W.E.F. 2016-17

Second Language - Telugu / Hindi / Urdu / Sanskrit

(Common for All UG Programs)

I Year - I Semister

తెలుగు పేపర్ - I

I. ప్రాచీన కవిత్వం

1. నన్నయ - గంగాశంతనుల కథ

ఆంధ్ర మహాభారతం - ఆదిపర్వం - నాల్గవ ఆశ్వాసం (120-135)

"నరవరుడగు శంతనునకు" నుండి "దివ్యభూషణాలంకృత" వరకు

2. తిక్కన - మూషిక మార్జాల వృత్తాంతం

ఆంధ్ర మహాభారతం - శాంతిపర్వం - మూడవ ఆశ్వాసం

"అడవిలో నొకమర్రి ....." నుండి "సౌఖ్యమున్ బొందెన్" వరకు

II. ఆధునిక కవిత్వం

1. గరిమెళ్ళ సత్యనారాయణ - మాకొద్దీ తెల్లదొరతనము

2. శ్రీశ్రీ - దేశచరిత్రలు

III. కథానికలు

1. వేంపల్లి అబ్దుల్ ఖాదర్ - బిడ్డలు

2. కొలకలూరి ఇనాక్ - ఆకలి

IV. వ్యాకరణం

1. సంధులు - సవర్ణదీర్ఘ, గుణ, వృద్ధి, యణాదేశ, త్రిక, గ.స.డ.ద.వా.దేశ. రుగాగమ, టుగాగమ, ఆమ్రేడిత, అత్వ, ఇత్వ, ఉత్వ.

2. సమాసాలు - తత్పురుష, కర్మధారయ, ద్వంద్వ, ద్విగు, బహువ్రీహి మొదలైనవి

3. అక్షర దోషాలు - దోషాలు సరిదిద్ది సాధు రూపాలు రాయ్యూలి

Telugu BOS chai-person

SRI VENKATESWARA UNIVERSITY, TIRUPATI

Model Question Paper : I Semester

I B.A / B.Com. / B.Sc Degree Course :: 2016-17

Part I (B) : General Telugu

Time : 3 Hrs | Max. Marks : 75

పార్ట్-ఎ

ఈ క్రింది వాటిలో ఏవైనా ఐదు ప్రశ్నలకు సమాధానాలు రాయండి 5×5=25మా

అందులో 3 మరియు 4 ప్రశ్నలకు ఒకదానిలో ఒక్కొక్కటి చొప్పున తప్పని సరిగా జవాబు వ్రాయవలెను.

1. వసిష్ఠుడు అష్టవసువులను శపించిన విధం తెల్పండి.
2. ఫలిత – రోమశుల మధ్య జరిగిన సంవాదమును రాయండి.
3. ఈ క్రింది వాటిలో ఒకదానికి సందర్భసహిత వాక్యాన్ని రాయండి

   ఎ. ఇష్టమున పరిగ్రహింపు నన్ను

   బి. నీ వలన నేను బ్రతికితి.
4. ఈ క్రింది వాటిలో ఒకదానికి సందర్భసహిత వాక్యం రాయండి

   ఎ. దొరల గుండెలలోన దడ దడ పుట్టింది

   బి. గతమంతా తడిసె రక్తమున
5. 'మా కొద్దీ తెల్లదొరతనము' ఆధారంగా గరిమెళ్ళ వారి దేశభక్తిని వివరించండి.
6. దేశ చరిత్రలు ఆధారంగా శ్రీశ్రీ అభ్యుదయ దృక్పథాన్ని వివరించండి.
7. బిడ్డలు కథలో విద్యాసాగర్ వృత్తాంతము తెల్పండి.
8. ఆకలి బాధను ఇనాక్ వర్ణించిన విధానము ఎట్టిది

పార్ట్-బి

I. **ఈ క్రింది వానిలో ఒకదానికి సమగ్ర వ్యాఖ్యలు రాయండి 1×10=10మా**

అ. గంగ నిజాంగ దీప్తు లెసగం జనుదెంచి లతాంగి సంగతో
త్తుంగ పయోధర ద్వితయ తోయరుహాయత చారునేత్ర ది
వ్యాంగనయై ప్రతీప వసుధాధిప శాల విశాల దక్షిణో
త్యంగము నందు మన్మథవశంబున నుండె గరంబు లీలతోన్

ఆ. అనఘు భయంబు నొందుటిది యారయ బేలదనంబు నెమ్మయై
మును నను నమ్మి చెంది భయో మోక్షణముం గని నాకు జాల మే
లొనరగ జేసి తీవు దుది నుల్లమునందగ విశ్వసింప కి
ట్లునికి సుఖంచె? నాదు సిరి కుకుత్తుండ వయ్యెదు రమ్ము ప్రీతితోన్

2. గంగాశంతనుల కథ ఆధారంగా నన్నయ కవితా రీతులు వర్ణించండి 10 మార్కులు

(లేదా)

మూషిక మార్జాల వృత్తాంతాన్ని వివరించండి.

3. గత చరిత్ర సారాన్ని శ్రీశ్రీ విశ్లేషించిన విధానాన్ని రాయండి 10 మార్కులు

(లేదా)

తెల్లదొరలు భారతీయులకు చేసిన ద్రోహాన్ని వివరించండి.

4. బిడ్డలు కథ ఆధారంగా మానవ సంబంధాలు ఏ విధంగా మాయమవుతున్నాయో వివరించండి 10 మార్కులు

(లేదా)

చిన్ని కుటుంబ పరిస్థితులు వివరించండి

5. ఐదు సంస్కృత సంధులను సోదాహరణంగా వివరించండి 10 మార్కులు

(లేదా)

అ. ఈ క్రింది వాటికి విగ్రహ వాక్యాన్ని రాసి, సమాసాన్ని రాయండి **$2_{1/2} \times 2 = 5$మా**

1. చరణ కమలము
2. పొదరిల్లు

ఆ. ఈ క్రింది తప్పులను సరిదిద్దండి **$5 \times 1 = 5$మా**

1. వుంగరము
2. యెండ
3. దర్మరాజు
4. మ్రుగము
5. మూసికము

SUBJECT : GENERAL ENGLISH

W.E.F. 2016-17 **1-01 R**

SEMESTER – I

1. Every unit shall state the objectives and expected deliverables.
2. Every lesson shall have
   i) Questions on subject comprehension, paragraph, short note, single sentence answer types
   ii) Exercises on vocabulary, syntax, and pronunciation
   iii) Language exercises shall include exercises in paraphrasing, note-making and report writing wherever possible
   iv) Pre -reading and post- reading activities.

Unit – I

PROSE

1. A.P. J. Abdul Kalam: The Knowledge Society (from *Ignited Minds*)
2. NgugiWaThiong'o: The Language of African Literature (from *Decolonizing the Mind*)

Unit – II

POETRY

1. Robert Frost: The Road Not Taken
2. Nissim Ezekiel: Night of the Scorpion

Unit – III

SHORT STORY

1. Mulk Raj Anand : The Lost Child
2. Henry Lawson: The Loaded Dog

Unit – IV

ONE - ACT PLAY

William Shakespeare: The Merchant of Venice (Court Scene – Act IV Scene -1)

Unit – V

LANGUAGE ACTIVITY

1. Classroom and Laboratory Activities
   i. Single Sentence Answer Questions on Vocabulary (spelling), sound(pronunciation), sense (meaning), and syntax (usage)
2. Classroom Activity
   i. Exercises in Articles and Prepositions
   ii. Exercises in Tenses, Interrogatives and Question tags

Note: In classroom instruction it may be ensured that the theoretical and practical components of CSS-I complement the language activity in this semester.

CHAIRMAN, BOS - ENGLISH
SV University, Tirupati

SV UNIVERSITY, TIRUPATHI
THREE YEAR DEGREE EXAMINATIONS – 2016-17
ENGLISH PART – I (MODEL PAPER)
I SEMESTER

TIME: 3HRS MAX. MARKS: 75

I. Attempt any **TWO** of the following questions. **2x5= 10**

1. How can a knowledge society be formed according to APJ Abdul Kalam?
2. What impact does colonialism exert on the colonized? Give examples.
3. What does the author say about language and culture?
4. What is societal transformation? How does it takes place?

II. Attempt any **TWO** of the following questions. **2x5= 10**

1. What do the roads stand for in the poem, The Road not Taken?
2. Bring out the mother's agony in Night of the Scorpion?
3. Analyze the behavior of the villagers in Ezekiel's poem?
4. "I took the one less travelled by
   And that has made all the difference", Explain.

III. Attempt any **TWO** of the following questions. **2x5= 10**

1. Explain the attitude of the child in Anand's story?
2. How do Andy and his team mates make the cartridge?
3. Justify the title "The Loaded Dog"?
4. Bring out the various activities of people in the fairs as described by Mulk Raj Anand?

IV. Attempt any **TWO** of the following questions. **2x5= 10**

1. Portray a character sketch of Shylock?
2. Analyze Portia's speech on mercy?
3. Why does Shylock refuse to show mercy on Antonio?
4. How does Portia turn the tables on Shylock?

V. A. Mention the sounds that the underlined letters represent in transcription. **4x1=4**

1. M<u>ea</u>n 2. F<u>oo</u>d 3. Ra<u>th</u>er 4. <u>S</u>ure

B. Pick out the correctly spelt word. **4x1=4**

1.	Achievement,	Achieviment,	Acheevament,	Acheivement
2.	Magnificent,	Magneficent,	Magnificient,	Magneficient
3.	Accessary,	Accessory,	Acessory,	Accessori
4.	Precipitate	Pricipatate	Precipetieit	Precipetate

C. Use the following pairs in sentences of your own. **4x1= 4**

1. Devise/Device
2. Stationary/stationery
3. Dairy/Diary
4. Compliment/Complement

D. Correct the following sentences. **5x1= 5**

1. Smitha lended me her pen.
2. No news are good news.
3. Bread and butter have great fascination for me.
4. By the time the teacher came, we finished our work.
5. What are your searching?

VI. A. Fill in the blanks with 'a' or 'an' or 'the'. **3x1=3**

1. I met ____ European yesterday.
2. She is ____ M.A.
3. ___ lion is the king of all animals.

B. Fill in the blanks with suitable prepositions. **3x1=3**

1. Let me congratulate you _____ your success.
2. Your name is ____ the list.
3. Please give me a chair to sit_____.

C. Fill in the blanks with the correct form of the verb in the brackets. **5X1=5**

1. Last summer the cost of living _____ (rise) to a high point.
2. Slow and study _____ (win) the race.
3. After I ____ (speak), my friends clapped their hands.
4. The accident took place when he _____ (cross) the road.
5. I ___ (belong) to Newpet.

D. Convert the following sentences into questions. **3x1= 3**

1. We have grammar classes thrice a week.
2. South Indians prefer rice.
3. They have been visiting him for a month.

E. Add Question tags to the following statements. **4x1= 4**

1. They have never seen the Taj.
2. She likes western music.
3. I shall help you.
4. You are dull.

(S. SURYANARAYANA)
CHAIRMAN, BOS - English
Sri Venkateswara University, Tirupati

I SEMESTER – W.E.F. 2016-17

SECOND LANGUAGE-HINDI-OPTIONAL- PAPER 1(B)

DIVISION OF HINDI SYLLUBAS INTO FIVE UNITES FOR SEMISTER SYSTEM

Unit	I Sem
1. गद्य संदेश (Prose)	साहित्य की महत्ता सच्ची वीरता मित्रता
2. कथा लोक (Short stories)	मुक्तिधन गूदड़ साई उसने कहा था
3. व्याकरण (Grammar)	लिंग वचन काल वाच्य वाक्यों की शुद्धि
4. व्याकरण (Grammar)	कार्यालय हिन्दी (पारिभाषिक शब्दावली- अंग्रेजी से हिन्दी) विलोम शब्द
5. पत्र लेखन (Letter writing)	व्यक्तिगत और सरकारी पत्र

FIRST SEMISTER MODEL PAPER : नमूना प्रश्न पत्र

Choice Based Credit System

(B.A., B.Sc, B.Com)

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1. निम्न लिखित में से किन्ही **पाँच** प्रश्नों के उत्तर लिखिए।

   1. 'ज्ञान राशी' के संचित कोश का नाम साहित्य है, सप्रसंग व्याख्या कीजिए ?
   2. 'सत्व गुण' के प्रसंग में जिनका अंत:करण निमग्न हो गया है, वे ही महात्मा, साधू और वीर हैं,सप्रसंग व्याख्या कीजिए।
   3. मित्र बनाते समय किन-किन बातों का ध्यान रखना चाहिए ?
   4. भारतीय इतिहास में आदर्श मित्रता के कुछ उदाहरण दीजिए ।
   5. मुक्तिधन कहानी की विशेषताएँ लिखिए ?
   6. उसने कहा था कहानी का उद्देश्य क्या है ?
   7. "गूदड साईं" का शीर्षक पर अपने उद्देश्य प्रकट कीजिए।
   8. "लिंग" की परिभाषा देकर कुछ उदाहरण दीजिए।

2. निम्न लिखित सभी प्रश्नों के उत्तर लिखिए।

   1.(I) 'साहित्य की महत्ता" का सारांश लिखिए।

   या

   (II) "मित्रता" पाठ का सारांश लिखिए।

   2.(I) नाना प्रकार की सच्ची वीरता के कुछ उदाहरण भारतीय इतिहास से दीजिए।

   या

   (II) साहित्य की जीवन में क्या आवश्यकता है ?

   3. (I) "मुक्तिधन" कहानी में रहमान का चरित्र-चित्रण कीजिए ?

   या

   (II) "गूदड साईं" शीर्षक कीसार्थकता समझाइए ?

   4. (I) 'उसने कहा था' कहानी का शीर्षक की समीक्षा कीजिए ?

या

(II) पत्र लेखन की आवश्यकता क्या है? व्यायाम का महत्व बताते हुए अपने छोटे भाई को पत्र लिखिए।

5. (a) कार्यालयीन अंग्रेजी शब्दों को हिन्दी में लिखिए।

(1) Casual leave
(2) Confidential
(3) Education officer
(4) Ambassador
(5) Forest officer

b. कार्यालयीन हिन्दी शब्दों को अंग्रेजी में लिखिए।

(6) कार्यान्वयन
(7) कार्यालय आदेश
(8) उद्योग
(9) आयकर विभाग
(10) करार

या

1.विलोम शब्दों को लिखिए।

(1) बुरा (2) विजय (3) दुःख (4) शत्रु (5) सरल

(6) घोडा दौडता है। (रेखांकित शब्द का लिंग बदलकर वाक्य को फिर से लिखिए।)

(7) लडका पाठशाला जाता है । (भूतकाल में लिखए।)

(8) बच्चा मैदान में खेल रहा है। (वचन बदलकर लिखिए।)

(9) कलम जेब पर है। (वाक्य शुद्ध कीजिए।)

(10) राम रोटी खाता है। (वाच्य बदलकर लिखिए।)

❖

1-03

Subject : SANSKRIT
SEMESTER - I
PAPER - I : POETRY, PROSE AND GRAMMAR - I

Unit - I **Old poetry**

1. ABHIJNAANAM
   Ramayanam - Kishkindhaa Kaanda - 6th Canto 1-27 Slokas
2. AATITHYAM
   Bhaagavatam - IX Skandha - 21st Adhyaaya - 1 - 36 Slokas

Unit - II **Modern Poetry**

1. UNNATIHI
   From Bharatee Bhushanam by Dr D.N.Deekshit - Page No. 66 - 68
2. VIVIKTA PUSHPA KARANDAHA
   By Dr Rani Sadasiva Murthy, Selected Stanzas - 14

UNIT - III **PROSE**

MOORKHATAA
APAREEKSHITAKAARAKAM OF
PANCHARANTRAM - 3rd & 4th
Stories
Murkha Brahmana Katha & Murkha Pandita Katha - Page 734 -743 , Pub. Krishnadas Academy, Varanasi

UNIT IV **GRAMMAR**

1. DECLENSIONS
   Nouns ending in vowels, Deva, Kavi, Bhanu, Dhatru, Pitru, Go,Ramaa, Mati
2. CONJUGATIONS
   1st Conjugation - Bhoo, Gam, Shtha, Drusir, Labh, Mud 2nd Conjugation - AS
   10th Conjugation - Bhaash

UNIT - V **GRAMMAR**

1. SANDHI
   Swara Sandhi : Sarvarnadeergha, Ayovayava, Guna, Vruddhi, Yana desa.
   Halsandhi : Scutva, Stutva, Anunasika
2. SAMASA
   Dwandwa, Tatpurusha, Karmadharaya, Dwigu.

Signature of the
Chairman (B.O.S.)
(20.....Exams)

1-03

OFFICE OF THE PRINCIPAL
CODE
Date:
DEGREE COLLEGE, TIR

SRI VENKATESWARA UNIVERSITY

MODEL PAPER

I B.Sc/B.Com/BCCA/ B.A Degree Examinations - 2015

Paper-I : Sanskrit (Poetry, Prose and Grammar)

Time : 3 Hrs | Max. Marks : 75 M

Date :

सूचना : द्वितीय, तृतीय, चतुर्थी, पञ्चम, नवम प्रश्नना:

संस्कृत भाषायामेव समाधेया:।

Q.No. 2,3,4,5 & 9 should be answered in Sanskrit only.

(सर्वे प्रश्ना: समाधेया:)

प्रथमो भाग: (25 Marks)

I. द्वौ श्लोकौ पूरयित्वा भावं लिखत। 2x2½=5M

1. अहं तामान ---------- नभ: स्थले।
2. नाहं जानामि ---------- पादाभिवन्दनान्।
3. तस्मै ---------- प्रथथौ द्विज:।
4. ईश्वरालम्बनं ---------- प्रत्यलीयत।

II. द्वयो: सम्पूर्ण शब्द रूपाणि लिखत। 2x2½=5M

1. देव 2. भानु 3. गो 4. रमा

III. द्वयो: लकारे सर्वाणि रूपाणि लिखग। 2x2½=5M

1. भवति 2. गच्छतु 3. आसीत् 4. भाषेत

IV. पञ्चानां नामनिर्देशपूर्वकं विश्लेषयत। 5x1=5M

1. तस्याज्ञा 2. पावक: 3. महोत्सव: 4. धनौदनम्
5. इत्यत्र 6. तच्च 7. तट्टीका 8. पन्नग:

V. पञ्चानां समासानां विग्रह वाक्यानि लिखत। 5x1=5M

1. मासपूर्व: 2. ग्रामगत: 3. पितरौ 4. रामलक्ष्मणौ
5. पञ्चवटी 6. नरसिंह: 7. नीलोत्पलम् 8. मुखचन्द:

द्वितीयो भाग: (50 Marks)

VI. एकस्य प्रश्नस्य समाधानं लिखत। 1x10=10M

1. "अभिज्ञानम्" इति पाठयांसस्य सारांशं विलिख्या पाठयस्य सन्देशं विवृणुत।
2. रन्तिदेव: अतिथिसेवां कथं चकार।

VII. एकस्य प्रश्नस्य समाधानं लिखत। 1x8=8M

1. औन्नत्यविषये वाजपेयीमहोदयस्य अभिप्रायं विशदयत।
2. "विविक्त पुष्प करण्ड" इति पाठयभागे विद्यमानं साहित्यसौन्दर्य तत्वं विमृशत।

Signature of the
Chairman (B.O.S.)
(20.....Exams)

1-03

VIII. एकस्य प्रश्नस्य समाधानं लिखत। 1x10=10M

1. मूर्खब्राह्मणकथां लिखत।
2. मूर्खपण्डितानाम् अलौकिकचेष्टितानि विवृणुत।

IX. पञ्चानां लघुसमाधानानि लिखत। 5x2=10M

1. वाल्मीकि: आदिकविरिति निरूपयत।
2. रामायणे कति श्लोको: सन्ति।
3. रामायणे कति काण्डा: सन्ति? तान् विलिखत।
4. व्यासस्य नामानि विवृणुत।
5. व्यासमहर्षे: जगद्गुरूत्वम् उपादयत।
6. रन्तिदेव: कस्य पुत्र:
7. पञ्चतन्त्रस्य अध्ययनेन किं प्रयोजनं भवति?
8. पञ्चतन्त्रम् कीदृशं काव्यम्।
9. विष्णुशर्मा पञ्चतन्त्रं किमर्थं व्यरचयत्?
10. प्रस्तुतपाठयस्य "अभिज्ञानम्" इति नाम कथं सार्थकं भवति?

X. चतुर्णा सप्रकरणं व्याख्यात। 4x3=12M

1. न शक्या सा जरयितुमपि सेन्द्रै: सुरासुरै:।
2. नुपुरे त्वभिजानामि नित्यं पादाभिवन्द नात्।
3. धर्मस्य त्वरिता गति:
4. तन्महाजनमागौण गच्छाम:।
5. न च राजप्रतिग्रहो बुद्ध्या लभ्यते विद्यां विना।
6. यद्येनं सजीवं करिष्यसि तत: सर्वानपि व्यापादयिष्यति।
7. राजन् मे दीयतामन्नं सगणाय बुभुक्षते।
8. वासुदेवे भगवति भक्त्या चके मन: परम्।

Signature of the
Chairman (B.O.S.)
(20.....Exams)

1-03

MODEL QUESTION PAPER

SANSKRIT

(COMMON CORE)

Time : 3 Hrs Max
Marks : 75

Part – A

5 x 5 = 25

Eight Questions should be asked from the lessons divided

Under five Units. The candidate will answer FIVE questions

Only. Each Question carries 05 (Five) Marks Only

Part – B

5 x 10 = 50

10 Questions with internal Choice should be asked.

The candidate will answer five questions only

Each question carries 10 marks

Internal – 25 marks

Signature of the
Chairman (B.O.S.)
(20.....Exams)

1-07 R

FOUNDATION COURSE – 1

I. HUMAN VALUES AND PROFESSIONAL ETHICS

W.E.F. 2016-17

I SEMESTER (Total 30 Hrs)

Unit-I : Introduction to Value Education

1. Value Education, Definition, Concept and Need for Value Education
2. The Content and Process of Value Education
3. Self-Exploration as a means of Value Education
4. Happiness and Prosperity as parts of Value Education

Unit-II : Harmony in the Human Being

1. Human Being is more than just the Body
2. Harmony of the Self ('I') with the Body
3. Understanding Myself as Co-existence of the Self and the Body
4. Understanding Needs of the Self and the Needs of the Body

Unit-III : Harmony in the Family and Society and Harmony in the Nature

1. Family as a basic unit of Human Interaction and Values in Relationships
2. The Basics for respect and today's Crisis : Affection, Care, Guidance, Reverence, Glory, Gratitude and Love
3. Comprehensive Human Goal : The Five dimensions of Human Endeavour

Unit-IV : Social Ethics

1. The Basics for Ethical Human conduct
2. Defects in Ethical Human Conduct
3. Holistic Alternative and Universal order
4. Universal Human Order and Ethical Conduct

Unit-V : Professional Ethics

1. Value Based Life and Profession
2. Professional Ethics and Right Understanding
3. Competence in Professional Ethics

4. Issues in Professional Ethics – The Current scenario
5. Vision for Holistic Technologies, Production System and Management Models

Reference Books :

1. A.N.Tripaty, Human Values, New Age International Publishers, 2003
2. Bajpai.B.L., Indian Ethos and Modern Management, New Royal Book Co., Lucknow, Reprinted, 2004
3. Bertrand Russell, Human Society in Ethics and Politics
4. Corliss Lamont, Philosophy of Humanism
5. Gaur.R.R., Sangal.R, Bagaria.G.P., A Foundation Course in Value Education, Excel Books, 2009
6. Gaur.R.R., Sangal.R, Bagaria.G.P., Teacher's Manual, Excel Books, 2009
7. I.C.Sharma, Ethical Philosophy of India, Nagin & Co., Julundhar
8. Mortimer.J.Adler, What Man has Made of Man
9. R.Subramanian, Professional Ethics, Oxford University Press
10. Text Book for Intermediate Ethics and Human Values, Board of Intermediate Education & Telugu Academy, Hyderabad
11. William Lilly, Introduction to Ethics, Allied Publishers

SRI VENKATESWARA UNIVERSITY

I.B. Com/BSc/B.A Model Paper.

Human Values & Professional Ethics

Semester – I, November, 2016-2017

Time: 2 Hours Max. Marks: 50

Section- A

Answer any Five of the following questions 5x3=15

ఏవైనా మీదు ప్రశ్నలకు జవాబులు వ్రాయుము.

I

1 Self - Exploration

అంతర్గత లేక స్వీయ పరిశీలన

2. What is meant by Stress Management? How to over come it?

ఒత్తిడిలను ఎలా అధిగమించవచ్చును?

3. Virtue and vice?

సద్గుణము & దుర్గుణము

4 Justice and fairness?

న్యాయము & నిష్పక్షపాతము

5 Obligation

బాధ్యత

6 Fraternity

సౌభ్రాతృత్వము

7 Trust

విశ్వాసము

8. Human Values

మానవ విలువలు

Section – B

II Answer any ONE question from each unit. 5×7=35

UNIT-I

9. What is meant by the process of value Education?
విలువల విద్యాక్రమము ఎట్లుండవలెను?

(Or)

what are the human values? what is their significance?
మానవ విలువలు అంటే ఏమిటి? వాటి ప్రాముఖ్యమేమి?

UNIT-II

10. "I am the seer, doer, enjoyer, The body is my instrument" Explain?
చూసేది, చేసేది, అనుభవించేది – నేనే. శరీరం నా పరికరం వివరించండి?

(Or)

Explain the harmony of the 'I' with the body?
"నేను" లోని కార్యకలాపాలతో శరీరానికి గల సంబంధమేట్టిది?

UNIT-III

11. What are the values in Human Relationships?
మానవ సంబంధాలలో ఇమిడియున్న విలువలేవి?

(Or)

what is the programme needed to achieve the comprehensive Human goal?
సంపూర్ణమైన మానవ లక్ష్యానికి అవసరమైన ప్రణాళిక ఎట్టిది?

UNIT-IV

12. What is ethical human conduct? Explain it in terms of values, policies and character?
నీతివంతమైన మానవ నడవడిక అనగానేమి? దీని యొక్క కారకములేవి?

(or)

Define Human Rights. Describe its origin and growth. Explain how they are enforced in India?
మానవ హక్కులు, నిర్వచనము, పుట్టుక, అభివృద్ధి - భారతదేశంలో అవి ఏలా అమలగుచున్నయో విశ్లేషించుము?

UNIT-V

13. Critically examine the issues in professional ethics?
నేటి వృత్తి ధర్మములో కెలకొన్న సమస్యలను విశ్లేషించి వాని పరిష్కార మార్గములను సూచింపుము?

(or)

Explain the ethical or moral code of conduct of the Civil Servants?
ప్రభుత్వ ఉద్యోగుల వృత్తి ధర్మ మేమిటో వివరింపుము?

Dr. P. RUKMINAMMA
M.A, B.Ed, M.Phil, Ph.D.
HEAD
Dept. of Philosophy & Indian Culture
S.P.W. UG & PG College
T.T.D., TIRUPATI - 517 502.

1-08 R

ENVIRONMENTAL STUDIES

I SEMESTER – W.E.F. 2016-17

(Total 30 Hours)

Unit-I : Natural Resources: 6 Hrs

Definition, scope and importance. Need for public awareness.

Brief description of;

Forest recourses: Use and over-exploitation. Deforestation; timber extraction, mining, dams. Effect of deforestation environment and tribal people

Water resources: Use and over–utilization. Effects of over utilisation of surface and ground water. Floods, drought.

Mineral resources: Use and exploitation, environmental effects of extracting and using mineral resources.

Food resources: World food problems, Effects of modern agriculture; fertilizer- pesticide, salinity problems.

Energy resources: Growing energy needs, renewable and non-renewable energy sources, use of alternate energy sources.

Land resources: Land as resources, land degradation, man induced landslides, soil erosion and desertification

Unit-II : Ecosystems, Biodiversity and its conservation 6 Hrs

Concept of an ecosystem
Structure and function of an ecosystem
Producers, consumers and decomposers
Food chains, food webs and ecological pyramids
Characteristic features of the following ecosystems:-
Forest ecosystem, Desert ecosystem, Aquatic ecosystem.
Value of biodiversity: Consumptive use, productive use. Biodiversity in India.
Threats to biodiversity: habitat loss, poaching of wildlife, man wildlife conflicts.
Endangered and endemic species of India
Conservation of biodiversity

Unit-III : Environmental Pollution **6 Hrs**

Definition

Causes, effects and control measures of :-

a. Air pollution
b. Water pollution
c. Soil pollution
d. Noise pollution

Solid waste management; Measures for safe urban and industrial waste disposal

Role of individual in prevention of pollution

Disaster management: Drought, floods and cyclones

Unit-IV : Social Issues and the Environment **6 Hrs**

From Unsustainable to Sustainable development

Water conservation, rain water harvesting, watershed management.

Climate change, global warming, ozone layer depletion,

Environment protection Act

Wildlife Protection Act, Forest Conservation Act

Unit-V : Human Population and the Environment **6 Hrs**

Population explosion, impact on environment.

Family welfare Programme

Environment and human health

Women and Child Welfare

Value Education

Role of Information Technology in Environment and humanhealth.

Reference Books :

1. Environmental Studies by Dr.M.Satyanarayana, Dr.M.V.R.K. Narasimhacharyulu, Dr.G. Rambabu and Dr.V.VivekaVardhani, Published by Telugu Academy, Hyderabad.
2. Environmental Studies by R.C.Sharma, Gurbir Sangha, published by Kalyani Publishers.
3. Environmental Studies by Purnima Smarath, published by Kalyani Publishers.

SRI VENKATESWARA UNIVERSITY : TIRUPATI

ENVIRONMENTAL STUDIES

MODEL QUESTION PAPER 2016-17

Answer FIVE questions choosing ONE question from each unit :

Marks 5 x 10 = 50

UNIT I

Q 1.

OR

Q 2.

UNIT II

Q 3.

OR

Q 4.

UNIT III

Q 5.

OR

Q 6.

UNIT IV

Q 7.

OR

Q 8.

UNIT V

Q 9.

OR

Q 10.

B. A. HISTORY

I Year B. A. Programme (UG) Courses – Under CBCS

SEMESTER – I - W.E.F. 2016-17

Paper – I (Core Paper)

ANCIENT INDIAN HISTORY & CULTURE

(Indian History and Culture from Earliest Times to 647 A.D)

Unit – 1	Survey of Sources: Literary & Archaeological Sources; Influence of Geography on History; Unity in Diversity; Traces of Stone Age Cultures (Circa 3,50,000 B. C to 3,000 B. C); Indus Valley Civilization (Circa 3000 B. C to 1,500 B. C): Origin, Extent, Salient Features.
Unit – II	Vedic Age & Religious Reform Movements (Circa 1500 B. C to 600 B. C): Society, Polity, Economy, Culture during early and later Vedic period; Jainism and Buddhism: Causes, Doctrines, Spread, Importance and Impact.
Unit - III	Transition from Territorial States to Emergence of Empires (Circa 600to Century to 300 B. C): Rise of Mahajanapadas – Causes for Magadha's Success; Persian and Macedonian Invasions; Mauryan Empire: State, Imperial Administration, Economy, Ashoka'sDhamma, Art & Architecture, Significance & Downfall.
Unit - IV	Conditions during 200 B. C to 300 A. D.: Central Asian Contacts – Kushanas – Aspects of polity, society, Economy, Religion, Art& Architecture; The Age of Satavahanas: Pattern of Administration – Social, Economic, Religious & Cultural Developments; Sangam Age: The Three Early Kingdoms (Chola, Chera& Pandya) – Society, Language & Literature.
Unit – V	India between 300 A. D & 600 A. D.: The Rise and Growth of Guptas: Administration, Society, Economy, Religion, Art, Literature and Science & Technology – Decline.

REFERENCES:

1	A.L. Basham, The Wonder That Was India
2	D.N.Jha, Ancient India
3	D.D.Kosambi, An Introduction to the Study of Indian History
4	D.P.Chattopadhyay, Science and Society in Ancient India
5	B.N.Mukherjee, The Rise and Fall of the Kushana Empire
6	K.A. NilakanthaShastri, A History of South India
7	R.C.Majumdar, K.K.Dutta&H.C.RoyChowdhuri (ed.), Advanced History of India
8	Kumkum Roy, The Emergence of Monarchy in North India: eighth to fourth centuries BC
9	RomilaThapar (et. al). India: Historical Beginnings and the Concept of the Aryan
10	M.L.K. Murthy, *Pre-and Protohistoric Andhra Pradesh upto 500 B.C.,* New Delhi, 2003

Study Tour: Study tour to local museum or at least to nearby historical sites is to be conducted. Students should be asked to prepare an inventory of items preserved in the museum and their usage.
Students can be asked to create a calendar charting the dates of key events. This can be applied to an historical event or the sequence of events.

1-1-107 R

B.A. ECONOMICS

SEMESTER – I, W.E.F. 2016-17

MICRO ECONOMICS – CONSUMER BEHAVIOR

PAPER -1

Module -1

Nature, definition and scope of Economics - Wealth, Welfare, Scarcity and modern definitions.

Module -2

Methodology in Economics - Micro & Macro; Static and Dynamic analysis; Normative and positive science, Inductive & Deductive methods; Partial and general Equilibrium.

Module - 3

Utility analysis**:** - cardinal approach-The Law of diminishing Marginal utility- The Law of Equi-Marginal Utility- concept of consumer's surplus

Module - 4

Demand analysis - Law of Demand - Elasticity of Demand - Measurement of Elasticity of Demand - Price, Income & Cross Elasticities of Demand**.**

Module - 5

Ordinal Approach**:** Indifference Curve analysis - Properties of Indifference curves - Price or budget line - Equilibrium of the Consumer with the help of Indifference curves – Samuelson's Revealed preference theory.

REFERENCES:

1. R.G. Lipsey and K.A.Chrystal - "Economics", Oxford University Press, 10/e, 2004.
2. P.A.Samuelson & W.D. Nordhaus-"Economics", Tata Mc.Graw Hill, 18/e, 2005.
3. N.Gregory Mankiw-"Principles of Economics", Thompson 2015 .
4. H.L.Ahuja-"Advanced Economic Theory"' S.Chand.
5. M.L.Seth-"Micro Economics", Laxmi Narayana Agarwal, 2015.
6. Bilas, A.-"Micro Economic Theory", International Student Edition, Mc.Graw Hill, 1971.
7. Telugu Academy Publications
8. D.M. Mithani & G.K. Murty - Business Economics, Himalaya Publishing, 2015.

Sri Venkateswara University - Tirupati CBCS

B.A - Economics - Semester - I - paper - I w.e.f. 2016-2017.

MICRO ECONOMICS - CONSUMER BEHAVIOR

Time : 3 hours | MODEL QUESTION PAPER. | Max. Marks : 75

PART - A

Answer any FIVE questions from the following: 5×5 = 25

1. కొరత నిర్వచనం → Scarcity Definition
2. చలన ఆర్థిక విశ్లేషణ → Dynamic Economic Analysis.
3. కార్డినల్ విశ్లేషణ → Cardinal Approach.
4. డిమాండు సూత్రం → Law of Demand.
5. బడ్జెట్ రేఖ → → Budget Line
6. మూల్యాంతర డిమాండు → Cross Elasticity of Demand.
7. ప్రతిస్థాపనోపాంతరేటు → Marginal Rate of Substitution
8. పాక్షిక సమతౌల్యం → Partial Equilibrium.

PART - B

Answer any FIVE questions from the following: 10×5 = 50.

9. (a) Write about the Nature and Scope of Economics ?
అర్థశాస్త్రము యొక్క స్వభావము మరియు పరిధిని గూర్చి వివరించుము ?

(OR)

(b) Explain the wealth and welfare Definitions ?
సంపద మరియు శ్రేయస్సు నిర్వచనాలను గూర్చి వివరించండి ?

10. (a) సూక్ష్మ మరియు స్థూల అర్థశాస్త్రములను గూర్చి వివరించండి ?
Explain the Micro and Macro Economics.

(OR)

(b) Write about the deductive and Inductive Methods ?
నిగమన మరియు ఆగమన పద్ధతులను గూర్చి వివరించుము ?

11. (a) Explain the law of Diminishing Marginal utility with limitations ?
క్షీణోపాంత ప్రయోజన సూత్రాలన్ని వివరించి, దాని పరిమితులు తెలుపుము ?

(OR)

(b) Explain the Law of Equi-Marginal utility ?
సమోపాంత ప్రయోజన సూత్రాలన్ని గూర్చి వివరించుము

P.T.O.

12. (a) Write about the Types of price Elasticity of Demand?
ధరడిమాండు వ్యాకోచత్వం యొక్క రకాలను గూర్చి వివరించుము?

(OR)

(b) Write about the Measurement of Elasticity of Demand?
ధరడిమాండు వ్యాకోచత్వాన్ని కొలిచే పద్ధతులను గూర్చి వివరించండి?

13. (a) Write about the properties of Indifference Curves?
ఉదాసీనతా వక్రరేఖల లక్షణాలను గూర్చి వివరించండి?

(OR)

(b) Explain the Equilibrium of Consumer with the help of Indifference Curves?
ఉదాసీనతా వక్రరేఖల సహాయంతో వినియోగదారుని సమతౌల్యస్థితిని తెలియజేయుము?

=== 000 ===.

CHAIRMAN
Board of Studies

MEMBER
B.O.S

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1-1-114 R

CBCS: SYLLABUS - SEMESTER WISE

FIRST YEAR; SEMESTER – I

B.A. POLITICAL SCIENCE – W.E.F. 2016-17

PAPER-I (CORE): BASIC CONCEPTS OF POLITICAL SCIENCE

Unit-1: Explanatory Frameworks of Politics

1. What is Politics: Nature and Scope of Political Science
2. Approaches to the Study of Politics: Normative, Historical, Empirical Traditions

Unit-2: What is the State

1. Origin and Evolution of the Modern State
2. Different Conceptions on the role of the Modern State: Social Democratic and Neo Liberal conceptions

Unit-3: Nations and Nationalism

1. Conceptual Distinction between Nationality and Nation
2. Varieties of Nationalism: Culture and Civic Nationalism

Unit-4: Rights and Citizenship

1. Evolution of Rights: Civil and Social rights
2. Citizenship: Universal and Differential Citizenship

Unit-5: Freedom, Equality and Justice

1. Freedom: Negative and Positive Freedom
2. Equality: Formal Equality, Equality of Opportunity, Equality of Outcome
3. Justice: Justice based on Needs, Deserts and Rights

REFERENCE BOOKS:

1. Bhargava Rajeev and Acharya Ashok (eds) (2008) Political Theory: An Introduction, Pearson, New Delhi.
2. Andrew Heywood (2007) Politics 3rd edition, Palgrave Macmillan, NewYork.
3. Bellamy R (1993) (Ed) Theories and Concepts of Politics, Manchester university press, New York.
4. Vincent A (2004) The Nature of Political Theory, Oxford Universit Press, NewYork.

RECOMMENDED SND ACCEPTED BY
SRI.D.DHANAPAL REDDY
LECTRER IN POLITICAL SCIENCE(RETIRED)
VICE-PRINCIPLA GDC(W) SRIKALAHASTI
DATE 18/7/2016.

SRI VENKATESWARA UNIVERSITY : TIRUPATI

POLITICAL SCIENCE - I SEMESTER

MODEL QUESTION PAPER 2016-17

SECTION –A

Answer any 5 question **Marks 5 x 5 = 25**

1.

2.

3.

4.

5.

6.

7.

8.

Answer any 5 of the following question **(10X5=50)**

9. .....

OR

.....

10. .....

OR

.....

11. .....

OR

.....

12. .....

OR

.....

13. .....

OR

.....

Advanced Telugu

1-1-103

బి.ఏ. డిగ్రీ మొదటి సంవత్సరము పాఠ్యప్రణాళిక

సెమిస్టర్ స్పెషల్ తెలుగు 2015 - 2016

I సెమిస్టర్

Title : old poetry and Drama (ప్రాచీన సాహిత్యాలు నాటకాలు)

Paper - I

I. శ్రీనాథుడు - కిరాతార్జునీయము - హరవిలాసము - సప్తమాశ్వాసం

పద్యాలు 68 - 91 వరకు

గాండీవప్రయుక్త .... దొడిగె జంద్రార్థమౌళి

II. రామరాజభూషణుడు - వసుచరిత్ర - తృతీయశ్వాసం -

పద్యాలు - 26 నుండి - 50 వరకు

"గిరిజ తనయ" నుండి "వసుధ సుధాంశు" వరకు

III. పొట్లూరి నారాయణ దాసు - స్వప్నవాసవదత్త (భాసకృతికి ఆంధ్రీకరణ)

మొదటి మూడు అంకాలు

IV. పొట్లూరి నారాయణ దాసు - స్వప్న వాసవ దత్త (భాసకృతికి ఆంధ్రీకరణ)

మిగిలిన అంకాలు

Signature of the
Chairman (B.O.S.)
(20.....Exams)

1-1-103

Semister - I
Part - II Telugu (Special Telugu) Paper - I
1st Semister Model Paper

Time 3 hrs Paper-I: old poetry and Drama **Marks 75**

Part - A

ఈ క్రింది వానిలో ఐదింటిని సమాధానాలు వ్రాయండి 3, 4 ప్రశ్నలు తప్పనిసరిగ వ్రాయాలి.

$5 \times 5 = 25$

1. శివార్జునుల అస్త్ర శస్త్ర విద్యా నైపుణ్యాన్ని వివరించండి.
2. గిరిక బాల్యంలో నేర్చిన విద్యాబుద్ధులు తెలపండి.
3. (అ) క్రింది వాటికి సందర్భసహిత వ్యాఖ్య వ్రాయండి.

   (ఆ) తల్లి నిన్నెలిపించెన్ సిరికల్మినంచు నగుచుc గీడింతురబ్బాలతోన్
4. క్రింది వాటికి సందర్భసహిత వ్యాఖ్య చేయండి

   (అ) అతిథి జనులకు తపోవనములు స్వగృహములు కదా?

   (ఆ) పరపురుష సంకీర్తన శ్రవణమయుక్తము
5. యౌగంధరాయణుని పాత్రను వివరించండి.
6. వసంతకుని పాత్రను తెలపండి
7. పంచసంధులు
8. అర్జుననకు ఈశ్వరుడు ప్రత్యక్షమైన విధానాన్ని తెలపండి.

Part - B

క్రింది పద్యాలలో ఒకదానికి సమగ్ర వ్యాఖ్య చేయండి

1. అ - తెలివింబొందక .... కౌటిల్య శిల్పంబునన్ **10 మార్కులు**

   ఆ - జలకములార్చి .... మంజురవంబున జోలపాండుచున్.
2. కిరాతార్జునీయ వృత్తాంతాన్ని వివరించండి **10 మార్కులు**

   లేదా

   కిరాతార్జునీయంలో శ్రీనాథుని కవితా విశేషాలు

Signature of the
Chairman (B.O.S.)
(20.....Exams)

1-1-103

3. గిరిక బాల్య వృత్తాంతాన్ని విశదీకరించండి **10 మార్కులు**

లేదా

రామరాజభూషణుని శ్లేష చమత్కృతిని తెలపండి

4. నాటక లక్షణాలను తెల్పి స్వప్న వాసవదత్త నాటకంతో సమన్వయించండి **10 మార్కులు**

లేదా

స్వప్న వాసవదత్త నాటకంలో ఉదయుని పాత్ర చిత్రణ

5. వాసవదత్త గుణశీలాలు తెలపండి **10 మార్కులు**

లేదా

పద్మావతీ గుణశీలాలు తెలపండి

—X—

Signature of the
Chairman (B.O.S.)
(20.....Exams)

SRI VENKATESWARA UNIVERSITY; TIRUPATI

B.A. / B.Com. Detailed Syllabi w.e.f. 2016-17

ACCOUNTS - SEMESTER - I

PAPER - FUNDAMENTALS OF ACCOUNTING-I

Unit-I – Introduction to Accounting

Need for Accounting – Definition – Objectives, Advantages – Book keeping and Accounting–Accounting concepts and conventions - Accounting Cycle - Accounting equation - Classification of Accounts and its rules - Double entry book keeping – Journalizing – Posting to ledgers, Balancing of ledger accounts- problems.

Unit –II – Subsidiary Books

Types of Subsidiary Books – Journal proper - Cash Book, Three column Cash Book- Petty cash Book -Problems.

Unit - III -Trial Balance& Rectification of Errors

Preparation of Trial Balance – Types of Errors – Rectification of Errors- Suspense Account.

Unit-IV- Bank Reconciliation Statement

Need for bank reconciliation - Reasons for difference between Cash Book and Pass Book Balances- Preparation of Bank Reconciliation Statement- Problems on both favorable and unfavorable balances.

Unit-V-Final Accounts

Meaning – Features – Manufacturing Account – Preparation of Trading Account, Profit & Loss Account and Balance Sheet with Adjustments.**(Problems)**

Reference Books

1. Tulasian, Accountancy -I, McGraw Hill Co.
2. T.S.Reddy & A. Murthy, Financial Accounting , Margham Publications
3. R L Gupta & V. K Gupta, Principles and Practice of Accounting, Sultan Chand & Sons
4. S.P. Jain & K.L Narang, Accountancy-I, Kalyani Publishers
5. V.K.Goyal, Financial Accounting, Excel Books
6. K. Arunjothi, Fundamentals of Accounting; Maruthi Publications

Sri Venkateswara University
Model Paper
I B.A. / B.Com
Semester – I, November, 2016
DSC 1A - Fundamentals of Accounting-I

Time: 3 Hours Max. Marks: 75

Section A

Answer any **Five** of the following Questions

(5 x 3= 15 Marks)

1. (a) From the following particulars prepare Raju's A/c

	Rs.
1-1-2014 Amount due from Raju	8,000
5-1-2014 Sold goods to Raju	14,000
8-1-2014 Purchased goods from Raju	5,000
14-1-2014 Cash received from Raju	6,000
24-1-2014 Cash paid to Raju	4,000
31-1-2014 Raju's A/c settled by cheque	

(b) Write an opening entry
Cash at Bank Rs.8,000/-, Accrued interest Rs.3,000/-, unpaid wages Rs.2,000/-, Unexpired insurance Rs.1,000/-, Rent received in advance Rs.4,000/-, debtors Rs.6,000/-, Premises Rs.8,000/-, Creditors Rs.7,000/-, Bills payable Rs.5,000/-, Bills receivable Rs.7,000/-, Bank overdraft Rs.4,000/-

(c) Write adjusting entries
i) Unexpired insurance Rs.1000/- ii) Outstanding wages Rs.4,000/- iii) Rent received an advance Rs.2,000/- iv) Accrued interest Rs.5,000/- v) Appreciation on building Rs.3,000/-

(d) A trader maintains Petty cash book under imprest system. Record the following Transactions in his Petty Cash Book:

2014		Rs.
Sep. 1	Received for Petty payments	500
2	Postage	40
5	Stationery	25
8	Advertising	50
12	Wages paid	20
16	Carriage	15
20	Conveyance	22
30	Postage	50

(e) What are the rules relating to different types of accounts?
(f) What are the causes for bank reconciliation statement?
(g) Suspense Account?
(h) What are the errors disclosed by trial balance?
(i) Three columnar Cash Book?
(j) Different types of Subsidary Books?

Section - B

Answer any ONE Question from each unit.

(5 ×12 =60 Marks)

UNIT I

2. Classify the following into Personal, Real and Nominal Accounts
   (a) Capital (b) Rent recovered (c) Accrued Interest
   (d) Discount (e) Bad debts (f) Carriage (g) goodwill
   (h) Premises (i) Investments (j) Work-in-Progress (k) Cash (l) Bank
3. Journalise the following transactions.
   (a) Rao starts business with Rs.10,000 cash and a building worth Rs.50,000
   (b) Purchased goods worth Rs.20,000 out of which goods worth Rs.12,000 was on credit from Shyam.
   (c) Sold goods on credit worth Rs.16,000 to Ram.
   (d) Received Rs.15,600 from Ram in full settlement of his account.
   (e) Paid Rs.11,800 to Shyam in full settlement of Rs.12,000 due to him.
   (f) Paid wages Rs.500 and salaries Rs.2,000

UNIT – II

4. Enter the following transactions in suitable subsidiary books.

		Rs.
Jan.1	Purchased goods from Rekha	7,500
4	Sold goods to Midhum	8,000
5	Returned gods to Rekha	500
6	Sridevi bought goods from us	4,000
8	Received goods returned by Midhun	400
10	Rajesh sold goods to us	4,000
15	Sold goods to Kishore	3,000
16	Returned goods to Rajesh	600
20	Kishore returns goods	500

5. Enter the following transactions in a three column cash book.

2015		Rs.
January 1	Started business with cash	40,000
2	Opened savings bank account with Vijaya Bank	16,000
5	Bought goods by cheque	350
6	Received cheque from Suhas	400
	Allowed him discount	20
8	Sold goods for cash	80
10	Paid into bank – Cash	60
	Cheque	400
14	Paid Sateesh by cheque	690
	Discount received	10
17	Paid Carriage	300
20	Drew from bank for office	400
31	Paid Salaries by cheque	200

UNIT – III

6. The following trial balance was prepared by a clerk appointed newly by Rao & Company. Some errors were found in the Trial Balance due to lack of experience in preparing accounts. Prepare Trial Balance by rectifying these mistakes.

S.No	Particulars	Debit Rs.	Credit Rs.
1.	Opening Stock	5,000	
2.	Capital		60,000
3.	Discount allowed		500
4.	Discount received		700
5.	Fixed Assets		60,000
6.	Sales	85,000	
7.	Purchases		45,000
8.	Purchase returns		1,000
9.	Sales returns	2,000	
10.	Carriage inwards		600
11.	Carriage outwards		700
12.	Wages, Salaries	25,000	
13.	Bills receivable	7,000	
14.	Debtors	9,000	
15.	Bills Payable		7,000
16.	Rent	3,000	
17.	Interest Paid		2,000
18.	Cash	800	
19.	Creditors	6,900	
20.	Closing Stock	33,800	
		1,77,500	1,77,500

7. Rectify the following errors by using Suspense account.
   a. Sales Day book was overcast by Rs. 100.
   b. A sale of Rs. 50 to X was wrongly debited to Y account.
   c. General expenses Rs. 180 was posted in the account as Rs. 810.
   d. A bill receivable for Rs. 155 was written in bills payable book. The bill was given by P.
   e. Legal expenses Rs. 119 paid to James was debited to his personal account.
   f. Cash received from C. Dass was debited to G. Dass Rs. 150.
   g. While carrying forward the total of one page of purchases book to the next, the amount of Rs. 1,235 was written as Rs. 1,325.

   Show Suspense a/c and Journal Entries.

8. The Cash Book (Bank Columns) and the Pass book of Umasankar are given below. Prepare Bank Reconciliation Statement as on 31st December, 2015.

Dr. Cash Book (Bank column) Cr.

		Rs.			Rs.
2015 Dec. 24			2015 Dec. 29		
	To balance b/d	360		By Mahesh	15
Dec. 27	To Prasad	60	Dec. 29	By Ganesh	145
Dec. 28	To Giridhar	120	Dec. 29	By Viswanadh	35
Dec. 28	To Sankar	42	Dec. 31	By balance c/d	387
		582			582
Jan. 1	To Balance b/d	387			

Dr. Bank Pass Book Cr.

		Rs.			Rs.
2015			2015		
Dec. 31	To Ganesh	145	Dec. 25	By balance b/d	360
Dec. 31	To balance c/d	400	Dec. 28	By Prasad	60
			Dec. 29	By Giridhar	120
			Dec. 31	By Interest	5
		545			545
			2016		
			Jan. 1	By balance b/d	400

9. From the following transactions prepare bank reconciliation statement.

1. Overdraft balance as per cash book Rs. 2,000
2. Out of cheques issued Rs. 35,000 payment was made for cheques amounting Rs. 28,000
3. Of Rs. 20,000 cheques sent for collection Rs. 2,000 not realised up to reconciliation date.
4. Bank charges Rs. 20 recorded in the debit side of the cash book.
5. Interest on investments Rs. 350 was realised by the banker but entered in the credit side of the cash book.
6. The cash book receipts side was overcast by Rs. 100
7. The pass book payments side was under caste by Rs. 300

UNIT – V

10. The following is the Trial Balance of B. Govil as on 31-3-1998:

Particulars	Debit Rs.	Credit Rs.
Cash in hand	540	
Cash at Bank	2,630	
Purchases	40,675	
Sales		98,780
Return Inwards	680	
Return Outwards		500
Wages	10,480	
Fuel and Power	4,730	
Carriage on Sales	3,200	
Carriage on Purchases	2,040	
Stock (1-4-97)	5,760	
Buildings	30,000	
Freehold Land	10,000	
Machinery	20,000	
Patents	7,500	
Salaries	15,000	
General Expenses	3,000	
Insurance	600	
Drawings	5,245	
Capital		71,000
Sundry Debtors	14,500	
Sundry Creditors		6,300
Closing Stock		
	1,76,580	**1,76,580**

Prepare the Trading and Profit and Loss Account and Balance Sheet as on 31-3-1998. The Stock on 31-3-1998 is Rs.6,800.

11. The following is the Trial Balance of Ram Lal on March 31, 1998.

Debit Balances:	Rs.		Rs.
Bank	7,500	Bills Receivable	7,500
Purchases (adjusted)	34,96,000	Stock (31st March,1998)	3,06,250
Salaries	21,000		
Carriage on Sales	2,500	Credit Balances:	
Carriage on Purchases	2,000	Capital	2,00,000
Lighting	1,500	Bills Payable	50,000
Buildings	1,35,000	Loan	1,00,000
Rate and Taxes	2,000	Sales	36,00,000
Sundry Debtors	40,000	Discount	2,000
Furniture	30,000	Commission	500
Cash in Hand	1,250	Sundry Creditors	1,00,000

Rates have been prepaid to the extent of Rs.600. During the year, bad debts amounted to Rs 2,500. A provision @ 5% has to be made on debtors. Buildings have to be depreciated at 2% and Furniture at 10%. Prepare the Trading and Profit & Loss A/c and the Balance Sheet as on March 31, 1998.

1-1-106 R

B.COM. / B.A. / B.Sc – COMPUTER APPLICATIONS

I YEAR - SEMESTER –I - W.E.F. 2016-17

DSC3A: FUNDAMENTALS OF COMPUTERS

UNIT I

Exploring Computers and Their Users:

An Overview of Computer System : Define Computer- Computers for Individual Users – Computer for organizations- Importance of computers.

Inside the Computer System

Describe the Machine- Parts of a Computer System – Hardware, Software, Data, Users – Information Processing cycle – essential Computer Hardware – Processing Devices- Memory Devices- Input/Output Device- System software – application Software.

UNIT II

Input Devices : The Keyboard , The mouse, The track ball, Scanner. **Output Devices**: Monitors – CRT monitors , Flat Panel Monitors ; PC projectors **Sound Systems** –Audio & Video devices (Multi-Media Device) ; **Hard copy devices** – Dot matrix printers , Ink Jet Printers , Laser Printers , Plotters.

UNIT III

Processing Data : How Computer process data- Data representation, and Data processing in a computer. **Modern CPU's**: Microcomputer Processors- Intel, AMD, Freescale, IBM processors-Types of Processors- RISC Processors - Connecting computer to other devices – The Bus, Serial and Parallel ports, SCSI , MIDI , and other specialized expansion ports, Expansion slots and boards.

UNIT IV

Storing Information in a Computer : Magnetic Disks – hard disk , Floppy disk, Optical Storage devices – CDROM , DVD ROM , CD – Recordable , CD – Rewritable.

UNIT V

How to Build a Computer: Knowing Computer Hardware Parts – Cataloging and purchasing the parts – Assembling the System –The first Boot –Installing Software – Maintenance of Computer.

TEXT BOOKS :

1. Peter Norton , Introduction to Computers , 6th Edition , Tata McGraw – Hill , 2008.
2. Jacob Beckerman , How to Build a Computer 2014-15: Learn, Select Parts, Assemble, and Install: A Step by Step Guide to Your First Homebuilt.

REFERENCE BOOKS :

1. Leon A and Leon M, Computers for Everyone , Leon Vikas , 2001 .
2. Turban E, Rainer R K , and Potter R E , Introduction to Information Technology , John Wiley & Sons , 2000.

MODEL QUESTION PAPER
I B.Com. / B.A. / B.Sc., Computer Applications
SEMESTER – I
DSC 3A: FUNDAMENTALS OF COMPUTERS

Time : 3 Hours Max. Marks : 75

Section A

Answer any **Five** of the following Questions (5 x 3 = 15 Marks)

1. (a) Applications of computer
   (b) Any three Characteristics of Computer
   (c) Memory cards
   (d) Processor
   (e) GUI
   (f) Serial Bus
   (g) PCI cards
   (h) Processing Data
   (i) RAM
   (j) Flash memory

Section - B

Answer any ONE Question from each unit. (5 × 12 = 60 marks)

UNIT I

2. Define computer and explain the Organization of computer?
3. Explain about parts of the computer?

UNIT – II

4. Explain about keyboard and pointing devices.
5. Explain output devices CRT monitors and Printers.

UNIT - III

6. Explain Data processing and how the data is represented in computer?
7. Explain different types of memory?

UNIT – IV

8. Explain about Magnetic storage devices.
9. Explain Optical storage devices and USB Flash devices?

UNIT – V

10. What is booting? Explain deferent steps for assembling computer.
11. What are the parts are needed to build a computer? Explain.

B.A. / B.SC. FIRST YEAR MATHEMATICS SYLLABUS
W.E.F. 2016-17
I SEMESTER

DIFFERENTIAL EQUATIONS

60 Hrs

UNIT – I (12 Hours), Differential Equations of first order and first degree :

Linear Differential Equations; Differential Equations Reducible to Linear Form; Exact Differential Equations; Integrating Factors; Change of Variables.

***UNIT – II (12 Hours),* Orthogonal Trajectories.**

Differential Equations of first order but not of the first degree :

Equations solvable for p; Equations solvable for y; Equations solvable for x; Equations that do not contain. x (or y); Equations of the first degree in x and y – Clairaut's Equation.

UNIT – III (12 Hours), Higher order linear differential equations-I :

Solution of homogeneous linear differential equations of order n with constant coefficients; Solution of the non-homogeneous linear differential equations with constant coefficients by means of polynomial operators.

General Solution of f(D)y=0

General Solution of f(D)y=Q when Q is a function of x.

$\frac{1}{f(D)}$ is Expressed as partial fractions.

P.I. of f(D)y = Q when Q= be^{ax}

P.I. of f(D)y = Q when Q is b sin ax or b cos ax.

UNIT – IV (12 Hours), Higher order linear differential equations-II :

Solution of the non-homogeneous linear differential equations with constant coefficients.

P.I. of f(D)y = Q when Q= bx^k

P.I. of f(D)y = Q when Q= $e^{ax}V$

P.I. of f(D)y = Q when Q= xV

P.I. of f(D)y = Q when Q= x^mV

UNIT –V (12 Hours), Higher order linear differential equations-III :

Method of variation of parameters; Linear differential Equations with non-constant coefficients; The Cauchy-Euler Equation.

Reference Books :

1. Differential Equations and Their Applications by Zafar Ahsan, published by Prentice-Hall of India Learning Pvt. Ltd. New Delhi-Second edition.
2. A text book of mathematics for BA/BSc Vol 1 by N. Krishna Murthy & others, published by S. Chand & Company, New Delhi.
3. Ordinary and Partial Differential Equations Raisinghania, published by S. Chand & Company, New Delhi.
4. Differential Equations with applications and programs – S. Balachandra Rao & HR Anuradha-universities press.

***Suggested Student Activities*:**

Seminar/ Quiz/ Assignments/ Project on Application of Differential Equations in Real life

(K. Ch. V. Subbaiah Naidu)
HOD of Mathematics & BOS
B.T College, Madanapalle.

1-1-21

Subject : STATISTICS (with Non- Mathematics combination)

SEMESTER - I

Paper - I : Elementary Mathematics

B.A

UNIT -I

Concept of sequences and series, fundamentals of sets and functions, types of functions, solution of simultaneous linear equations, quadratic equations.

UNIT - II

Progressions - A.P, G.P, H.P, permutations, combinations, Binomial theorem.

UNIT -III

Definition and types of matrices, addition, subtraction, scalar multiplication of matrices

UNIT - IV

Determinant of Matrix. Transpose of a matrix, inverse and rank of 3X3 matrices only. Solution - simultaneous linear equations by matrix methods.

UNIT - V

Differentiations, derivatives of algebraic and exponential functions. Maxima and Minima of a function. Integration basics, Integration by parts and by substitution.

Practicals - Semester - I

1. Solution to simultaneous Linear equations.
2. Progressions - AP,GP.I--IP.
3. Addition, Subtraction, Multiplication of Matrices.
4. Determinant of a Matrix.
5. Simple differentiation, Integrations.

Reference Books:

1. Statistical methods - S.P. Gupta
2. Fundamentals of Mathematical statistics - SC Gupta and V.K.Kapoor
3. Differential Calculus-Santhi Narayana
4. Outlines of Matrices – Schaum

*****

Signature of the
Chairman (B.O.S.)
(20.....Exams)

1-1-12)

MODEL QUESTION PAPER

FIRST YEAR B.Sc DEGREE EXAMINATION – 2015-16

I SEMISTER

STATISTICS (NM)

(Semester Pattern w.e.f. 2015-16)

Time: 3 hours Marks: 75

SECTION – A

(Short Answer Questions)

I Write short notes on any FIVE of the following. Each question carries 5 marks.

(Marks: 5X5 = 25)

1. Explain about sequences.
2. A={1,2,3,4}, B={1,6,9,11,12}, C={7,8,9,11,12,16} find (i) AU (B∩C) (ii) A∩ (BUC).
3. Explain the following functions.
   (a) One-One function (b) onto function.
4. Define matrix and explain different types of matrices.
5. Solve the following quadratic equations.
   (a) $3X^2 + 2X - 5 = 0$ (b) $X^2 + 6X + 34 = 0$
6. The 8th term of an A.P. is 17 and the 19th term is 39. Find the 25th term.
7. Find dy/dx for the following functions.
   (i) $y = 3x^2 + 2x + 6$ (ii) $y = (x+2 / x+1)$
8. Evaluate
   (i) $\int (1-x)(4-3x)(3x+2)\,dx$ (ii) $\int (x + 1/x)^3\,dx$

SECTION– B

II Answer <u>ONE</u> Question from each unit (5 X 10 = 50)

UNIT- I

9. The series $\sum 1/n^p = 1/1^p + 1/2^p + 1/3^p + \text{------} + 1/n^p + \text{------}$ is convergent if $p>1$ and divergent if $p\leq 1$. Prove it.

(Or)

10. Solve the equation $\sqrt{x/(1-x)} + \sqrt{(1-x)/x} = 2\ ^1/_6$

UNIT- II

11. Explain binomial theorem and find the middle term in the expansion using Binomial theorem
    (i) $(3x/_7 - 2Y)^{10}$ (ii) $(4x^2 + 5x^3)^5$

(Or)

12. Define progression and explain A.P, G.P. & H.P.

Signature of the Chairman (B.O.S.)
(20.....Exams)

UNIT- III

13. Solve the following system of linear equations by using the matrix method.
    $3x + 4y + 5z = 18$, $2x-y+8z=13$ and $5x-2y+7z=20$.

1-1-121

UNIT- IV

15. (a) Define maxima & Minima conditions
    (b) Determine whether the curves of the following function rise or fall or remain stationary at the points indicated against them
    (i) $y=1+2x-x^2$, at $x=1$ and at $x=2$
    (ii) $y=10x^3-15x^2+10$, at $x=2$ and at $x=3$

(Or)

16. Solve the equations $2x^2 - 10x + 5 = 0$ and $(b-c)\,x^2 + (c-a)x + (a-b) = 0$

UNIT- V

17. Find dy/dx for the following functions.
    (i) $y = 4x^3 + 3x^2+6x$), (ii) $y= (x^2 - 2x + 1) / 2x+1$ (iii) $y= (3x-4) / (4x+5)$

(Or)

18. Evaluate (i) $\int (2x+1)\,(4-3x)\,(3x+2)\,dx$ (ii) $\int (2x + 1/x)^2$

P. [illegible]
(Chairman, BOS)

Signature of the
Chairman (B.O.S.)
(20.....Exams)

SRI VENKATESWARA UNIVERSITY

Revised Common Framework of CBCS for B.Com (w.e.f.2016-17)

B.Com - SEMESTER –I

Sl. No.	Course	Name of the subject	Total Marks	Mid. Sem. Exam*	Sem. End Exam	Teaching Hours**	Credits
1.	First Language	English	100	25	75	4	3
2.	Second Language	(Tel/Hindi/Urdu/Sans)	100	25	75	4	3
3.	Foundation Course -1	HVPE (Human Values & Professional Ethics)*	50	---	50	2	2
4.	Foundation Course- 2	Environmental Studies	50	---	50	2	2
5.	DSC 1 A	Fundamentals of Accounting-I	100	25	75	6	4
6.	DSC 2 A	Business Organization	100	25	75	6	4
7.	DSC 3 A	Business Economics-I	100	25	75	6	4
Total			**600**	**125**	**475**	**30**	**22**

#The marks split between formal test and co-curricular activities may be decided by the University concerned @ Syllabus size shall be in accordance with the No. of teaching hours.

*HVPE may be taught by Telugu teachers

SRI VENKATESWARA UNIVERSITY; TIRUPATI

B.Com. Detailed Syllabi w.e.f. 2016-17

SEMESTER - I

DSC 1A - FUNDAMENTALS OF ACCOUNTING-I

Unit-I – Introduction to Accounting

Need for Accounting – Definition – Objectives, Advantages – Book keeping and Accounting–Accounting concepts and conventions - Accounting Cycle - Accounting equation - Classification of Accounts and its rules - Double entry book keeping – Journalizing – Posting to ledgers, Balancing of ledger accounts- problems.

Unit –II – Subsidiary Books

Types of Subsidiary Books – Journal proper - Cash Book, Three column Cash Book- Petty cash Book -Problems.

Unit - III -Trial Balance& Rectification of Errors

Preparation of Trial Balance – Types of Errors – Rectification of Errors- Suspense Account.

Unit-IV- Bank Reconciliation Statement

Need for bank reconciliation - Reasons for difference between Cash Book and Pass Book Balances- Preparation of Bank Reconciliation Statement- Problems on both favorable and unfavorable balances.

Unit-V-Final Accounts

Meaning – Features – Manufacturing Account – Preparation of Trading Account, Profit & Loss Account and Balance Sheet with Adjustments.**(Problems)**

Reference Books

1. Tulasian, Accountancy -I, McGraw Hill Co.
2. T.S.Reddy & A. Murthy, Financial Accounting , Margham Publications
3. R L Gupta & V. K Gupta, Principles and Practice of Accounting, Sultan Chand & Sons
4. S.P. Jain & K.L Narang, Accountancy-I, Kalyani Publishers
5. V.K.Goyal, Financial Accounting, Excel Books
6. K. Arunjothi, Fundamentals of Accounting; Maruthi Publications

Sri Venkateswara University
Model Paper
I B.Com
Semester – I, November, 2016
DSC 1A - Fundamentals of Accounting-I

Time: 3 Hours Max. Marks: 75

Section A

Answer any **Five** of the following Questions

(5 x 3= 15 Marks)

1. (a) From the following particulars prepare Raju's A/c

	Rs.
1-1-2014 Amount due from Raju	8,000
5-1-2014 Sold goods to Raju	14,000
8-1-2014 Purchased goods from Raju	5,000
14-1-2014 Cash received from Raju	6,000
24-1-2014 Cash paid to Raju	4,000
31-1-2014 Raju's A/c settled by cheque	

(b) Write an opening entry
Cash at Bank Rs.8,000/-, Accrued interest Rs.3,000/-, unpaid wages Rs.2,000/-, Unexpired insurance Rs.1,000/-, Rent received in advance Rs.4,000/-, debtors Rs.6,000/-, Premises Rs.8,000/-, Creditors Rs.7,000/-, Bills payable Rs.5,000/-, Bills receivable Rs.7,000/-, Bank overdraft Rs.4,000/-

(c) Write adjusting entries
i) Unexpired insurance Rs.1000/- ii) Outstanding wages Rs.4,000/- iii) Rent received an advance Rs.2,000/- iv) Accrued interest Rs.5,000/- v) Appreciation on building Rs.3,000/-

(d) A trader maintains Petty cash book under imprest system. Record the following Transactions in his Petty Cash Book:

2014		Rs.
Sep. 1	Received for Petty payments	500
2	Postage	40
5	Stationery	25
8	Advertising	50
12	Wages paid	20
16	Carriage	15
20	Conveyance	22
30	Postage	50

(e) What are the rules relating to different types of accounts?
(f) What are the causes for bank reconciliation statement?
(g) Suspense Account?
(h) What are the errors disclosed by trial balance?
(i) Three columnar Cash Book?
(j) Different types of Subsidary Books?

Section - B

Answer any ONE Question from each unit.

(5 ×12 =60 Marks)

UNIT I

2. Classify the following into Personal, Real and Nominal Accounts
   (a) Capital (b) Rent recovered (c) Accrued Interest
   (d) Discount (e) Bad debts (f) Carriage (g) goodwill
   (h) Premises (i) Investments (j) Work-in-Progress (k) Cash (l) Bank
3. Journalise the following transactions.
   (a) Rao starts business with Rs.10,000 cash and a building worth Rs.50,000
   (b) Purchased goods worth Rs.20,000 out of which goods worth Rs.12,000 was on credit from Shyam.
   (c) Sold goods on credit worth Rs.16,000 to Ram.
   (d) Received Rs.15,600 from Ram in full settlement of his account.
   (e) Paid Rs.11,800 to Shyam in full settlement of Rs.12,000 due to him.
   (f) Paid wages Rs.500 and salaries Rs.2,000

UNIT – II

4. Enter the following transactions in suitable subsidiary books.

		Rs.
Jan.1	Purchased goods from Rekha	7,500
4	Sold goods to Midhum	8,000
5	Returned gods to Rekha	500
6	Sridevi bought goods from us	4,000
8	Received goods returned by Midhun	400
10	Rajesh sold goods to us	4,000
15	Sold goods to Kishore	3,000
16	Returned goods to Rajesh	600
20	Kishore returns goods	500

5. Enter the following transactions in a three column cash book.

2015		Rs.
January 1	Started business with cash	40,000
2	Opened savings bank account with Vijaya Bank	16,000
5	Bought goods by cheque	350
6	Received cheque from Suhas	400
	Allowed him discount	20
8	Sold goods for cash	80
10	Paid into bank – Cash	60
	Cheque	400
14	Paid Sateesh by cheque	690
	Discount received	10
17	Paid Carriage	300
20	Drew from bank for office	400
31	Paid Salaries by cheque	200

UNIT – III

6. The following trial balance was prepared by a clerk appointed newly by Rao & Company. Some errors were found in the Trial Balance due to lack of experience in preparing accounts. Prepare Trial Balance by rectifying these mistakes.

S.No	Particulars	Debit Rs.	Credit Rs.
1.	Opening Stock	5,000	
2.	Capital		60,000
3.	Discount allowed		500
4.	Discount received		700
5.	Fixed Assets		60,000
6.	Sales	85,000	
7.	Purchases		45,000
8.	Purchase returns		1,000
9.	Sales returns	2,000	
10.	Carriage inwards		600
11.	Carriage outwards		700
12.	Wages, Salaries	25,000	
13.	Bills receivable	7,000	
14.	Debtors	9,000	
15.	Bills Payable		7,000
16.	Rent	3,000	
17.	Interest Paid		2,000
18.	Cash	800	
19.	Creditors	6,900	
20.	Closing Stock	33,800	
		1,77,500	1,77,500

7. Rectify the following errors by using Suspense account.
   a. Sales Day book was overcast by Rs. 100.
   b. A sale of Rs. 50 to X was wrongly debited to Y account.
   c. General expenses Rs. 180 was posted in the account as Rs. 810.
   d. A bill receivable for Rs. 155 was written in bills payable book. The bill was given by P.
   e. Legal expenses Rs. 119 paid to James was debited to his personal account.
   f. Cash received from C. Dass was debited to G. Dass Rs. 150.
   g. While carrying forward the total of one page of purchases book to the next, the amount of Rs. 1,235 was written as Rs. 1,325.

   Show Suspense a/c and Journal Entries.

8. The Cash Book (Bank Columns) and the Pass book of Umasankar are given below. Prepare Bank Reconciliation Statement as on 31st December, 2015.

Dr. Cash Book (Bank column) Cr.

		Rs.			Rs.
2015 Dec. 24			2015 Dec. 29		
	To balance b/d	360		By Mahesh	15
Dec. 27	To Prasad	60	Dec. 29	By Ganesh	145
Dec. 28	To Giridhar	120	Dec. 29	By Viswanadh	35
Dec. 28	To Sankar	42	Dec. 31	By balance c/d	387
		582			582
Jan. 1	To Balance b/d	387			

Dr. Bank Pass Book Cr.

		Rs.			Rs.
2015			2015		
Dec. 31	To Ganesh	145	Dec. 25	By balance b/d	360
Dec. 31	To balance c/d	400	Dec. 28	By Prasad	60
			Dec. 29	By Giridhar	120
			Dec. 31	By Interest	5
		545			545
			2016		
			Jan. 1	By balance b/d	400

9. From the following transactions prepare bank reconciliation statement.

1. Overdraft balance as per cash book Rs. 2,000
2. Out of cheques issued Rs. 35,000 payment was made for cheques amounting Rs. 28,000
3. Of Rs. 20,000 cheques sent for collection Rs. 2,000 not realised up to reconciliation date.
4. Bank charges Rs. 20 recorded in the debit side of the cash book.
5. Interest on investments Rs. 350 was realised by the banker but entered in the credit side of the cash book.
6. The cash book receipts side was overcast by Rs. 100
7. The pass book payments side was under caste by Rs. 300

UNIT – V

10. The following is the Trial Balance of B. Govil as on 31-3-1998:

Particulars	Debit Rs.	Credit Rs.
Cash in hand	540	
Cash at Bank	2,630	
Purchases	40,675	
Sales		98,780
Return Inwards	680	
Return Outwards		500
Wages	10,480	
Fuel and Power	4,730	
Carriage on Sales	3,200	
Carriage on Purchases	2,040	
Stock (1-4-97)	5,760	
Buildings	30,000	
Freehold Land	10,000	
Machinery	20,000	
Patents	7,500	
Salaries	15,000	
General Expenses	3,000	
Insurance	600	
Drawings	5,245	
Capital		71,000
Sundry Debtors	14,500	
Sundry Creditors		6,300
Closing Stock		
	1,76,580	**1,76,580**

Prepare the Trading and Profit and Loss Account and Balance Sheet as on 31-3-1998. The Stock on 31-3-1998 is Rs.6,800.

11. The following is the Trial Balance of Ram Lal on March 31, 1998.

Debit Balances:	Rs.		Rs.
Bank	7,500	Bills Receivable	7,500
Purchases (adjusted)	34,96,000	Stock (31st March,1998)	3,06,250
Salaries	21,000		
Carriage on Sales	2,500	Credit Balances:	
Carriage on Purchases	2,000	Capital	2,00,000
Lighting	1,500	Bills Payable	50,000
Buildings	1,35,000	Loan	1,00,000
Rate and Taxes	2,000	Sales	36,00,000
Sundry Debtors	40,000	Discount	2,000
Furniture	30,000	Commission	500
Cash in Hand	1,250	Sundry Creditors	1,00,000

Rates have been prepaid to the extent of Rs.600. During the year, bad debts amounted to Rs 2,500. A provision @ 5% has to be made on debtors. Buildings have to be depreciated at 2% and Furniture at 10%. Prepare the Trading and Profit & Loss A/c and the Balance Sheet as on March 31, 1998.

DSC 2 A - BUSINESS ORGANIZATION

Unit-I – Introduction

Concepts of business, Trade, Industry and Commerce –Business- Features of Business -Trade - Classification- aids to Trade – Industry – Classification – Relationship of Trade , industry and Commerce.

Unit II- Business Functions & Entrepreneurship

Functions of Business- Factors influencing the choice of suitable form of organization – Meaning of Entrepreneurship – Types – Functions of Entrepreneurship.

Unit –III – Forms of Organization

Sole Proprietorship – meaning – Characteristics – Advantages and Disadvantages – Partnership- Meaning – Characteristics- Kinds of partners – Advantages and Disadvantages – Partnership Deed – Hindu undivided family .

Unit-IV- Company

Company – Meaning – Characteristics –Advantages – kinds of companies - Government Company - Differences between Private Ltd and Public Ltd Companies

Unit-V- Company Incorporation

Preparation of important Documents for incorporation of Company – Memorandum of Association – Articles of Association – Differences Between Memorandum of Association and Articles of Association. Contents of Prospectus

Reference Books

1. Dr.C.D.Balaji and G.Prasad, Business Organization - Margham Publications, Chennai-17.
2. R.K.Sharma and Shashi K Gupata Business Organization - Kalayani Publications.
3. C.B.Guptha Industrial Organization and Management, Sulthan Chand.
4. Y.K.Bushan Business organization and Management, Sulthan Chand.
5. Sherlekar Business Organization and Management , Himalaya Publications.

Sri Venkateswara University
Model Paper
I B.Com
Semester – I, November, 2016
DSC 2 A - Business Organization

Time : 3 Hours Max. Marks : 75

Section A

Answer any **Five** of the following Questions

(5 x 3 = 15 Marks)

1. (a) Different types of Trade
   (b) Different types of Industries
   (c) Different types of Entrepreneurs
   (d) Functions of Business
   (e) Partnership deed
   (f) Joint Hindu family
   (g) Types of companies
   (h) Prospectus
   (i) Commerce
   (j) Government Company

Section - B

Answer any ONE Question from each unit.

(5 ×12 = 60 Marks)

UNIT I

2. Define Business. Explain the characteristics of Business.
3. Distinguish between Trade, Industry and Commerce

UNIT – II

4. What are the factors influencing the choice of a suitable form of organization?
5. What are the functions of Entrepreneur?

UNIT – III

6. What are the advantages and disadvantages of sole trading business
7. What are the features of Partnership Business?

UNIT – IV

8. Define Company. Explain the characteristics of a Company
9. Distinguish between Private Company and Public Company

UNIT – V

10. Describe the legal formalities for the incorporation of a Public Limited Company.
11. Distinguish between Memorandum of Association and Articles of Association.

2-1-114

DSC 3A - BUSINESS ECONOMICS-I

Unit-I- Introduction

Meaning and Definitions of Business Economics - Nature and scope of Business Economics- Micro and Macro Economics and their differences.

Unit-II- Demand Analysis

Meaning and Definition of Demand - Determinants of Demand - Demand function – Law of demand- Demand Curve - Exceptions to Law of Demand.

Unit –III- Elasticity of Demand

Meaning and Definition of Elasticity of Demand – Types of Elasticity of Demand – Measurements of Price elasticity of demand – Total outlay Method – Point Method – Arc Method.

Unit – IV- Cost and Revenue Analysis

Classification of Costs – Total - Average – Marginal Cost – Cost function –Cost Output relations in Long-run and Short-run – Total Revenue - Average revenue – Marginal Revenue.

Unit-V- Break-Even Analysis

Type of Costs – Fixed Cost – Semi-variable Cost – Variable Cost– Cost behaviour - Breakeven Analysis - Its Uses and limitations.

Reference Books

1. Aryasri and Murthy Business Economics , McGraw Hill
2. S.Sankaran, Business Economics, Margham Publications, Chennai.
3. Business Economics - Kalyani Publications.
4. Business Economics – Himalaya Publishing House.
5. Business Economics, Maruthi Publications.

Sri Venkateswara University
Model Paper
I B.Com
Semester – I, November, 2016
DSC 3A - BUSINESS ECONOMICS-I

Time : 3 Hours Max. Marks : 75

Section A

Answer any **Five** of the following Questions

(5 x 3 = 15 Marks)

1. (a) Business Economics
   (b) Micro Economics
   (c) Demand Schedule
   (d) Income Elasticity of demand
   (e) Cross demand
   (f) Cost function
   (g) Marginal Cost
   (h) Fixed Cost
   (i) Break even point
   (j) Margin of safety

Section - B

Answer any ONE Question from each unit.

(5 ×12 = 60 Marks)

UNIT I

2.Describe the nature and scope of Business Economics
3.Distinguish between Micro and Macro Economics

UNIT – II

4.What are the factors to determine the demand?
5.What are the exceptions to law of demand?

UNIT – III

6.What are the different types of Elasticity of demand?
7.How is price elasticity of demand measured under total outlay method and point method?

UNIT – IV

8.Describe the different concepts of cost
9.Describe the cost output relations in short run.

UNIT – V

10.Distinguish between fixed cost and variable cost.
11.What are the uses of break even analysis?

SRI VENKATESWARA UNIVERSITY

Revised Common Framework of CBCS for B.Com (CA) (w.e.f.2016-17)

B.Com (CA)-SEMESTER –I

Sl. No.	Course	Name of the subject	Total Marks	Mid. Sem. Exam*	Sem. End Exam	Teaching Hours**	Credits
1.	First Language	English	100	25	75	4	3
2.	Second Language	(Tel/Hindi/Urdu/Sans)	100	25	75	4	3
3.	Foundation Course -1	HVPE (Human Values & Professional Ethics)*	50	---	50	2	2
4.	Foundation Course- 2	Environmental Studies	50	---	50	2	2
5.	DSC 1 A	Fundamentals of Accounting-I	100	25	75	6	4
6.	DSC 2 A	Business Organization	100	25	75	6	4
7.	DSC3 A	Fundamentals of Computers	100	25	75	4	4
		Practical's	50		50	2	2
Total			**650**	**125**	**525**	**30**	**24**

#The marks split between formal test and co-curricular activities may be decided by the University concerned @ Syllabus size shall be in accordance with the No. of teaching hours.
*HVPE may be taught by Telugu teachers

SRI VENKATESWARA UNIVERSITY; TIRUPATI

B.Com;B.Com (CA); B.A (Accountancy)
Detailed Syllabi w.e.f. 2016-17
SEMESTER - I
DSC 1A - Fundamentals of Accounting-I

Unit-I – Introduction to Accounting

Need for Accounting – Definition – Objectives, Advantages – Book keeping and Accounting–Accounting concepts and conventions - Accounting Cycle - Accounting equation - Classification of Accounts and its rules - Double entry book keeping – Journalizing – Posting to ledgers, Balancing of ledger accounts- problems.

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Types of Subsidiary Books – Journal proper - Cash Book, Three column Cash Book- Petty cash Book -Problems.

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Need for bank reconciliation - Reasons for difference between Cash Book and Pass Book Balances- Preparation of Bank Reconciliation Statement- Problems on both favorable and unfavorable balances.

Unit-V-Final Accounts

Meaning – Features – Manufacturing Account – Preparation of Trading Account, Profit & Loss Account and Balance Sheet with Adjustments.**(Problems)**

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1. Tulasian, Accountancy -I, McGraw Hill Co.
2. T.S.Reddy& A. Murthy, Financial Accounting , Margham Publications
3. R L Gupta & V. K Gupta, Principles and Practice of Accounting, Sultan Chand & Sons
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5. V.K.Goyal, Financial Accounting, Excel Books
6. K. Arunjothi, Fundamentals of Accounting; Maruthi Publications

I B.Com; B.Com (CA);
DSC 2 A - Business Organization

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3. C.B.Guptha Industrial Organization and Management, Sulthan Chand.
4. Y.K.Bushan Business organization and Management, Sulthan Chand.
5. Sherlekar Business Organization and Management , Himalaya Publications.

B.COM. / B.A. / B.Sc – COMPUTER APPLICATIONS

I YEAR - SEMESTER –I

DSC3A: FUNDAMENTALS OF COMPUTERS

UNIT I

Exploring Computers and Their Users:

An Overview of Computer System : Define Computer- Computers for Individual Users – Computer for organizations- Importance of computers.

Inside the Computer System

Describe the Machine- Parts of a Computer System – Hardware, Software, Data, Users – Information Processing cycle – essential Computer Hardware – Processing Devices- Memory Devices- Input/Output Device- System software – application Software.

UNIT II

Input Devices : The Keyboard , The mouse, The track ball, Scanner. **Output Devices** : Monitors – CRT monitors , Flat Panel Monitors ; PC projectors **Sound Systems** –Audio & Video devices (Multi-Media Device) ; **Hard copy devices** – Dot matrix printers , Ink Jet Printers , Laser Printers , Plotters.

UNIT III

Processing Data : How Computer process data- Data representation, and Data processing in a computer .**Modern CPU's**: Microcomputer Processors- Intel , AMD, Freescale, IBM processors-Types of Processors- RISC Processors,- Connecting computer to other devices – The Bus, Serial and Parallel ports , SCSI , MIDI , and other specialized expansion ports, Expansion slots and boards.

UNIT IV

Storing Information in a Computer : Magnetic Disks – hard disk , Floppy disk, Optical Storage devices – CDROM , DVD ROM , CD – Recordable , CD – Rewritable.

UNIT V

How to Build a Computer: Knowing Computer Hardware Parts – Cataloging and purchasing the parts – Assembling the System –The first Boot –Installing Software – Maintenance of Computer

TEXT BOOKS :

1. Peter Norton , Introduction to Computers , 6th Edition , Tata McGraw – Hill , 2008.
2. Jacob Beckerman , How to Build a Computer 2014-15: Learn, Select Parts, Assemble, and Install: A Step by Step Guide to Your First Homebuilt.

REFERENCE BOOKS :

1. Leon A and Leon M, Computers for Everyone , Leon Vikas , 2001 .
2. Turban E, Rainer R K , and Potter R E , Introduction to Information Technology , John Wiley & Sons , 2000.

SRI VENKATESWARA UNIVERSITY
ModelQuestion Paper
I B.Com; B.Com (CA); B.A (Accountancy)
Semester – I
DSC 1A - Fundamentals of Accounting-I

Time: 3 Hours Max. Marks: 75

Section A

Answer any **Five** of the following Questions

(5 x 3= 15 Marks)

1. (a) From the following particulars prepare Raju's A/c

		Rs.
1-1-2014	Amount due from Raju	8,000
5-1-2014	Sold goods to Raju	14,000
8-1-2014	Purchased goods from Raju	5,000
14-1-2014	Cash received from Raju	6,000
24-1-2014	Cash paid to Raju	4,000
31-1-2014	Raju's A/c settled by cheque	

(b) Write an opening entry
Cash at Bank Rs.8,000/-, Accrued interest Rs.3,000/-, unpaid wages Rs.2,000/-, Unexpired insurance Rs.1,000/-, Rent received in advance Rs.4,000/-, debtors Rs.6,000/-, Premises Rs.8,000/-, Creditors Rs.7,000/-, Bills payable Rs.5,000/-, Bills receivable Rs.7,000/-, Bank overdraft Rs.4,000/-

(c) Write adjusting entries
i) Unexpired insurance Rs.1000/- ii) Outstanding wages Rs.4,000/- iii) Rent received an advance Rs.2,000/- iv) Accrued interest Rs.5,000/- v) Appreciation on building Rs.3,000/-

(d) A trader maintains Petty cash book under imprest system. Record the following Transactions in his Petty Cash Book:

2014		Rs.
Sep. 1	Received for Petty payments	500
2	Postage	40
5	Stationery	25
8	Advertising	50
12	Wages paid	20
16	Carriage	15
20	Conveyance	22
30	Postage	50

(e) What are the rules relating to different types of accounts?
(f) What are the causes for bank reconciliation statement?
(g) Suspense Account?
(h) What are the errors disclosed by trial balance?
(i) Three columnar Cash Book?
(j) Different types of Subsidary Books?

Section - B

Answer any ONE Question from each unit.

(5 ×12 =60 Marks)

UNIT I

2. Classify the following into Personal, Real and Nominal Accounts
   (a) Capital (b) Rent recovered (c) Accrued Interest
   (d) Discount (e) Bad debts (f) Carriage (g) goodwill
   (h) Premises (i) Investments (j) Work-in-Progress (k) Cash (l) Bank
3. Journalise the following transactions.
   (a) Rao starts business with Rs.10,000 cash and a building worth Rs.50,000
   (b) Purchased goods worth Rs.20,000 out of which goods worth Rs.12,000 was on credit from Shyam.
   (c) Sold goods on credit worth Rs.16,000 to Ram.
   (d) Received Rs.15,600 from Ram in full settlement of his account.
   (e) Paid Rs.11,800 to Shyam in full settlement of Rs.12,000 due to him.
   (f) Paid wages Rs.500 and salaries Rs.2,000

UNIT – II

4. Enter the following transactions in suitable subsidiary books.

		Rs.
Jan.1	Purchased goods from Rekha	7,500
4	Sold goods to Midhum	8,000
5	Returned gods to Rekha	500
6	Sridevi bought goods from us	4,000
8	Received goods returned by Midhun	400
10	Rajesh sold goods to us	4,000
15	Sold goods to Kishore	3,000
16	Returned goods to Rajesh	600
20	Kishore returns goods	500

5. Enter the following transactions in a three column cash book.

2015		Rs.
January 1	Started business with cash	40,000
2	Opened savings bank account with Vijaya Bank	16,000
5	Bought goods by cheque	350
6	Received cheque from Suhas	400
	Allowed him discount	20
8	Sold goods for cash	80
10	Paid into bank – Cash	60
	Cheque	400
14	Paid Sateesh by cheque	690
	Discount received	10
17	Paid Carriage	300
20	Drew from bank for office	400
31	Paid Salaries by cheque	200

UNIT – III

6. The following trial balance was prepared by a clerk appointed newly by Rao& Company. Some errors were found in the Trial Balance due to lack of experience in preparing accounts. Prepare Trial Balance by rectifying these mistakes.

S.No	Particulars	Debit Rs.	Credit Rs.
1.	Opening Stock	5,000	
2.	Capital		60,000
3.	Discount allowed		500
4.	Discount received		700
5.	Fixed Assets		60,000
6.	Sales	85,000	
7.	Purchases		45,000
8.	Purchase returns		1,000
9.	Sales returns	2,000	
10.	Carriage inwards		600
11.	Carriage outwards		700
12.	Wages, Salaries	25,000	
13.	Bills receivable	7,000	
14.	Debtors	9,000	
15.	Bills Payable		7,000
16.	Rent	3,000	
17.	Interest Paid		2,000
18.	Cash	800	
19.	Creditors	6,900	
20.	Closing Stock	33,800	
		1,77,500	1,77,500

7. Rectify the following errors by using Suspense account.
   a. Sales Day book was overcast by Rs. 100.
   b. A sale of Rs. 50 to X was wrongly debited to Y account.
   c. General expenses Rs. 180 was posted in the account as Rs. 810.
   d. A bill receivable for Rs. 155 was written in bills payable book. The bill was given by P.
   e. Legal expenses Rs. 119 paid to James was debited to his personal account.
   f. Cash received from C. Dass was debited to G. DassRs. 150.
   g. While carrying forward the total of one page of purchases book to the next, the amount of Rs. 1,235 was written as Rs. 1,325.

   Show Suspense a/c and Journal Entries.

UNIT – IV

8. The Cash Book (Bank Columns) and the Pass book of Umasankar are given below. Prepare Bank Reconciliation Statement as on 31st December, 2015.

Dr. Cash Book (Bank column) Cr.

		Rs.			Rs.
2015 Dec. 24			2015 Dec. 29		
	To balance b/d	360		By Mahesh	15
Dec. 27	To Prasad	60	Dec. 29	By Ganesh	145
Dec. 28	To Giridhar	120	Dec. 29	By Viswanadh	35
Dec. 28	To Sankar	42	Dec. 31	By balance c/d	387
		582			582
Jan. 1	To Balance b/d	387			

Dr. Bank Pass Book Cr.

		Rs.			Rs.
2015			2015		
Dec. 31	To Ganesh	145	Dec. 25	By balance b/d	360
Dec. 31	To balance c/d	400	Dec. 28	By Prasad	60
			Dec. 29	By Giridhar	120
			Dec. 31	By Interest	5
		545			545
			2016		
			Jan. 1	By balance b/d	400

9. From the following transactions prepare bank reconciliation statement.

1. Overdraft balance as per cash book Rs. 2,000
2. Out of cheques issued Rs. 35,000 payment was made for cheques amounting Rs. 28,000
3. Of Rs. 20,000 cheques sent for collection Rs. 2,000 not realised up to reconciliation date.
4. Bank charges Rs. 20 recorded in the debit side of the cash book.
5. Interest on investments Rs. 350 was realised by the banker but entered in the credit side of the cash book.
6. The cash book receipts side was overcast by Rs. 100
7. The pass book payments side was under caste by Rs. 300

UNIT – V

10. The following is the Trial Balance of B. Govil as on 31-3-1998:

Particulars	Debit Rs.	Credit Rs.
Cash in hand	540	
Cash at Bank	2,630	
Purchases	40,675	
Sales		98,780
Return Inwards	680	
Return Outwards		500
Wages	10,480	
Fuel and Power	4,730	
Carriage on Sales	3,200	
Carriage on Purchases	2,040	
Stock (1-4-97)	5,760	
Buildings	30,000	
Freehold Land	10,000	
Machinery	20,000	
Patents	7,500	
Salaries	15,000	
General Expenses	3,000	
Insurance	600	
Drawings	5,245	
Capital		71,000
Sundry Debtors	14,500	
Sundry Creditors		6,300
Closing Stock		
	1,76,580	**1,76,580**

Prepare the Trading and Profit and Loss Account and Balance Sheet as on 31-3-1998. The Stock on 31-3-1998 is Rs.6,800.

11. The following is the Trial Balance of Ram Lal on March 31, 1998.

Debit Balances:	Rs.		Rs.
Bank	7,500	Bills Receivable	7,500
Purchases (adjusted)	34,96,000	Stock (31st March,1998)	3,06,250
Salaries	21,000		
Carriage on Sales	2,500	Credit Balances:	
Carriage on Purchases	2,000	Capital	2,00,000
Lighting	1,500	Bills Payable	50,000
Buildings	1,35,000	Loan	1,00,000
Rate and Taxes	2,000	Sales	36,00,000
Sundry Debtors	40,000	Discount	2,000
Furniture	30,000	Commission	500
Cash in Hand	1,250	Sundry Creditors	1,00,000

Rates have been prepaid to the extent of Rs.600. During the year, bad debts amounted to Rs 2,500. A provision @ 5% has to be made on debtors. Buildings have to be depreciated at 2% and Furniture at 10%. Prepare the Trading and Profit & Loss A/c and the Balance Sheet as on March 31, 1998.

SRI VENKATESWARA UNIVERSITY
Model Paper
B.Com.B.Com (CA); Semester – I,
DSC 2 A - Business Organization

Time : 3 Hours Max. Marks : 75

Section A

Answer any **Five** of the following Questions

(5 x 3 = 15 Marks)

1.(a) Different types of Trade
(b) Different types of Industries
(c) Different types of Entrepreneurs
(d) Functions of Business
(e) Partnership deed
(f) Joint Hindu family
(g) Types of companies
(h) Prospectus
(i) Commerce
(j) Government Company

Section - B

Answer any ONE Question from each unit.

(5 ×12 = 60 Marks)

UNIT I

2. Define Business. Explain the characteristics of Business.
3. Distinguish between Trade, Industry and Commerce

UNIT – II

4. What are the factors influencing the choice of a suitable form of organization?
5. What are the functions of Entrepreneur?

UNIT – III

6. What are the advantages and disadvantages of sole trading business
7.What are the features of Partnership Business?

UNIT – IV

8. Define Company. Explain the characteristics of a Company
9. Distinguish between Private Company and Public Company

UNIT – V

10. Describe the legal formalities for the incorporation of a Public Limited Company.
11.Distinguish between Memorandum of Association and Articles of Association.

MODEL QUESTION PAPER
I B.Com. / B.A. / B.Sc., Computer Applications
SEMESTER – I
DSC 3A: FUNDAMENTALS OF COMPUTERS

Time : 3 Hours Max. Marks : 75

Section A

Answer any **Five** of the following Questions (5 x 3 = 15 Marks)

1. (a) Applications of computer
   (b) Any three Characteristics of Computer
   (c) Memory cards
   (d) Processor
   (e) GUI
   (f) Serial Bus
   (g) PCI cards
   (h) Processing Data
   (i) RAM
   (j) Flash memory

Section - B

Answer any ONE Question from each unit. (5 × 12 = 60 marks)

UNIT I

2. Define computer and explain the Organization of computer?
3. Explain about parts of the computer?

UNIT – II

4. Explain about keyboard and pointing devices.
5. Explain output devices CRT monitors and Printers.

UNIT - III

6. Explain Data processing and how the data is represented in computer?
7. Explain different types of memory?

UNIT – IV

8. Explain about Magnetic storage devices.
9. Explain Optical storage devices and USB Flash devices?

UNIT – V

10. What is booting? Explain deferent steps for assembling computer.
11. What are the parts are needed to build a computer? Explain.

B.Sc Biotechnology: Choice based Credit System

B. Sc. I – SEMESTER I - W.E.F. 2016-17

BT 101 MICROBIOLOGY AND CELL BIOLOGY

UNIT I

History, Development and Microscopy

History and development of microbiology: contributions of Louis Pasteur, Robert Koch and Edward Jenner. Microscopy: Compound microscopy: Numerical aperture and its importance, resolving power, oil immersion objectives and their significance, principles and applications of dark field, phase contrast, fluorescent microscopy. Electron microscopy: Principle, ray diagram and applications, TEM and SEM, comparison between optical and electron microscope, limitations of electron microscopy.

Stains and staining procedures: Acidic, basic and neutral stains, Gram staining, Acid fast staining, Flagella staining, Endospore staining.

UNIT II

A. **Bacteria:**

Bacterial morphology and subcellular structures, general morphology of bacteria, shapes and sizes, generalized diagram of typical bacterial cell.

Slime layer and capsule, difference between the structure, function and the position of the two structures.

Cell wall of gram +ve and Gram -ve cells.

General account of flagella and fimbriae.

Chromatin material, plasmids; definition and kind of plasmids (conjugative and non-conjugative) F, R, and Col plasmids.

Endospores: Detailed study of endospore structure and its formation, germination, basis of resistance.

B. **Viruses**: General characteristics of viruses, difference between virus and typical microbial cell, structure, different shapes and symmetries with one example of each type, classification of viruses on the basis of nucleic acids, phage and animal cell viruses, example of each and their importance. Brief idea of lytic cycle and lysogeny.

UNIT III

Nutrition: Basic nutritional requirements: Basic idea of such nutrients as water, carbon, nitrogen, sulfur and vitamins etc., natural and synthetic media, nutritional classification of bacteria. Selective and Differential media, Enriched media, Enrichment media.

UNIT IV: Microbial growth and control:

Growth: Growth rate and generation time, details of growth curve and its various phases.
Concept of synchronous cultures, continuous and batch cultures (chemostat and turbidostat). Measurement of growth.
Physical conditions required for growth: Temperature (classification of microorganisms on the basis of temperature requirements), Ph etc. Pure cultures and cultural characteristics. Maintenance of pure culture.

Microbial Control: Terminologies - Sterilization, disinfection, antiseptic, sanitization, germicide, microbistasis, preservative and antimicrobial agents.
Mechanism of cell injury: Damage to cell wall, cell membrane, denaturation of proteins, inhibition of protein synthesis, transcription, replication, other metabolic reactions and change in supercoiling of DNA.
Physical control: Temperature (moist heat, autoclave, dry heat, hot air oven and incinerators), dessication, surface tension, osmotic pressure, radiation, UV light, electricity, ultrasonic sound waves, filtration.
Chemical control: Antiseptics and disinfectants (halogens, alcohol, gaseous sterilization.
Concept of biological control.

UNIT V Cell Biology
Eukaryotic Cell - Structure and function of the following: nucleus, nuclear membrane, nucleoplasm, nucleolus, golgi complex, endoplasmic reticulum, lysosomes, peroxisomes, glyoxisomes and vacuoles.
Plant cell wall.
Cytoskeleton (actin, microtubules) and cell locomotion.
Mitosis and meiosis. Brief idea of cell cycle..
Cell and its life cycles: Mitosis and meiosis

B.Sc. I SEMESTER I

PRACTICALS

BIOTECHNOLOGY

102 Microbiology & Cell Biology

1. Demonstration, use and care of microbiological equipments.
2. Preparation of media, sterilization and isolation of bacteria.
3. Isolation of Bacteriophage from sewage / other sources.
4. Demonstration of motility of Bacteria.
5. Simple staining of bacteria
6. Gram staining of Bacteria
7. Acid fast staining of Bacteria
8. Endospore staining.
9. Demonstration of starch hydrolysis by bacterial cultures
10. Growth of fecal coliforms on selective media.
11. Isolation of pure culture by pour plate method
12. Isolation of pure culture by streak plate method.
13. Anaerobic cultivation of microorganisms.
14. Cultivation of yeast and moulds.
15. Antibiotic sensitivity assay.
16. Oligodynamic action of metals.
17. To study germicidal effect of UV light on bacterial growth.
18. Stages of mitosis.
19. Stages of meiosis.

Note: - Mandatory to perform at least ten practical.

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B.Sc I year Biotechnology

Semester I - 2016-17

Model question Paper

Course code : BT 101

Cell Biology

Time: 3h | Marks 75

Section A

Answer any five of the following | 5 x 3 = 15 M

1. Limitations of electron microscopy
2. Cytogeny
3. Gram Staining
4. Basis of resistance
5. Differential medium.
6. Synchronous culture
7. Denaturation of protein
8. Lysosomes

Section B

Answer all the questions | 5 x 12 = 60 M

9 a) what are the different stains employed in identification of micro organisms

or

b) Explain the principle, construction and applications of electron microscopy

PTO

10) a) Explain in detail about structure and formation of endospores

or

b) How to classify viruses based on the content of nucleic acids.

11) a) what are the various media employed in cultivation of microorganisms.

or

b) Explain the basic nutritional requirements employed in media preparation.

12) a) what are the physical factors influence the growth of microorganisms.

or

b) what is sterilization and what are the physical and chemical methods employed for it.

13) a) Draw the structure of eukaryotic cell and explain the different organelles.

or

b) Explain the differences between mitosis and meiosis.

—x—

Subject Coordinator
BOS Chairman
Biotech (UG)

3-1-103 R

I B.Sc - SEMESTER- I: BOTANY SYLLABUS
W.E.F. 2016-17
Paper- I : Microbial Diversity, Algae and Fungi

Total hours of teaching 60hrs @ 4 hrs per week

UNIT-I: MICROBIAL WORLD (Origin and Evolution of Life, Microbial diversity (12hrs)

1. Discovery of microorganisms, origin of life, spontaneous, biogenesis, Pasteur experiments, germ theory of disease.
2. Classification of microorganisms – R.H. Whittaker's five kingdom concept, Carl Woese's- Domain system.
3. Brief account of special groups of bacteria- Archaebacteria, Mycoplasma, Chlamydia,
   Actinomycetes, Rickettsias and Cyanobacteria.

UNIT- II: VIRUSES (12hrs)

1. Viruses- Discovery, general account, structure& replication of –T4 Phage (Lytic, Lysogenic) and TMV, Viroids, Prions.
2. Plant diseasescaused by viruses– Symptoms, transmission and control measures (Brief account only).
3. Study of Tobacco Mosaic, Bhendi Vein clearing and Papaya leaf curl diseases.

UNIT III: BACTERIA (12hrs)

1. Bacteria: Discovery, General characteristics, cell structure andnutrition.
2. Reproduction- Asexual and bacterial recombination (Conjugation, Transformation, Transduction).
3. Economic importance of Bacteria.

UNIT –IV Algae (12hrs)

1. General account - thallus organization and reproduction in Algae.
2. Fritsch classification of Algae (up to classes only) and economic importance.
3. Structure, reproduction and life history of *Oedogonium, Ectocarpus* and *Polysiphonia.*

UNIT V: FUNGI (12hrs)

1. General characteristics and outline classification (Ainsworth).
2. Structure, reproduction and life history of *Rhizopus* (Zygomycota),*Penicillium* (Ascomycota), and *Puccinia* (Basidiomycota).
3. Lichens-Structure and reproduction; ecological and economic importance.

Suggested activity: Seminar, Quiz, debate, collection of diseased plant parts –studying symptoms and identification of pathogen, collection and study of fresh and marine Algae available in local area.

Books for Reference:

1. Oladele Ogunseitan (2008) Microbial Diversity: Form and Function in Prokaryotes Wiley- Blackwell.
2. Pelczar, M.J. (2001) Microbiology, 5th edition, Tata Mc Graw-Hill Co, New Delhi.
3. Presscott, L. Harley, J. and Klein, D. (2005) Microbiology, 6th edition, Tata Mc Graw- Hill Co. New Delhi.
4. Fritsch F.E. (1935 The Structure & Reproduction of Algae 1945): Cambridge University Press Cambridge, U.K. Vol. I, Vol. II.
5. Smith, G.M (1955) :Cryptogamic Botany(Vol. I Algae, Fungi, & Lichens) McGraw-Hill Book Co., New York .
6. Ian Morris (1967): An Introduction to the Algae, Hutchinson, London.
7. Alexopoulos,C.J.., Mims, C.W. & Blackwell, M. (1996): Introductory Mycology John Wiley& Sons., Inc., N.Y., Chicester, Berisbane, Toronto, Singapore.
8. Webster, J (1999) : Introduction to Fungi(2nd edition) Cambridge University Press.

**Student Activities like Seminars, Assignments, Fieldwork, Study Projects, Models etc. are Part of Curriculum for all units in all papers.

I B.Sc – SEMESTER –I: BOTANY PRACTICAL SYLLABUS

Paper-I: Microbial Diversity, Algae and Fungi

Total hours of laboratory Exercises 30 hrs @ 2 per week

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1. Knowledge of Equipment used in Microbiology: Spirit lamp, Inoculation loop, Hot-air oven, Autoclave/Pressure cooker, laminar air flow chamber and Incubator.
2. Preparation of liquid and solid media for culturing of microbes (Demonstration).
3. Study of viruses and bacteria using electron photo micrographs (TMV, Bacteriophage, HIV, Cocci, Bacillus, Spirillum bacteria).
4. Gram staining technique.
5. Study of Plant disease symptoms caused by Bacteria (Citrus canker, leaf blight of rice, Angular leaf spot of Cotton) and viruses (TMV, Bhendi vein clearing and Leaf curl of Papaya),Fungi (Late blight of potato, Red rot of Sugarcane and Paddy blast).
6. Study of vegetative and reproductive structures of the following :
   a) **Cyanobacteria:** *Nostoc and Scytonema.*
   b) Algae: *Oedogonium, Ectocarpus, Polysiphonia*,
   c) Fungi: *Rhizopus, Penicillium and Puccinia* .
7. Study of plant materialinfected by Fungi (Rot of tomatoes,blue and greenmoulds of Ciitrus fruits and wheat rust(Section cutting of diseased parts of Wheat and Barberry - identification of different spores).
8. Lichens: Morphology and of anatomy of different thalli.
9. Field Visit.

B.Sc - SEMESTER –I
BOTANY PRACTICAL PAPER –I
Paper-1 P: Microbial Diversity, Algae and Fungi

Time: 3hrs. Max. Marks: 50

1. Identify giving reasons two of the given **Algal mixture" A**". Leave your preparation for evaluation. Draw labeled diagrams. (Slide--1mark, Diagrams--1mark, Identification--1mark)

   3x 2 = 6 Marks

2. Make suitable stained preparation of the **material "B"** to bring out the details of internal structure--identify giving reasons. Draw labeled diagrams and leave your preparations for evaluation.
   (Slide-4 marks, diagrams-3 marks, Identification-3marks)

   10 Marks

3. Perform Gram staining of the given Bacterial culture 9 Marks

4. Write critical notes and Identify D, E, F, G and H (5X3)= 15 Marks

5. Record(submission is compulsory) 10 Marks

Total: 50 Marks

Key:
A. Algal material
B. Fungi material
C. Bacterial culture
D. One of the instruments of Micro biology laboratory.
E. Whole specimen or a permanent slide of Algae.
F. Whole specimen or a permanent slide of Fungi.
G. Whole specimen or a permanent slide of Plant disease studied.
H. Whole specimen or a permanent slide of Lichens.

THREE YEAR B.SC. DEGREE EXAMINATION

FIRST SEMESTER

CHOICE BASED CREDIT SYSTEM

PART - II : BOTANY

Paper – I: Microbial Diversity, Algae and Fungi

Time: 3 Hours Max. Marks: 75

SECTION-A

Answer any five of the following questions.

Draw neat and labelled diagram where ever necessary.

(5 X 5 =25 Marks)

1. **Pasteur Experiments - పాశ్చర్ ప్రయోగాలు**
2. **Micoplasma - మైకోప్లాస్మా**
3. **Papaya Leaf curl - బొప్పాయి ఆకు ముడుత తెగులు**
4. **Bacteria cell diagram - బ్యాక్టీరియా కణము పటము**
5. **Polysiphonia Corposporophyta - పాలిసైఫోనియా కార్పోస్పారోఫైట**
6. **Puccinia Teleutospores - పక్సీనియా టెలుటోస్పోర్లు**
7. **Rhizopus Asexual Reproduction - రైజోపస్ అలైంగిక ప్రత్యుత్పత్తి**
8. **Autotrophic Bacteria - స్వయంపోషక బ్యాక్టీరియా**

SECTION-B

Answer all questions

(5 X 10 = 50 Marks)

9. **a) With the help of various theories write an essay on origin of life.**
   వివిధ సిద్ధాంతాల సహాయంతో జీవ పరిణామము గురించి ఒక వ్యాసము వ్రాయుము

(OR)

b) Write an essay on Cyanobacteria.

సయనో బ్యాక్టీరియా గురించి ఒక వ్యాసము వ్రాయుము

10. a) Explain various methods of replication in viruses

వైరస్ లలో జరిగే వివిధ ప్రతికృతి విధానాలను వివరించుము

(OR)

b) Describe various methods of transmission of viral diseases.

వైరస్ వ్యాధులు వ్యాపించే విధానాలను వివరించుము

11 . a) Describe different methods of reproduction in bacteria.

బ్యాక్టీరియాలలో జరిగే వివిధ ప్రత్యుత్పత్తి విధానాలను వివరించుము

(OR)

b) Write an essay on economic importance of Bacteria.

బ్యాక్టీరియాల ఆర్థిక ప్రాముఖ్యము గురించి వ్రాయుము

12. a) Write an essay on economic importance of Algae.

శైవలాల ఆర్థిక ప్రాముఖ్యము గురించి వ్రాయుము

(OR)

b) Explain reproduction in Oedogonium.

ఈడోగోనియంలో జరిగే ప్రత్యుత్పత్తి విధానాలను వివరించుము

13. a) Write general characters of Fungi

శిలీంధ్రాల సాధారణ లక్షణాలను గురించి వ్రాయుము

(OR)

b) Describe the external and internal structure of Lichens with the help of diagrams.

లైకెన్స్ యొక్క బాహ్య మరియు అంతర్నిర్మాణములను పటముల సహాయంతో వివరించుము

3-1-106 R

B.SC. CHEMISTRY SYLLABUS UNDER CBCS

SEMESTER – I – W.E.F. – 2016-17

PAPER I - INORGANIC & ORGANIC CHEMISTRY 60hrs (4h/w)

INORGANIC CHEMISTRY 30 hrs (2h / w)

UNIT –I

p-block elements –I **15h**

Group-13: Synthesis and structure of diborane and higher boranes (B_4H_{10} and B_5H_9)**,** boron-nitrogen compounds ($B_3N_3H_6$ and BN)

Group - 14: Preparation and applications of silanes and silicones.

Group - 15: Preparation and reactions of hydrazine, hydroxylamine.

UNIT-II

1. **p-block elements -II** **8h**

Group - 16: Classifications of oxides based on (i) Chemical behaviour and (ii) Oxygen content.

Group-17: Inter halogen compounds and pseudo halogens.

2. Organometallic Chemistry **7h**

Definition - classification of Organometallic compounds - nomenclature, preparation, properties and applications of alkyls of Li and Mg.

ORGANIC CHEMISTRY 30hrs (2h /w)

UNIT-III

Structural theory in Organic Chemistry **10 h**

Types of bond fission and organic reagents (Electrophilic, Nucleophilic, and free radical reagents including neutral molecules like H_2O,NH_3& $AlCl_3$).

Bond polarization : Factors influencing the polarization of covalent bonds, electro negativity - inductive effect. Application of inductive effect (a) Basicity of amines (b) Acidity of carboxylic acids (c) Stability of carbonium ions. Resonance or Mesomeric effect, application to (a) acidity of phenol, and (b) acidity of carboxylic acids. Hyper conjugation and its application to stability of carbonium ions, Free radicals and alkenes, carbanions, carbenes and nitrenes.

Types of Organic reactions : Addition - electrophilic, nucleophilic and free radical. Substitution - electrophilic, nucleophilic and free radical. Elimination- Examples.

UNIT-IV

l. **Acyclic Hydrocarbons** **6 h**

Alkenes - Preparation of alkenes. Properties: Addition of hydrogen - heat of hydrogenation and stability of alkenes. Addition of halogen and its mechanism. Addition of HX, Markonikov's rule, addition of H_2O, HOX, H_2SO_4 with mechanism and addition of HBr in the presence of peroxide (anti - Markonikov's addition). Dienes - Types of dienes, reactions of conjugated dienes - 1,2 and 1,4 addition of HBr to 1,3 - butadiene and Diel's - Alder reaction.

Alkynes - Preparation by dehydrohalogenation of dihalides, dehalogenation of tetrahalides, Properties; Acidity of acetylenic hydrogen (formation of Metal acetylides). Preparation of higher acetylenes, Metal ammonia reductions, Physical properties. Chemical reactivity - electrophilic addition of X_2, HX, H_2O (Tautomerism), Oxidation with $KMnO_4$, OsO_4, reduction and Polymerisation reaction of acetylene.

2. **Alicyclic hydrocarbons (Cycloalkanes)** **4 h**

Nomenclature, Preparation by Freunds method, Wislicenus method. Properties - reactivity of cyclopropane and cyclobutane by comparing with alkanes, Stability of cycloalkanes - Baeyer's strain theory, Sachse and Mohr predictions and Pitzer's strain theory. Conformational structures of cyclobutane, cyclopentane, cyclohexane.

UNIT-V

Benzene and its reactivity **10h**

Concept of resonance, resonance energy. Heat of hydrogenation, heat of combustion of Benzene, mention of C-C bond lengths and orbital picture of Benzene. Concept of aromaticity - aromaticity (definition), Huckel's rule - application to Benzenoid (Benzene, Naphthalene) and Non - Benzenoid compounds (cyclopropenyl cation, cyclopentadienyl anion and tropylium cation)

Reactions - General mechanism of electrophilic substitution, mechanism of nitration, Friedel Craft's alkylation and acylation. Orientation of aromatic substitution - Definition of ortho, para and meta directing groups. Ring activating and deactivating groups with examples (Electronic interpretation of various groups like NO_2 and Phenolic). Orientation of (i) Amino, methoxy and methyl groups (ii) Carboxy, nitro, nitrile, carbonyl and sulphonic acid groups (iii) Halogens

(Explanation by taking minimum of one example from each type)

List of Reference Books

1. Inorganic Chemistry by J.E.Huheey
2. Basic Inorganic Chemistry by Cotton and Wilkinson
3.A textbook of qualitative inorganic analysis by A.I. Vogel
4. Organic Chemistry by Morrisson and Boyd
5. A Text Book of Organic chemistry by I L Finar Vol I
6. Concise Inorganic Chemistry by J.D.Lee

LABORATORY COURSE-I **30** hrs (2 h / w)

Practical-I Simple Salt Analysis

(At the end of Semester-I)

Qualitative inorganic analysis

Analysis of simple salt containing one anion and cation from the following

Anions: Carbonate, sulphate, chloride, bromide, acetate, nitrate, borate, phosphate.

cations: Lead, copper, iron, aluminum, zinc, manganese, nickel, calcium, strontium, barium, potassium and ammonium.

MODEL PAPER

THREE YEAR B.Sc, DEGREE EXAMINATION
FIRST YEAR EXAMINATIONS
SEMESTER I
Paper –I: INORGANIC & ORGANIC CHEMISTRY - I

Time: 3 hours **Maximum Marks: 75**

PART- A

Answer any **FIVE** of the following questions
Each carries **FIVE** marks **5x5 = 25 Marks**

1. Define the electron deficient molecules and draw the structure of Borazole and Diborane.
2. Classify the Oxides based on the oxygen content with one example to each.
3. How the following are synthesized from Organo Lithium Compounds.

a) Acetic acid b) Ethyl alcohol

4. Define the Carbonium ion and explain the stability with no bond resonance.
5. Define the Markonikov's rule and explain the addition of 1- Propene with HBr.
6. Explain the acidity of the Acetylinic hydrogen with example.
7. Draw the conformational structures of Cyclohexane.
8. Define aromaticity and apply the Huckel's rule to benzene and naphthalene.

PART- B

Answer **ALL** the questions
Each carries **TEN** marks **5x10 = 50 Marks**

9. (a) Write note on Preparation, Structure and Properties of Silicones.

(OR)

(b) Explain the Preparation and Oxidation- Reduction reactions of Hydroxylamine.

10.(a) Give an account on different types of interhalogen compounds.

(OR)

(b) How the following are prepared from the Methyl Magnesium bromide and methyl lithium
1) Formaldehyde 2) Acetaldehyde3) Acetone 4) t- butyl alcohol

11. (a) Describe different types of Organic Reactions with one example to each.

(OR)

(b) Write notes on the following
1) Mesomeric effect 2) Hyper conjugation 3) Inductive effect

12.(a) Explain the addition of these reagents to alkenes with mechanism.
1) H_2O 2) HOX 3) H_2SO_4

(OR)

(b)Explain Baeyer's bond angle strain theory.

13. (a) Describe the Molecular Orbital structure of Benzene.

(OR)

(b) Explain the orientation in benzene with respect to alkyl and nitro groups.

3-1-108 R

W.E.F.-2016-17

B.Sc. Computer Science/Information Technology (IT) Syllabus Under CBCS
Structure of Computer Science/Information Technology (IT) Syllabus
B.Sc. – FIRST YEAR 1 SEMESTER

Computer Fundamentals & Programming in C

Course Outcome

UNIT-I

Introduction to computers, characteristics and limitations of computer, Block diagram of computer, types of computers, uses of computers, computer generations.
Input and output devices: Keyboard and mouse, inputting data in other ways, Types of Software: system software, Application software, commercial, open source, domain and free ware software, Memories: primary, secondary and cache memory. Windows basics: desktop, start menu, icons.

UNIT II

Introduction to C: Introduction – Structure of C Program – Writing the first C Program – File used in C Program – Compiling and Executing C Programs – Using Comments – Keywords – Identifiers – Basic Data Types in C – Variables – Constants – I/O Statements in C- Operators in C- Programming Examples – Type Conversion and Type Casting.

UNIT III

Decision Control and Looping Statements: Introduction to Decision Control Statements – Conditional Branching Statements – Iterative Statements – Nested Loops – Break and Continue Statement – Goto Statement
Functions: Introduction – using functions – Function declaration/ prototype – Function definition – function call – return statement – Passing parameters – Scope of variables – Storage Classes – Recursive function

UNIT IV

Arrays: Introduction – Declaration of Arrays – Accessing elements of the Array – Storing Values in Array – Calculating the length of the Array – Operations on Array – one dimensional array for inter-function communication – Two dimensional Arrays –Operations on Two Dimensional Arrays
Strings: Introduction String and Character functions

UNIT V

Pointers: Understanding Computer Memory – Introduction to Pointers – declaring Pointer Variables – Pointer Expressions and Pointer Arithmetic – Null Pointers – Generic Pointers - Passing Arguments to Functions using Pointer – Pointer and Arrays – Passing Array to Function –

Structure, Union, and Enumerated Data Types: Introduction – Nested Structures – Arrays of Structures – Structures and Functions - Unions – Enumerated Data Types

Files: Introduction to Files – Using Files in C – Reading Data from Files – Writing Data from Files – Detecting the End-of-file –Close a file – Random Access Files – Binary Files – Command line arguments

Syllabus for B.Sc. CT & H M 3-1-119

3-1-119

SUBJECT: CT& HM (Catering Tourism & Hotel Management)

SEMESTER- I

PAPER-I:101 PRINCIPLES OF TOURISM

Unit-I

Tourism - Definition - Nature and Scope - History of Tourism and its development - Motivation - for Travel - Types of tourism Domestic and International Tourism.

Unit - II

Social and Economic significance of Tourism - Environmental and Social Impact of Tourism - Tourism as an Industry - Ancillary industries in Tourism

Unit - III

Tourism - Analyse the Scenario and Five year plans - Impact of Tourism - Contribution of Andhra Pradesh State Tourism - Along with different organization. Eg. WTO, IATA, PATA, ICAO, TAAI and UFTAA.

Unit - IV

Natural resources - wildlife - Beaches - Hill Resorts - Impact of Tourism on Physical Environment - Air - Water - Soil - Mountain - Ecology etc. - Social Impact of Tourism - Unity of In diversity in Indian context.

Unit - V

Importance of Tourism in India - fairs and festivals - Kumbhamela - Mysore Dasara - Brahmotsavams of Tirumala - Tribal culture - History and Culture for Tourism - Ajantha - Ellora - amaravathi - Nagarjunakonda - Mahabalipuram - BellandHaldidu - Tirupati - Puri - Delhi - Goa - Mount Abu.

PRACTICALS:

1. Visit to A.P. Tourism Department
2. Wild life / Beaches / Record work / AP Regional wise
3. Hill resorts
4. Transport: a) Air, b) Sea, c) Railway, d) Bus
5. Visit to any culture regions - Case Study

REFERENCES:

1. An Introduction to Travel and Tourism - Jag Mohan Nagi
2. Air Lines and ticketing for tourism - Jag Mohan Nagi
3. IATA ticketing manual - Ticketing course material

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Question Paper to be Set both Languages (English and Telugu)

Signature of the
Chairman (B.O.S.)
(20.....Exams)

3-1-119

3. Hill resorts
4. Transport: a) Air, b) Sea, c) Railway, d) Bus
5. Visit to any culture regions – Case Study

REFERENCES:

1. An Introduction to Travel and Tourism – Jag Mohan Nagi
2. Air Lines and ticketing for tourism – Jag Mohan Nagi
3. IATA ticketing manual – Ticketing course material

B.Sc. (CT & HM)
I-Semester
CT & HM -101 PRINCIPLES OF TOURISM - I
Model Question Paper

Time : 3 Hrs **Marks : 75**

Section-A

Answer any Five Questions
Each question carries 5 marks 5 × 5 = 25 M

1. Write short note on any one wild life sanctuary?
2. Explain any two important hill station in India?
3. Write short note on Nagarjuna Konda?
4. What are the functions of TDC?
5. Write any one famous wold heritage places in India.
6. Write about history of travel agency?
7. Define International Tourism?
8. Explain Simhachalam as a historical tourist place.

Section-B

Answer All Questions
Each question carries 10 marks 5 × 10 = 50 M

9. a) Write about types and forms of tourism.
   (or)
   b) Explain the social and economical significance of Tourism?

10. a) What are the services provided by Tourism Industry?
    (or)
    b) Write about the importance of Kumbamela?

Q.P. to be set both languages
English and Telugu

Signature of the Chairman (B.O.S.) (20.....Exams)

11. a) Explain any two eco-tourism places in A.P.

(or)

b) Explain International Tourism.

12. a) Discuss the importance of monuments and museums.

(or)

b) Explain impact of tourism in Indian economy.

13. a) Write any two beaches in India?

(or)

b) Explain the Scenario of Tourism in India?

Signature of the
Chairman (B.O.S.)
(20.....Exams)

3-1-104

SUBJECT: CT& HM (Catering Tourism & Hotel Management)

SEMESTER- I

PAPER-I: 102 FOOD PRODUCTION

Unit-I

Introduction to cooking - origin of cooking - Culinary terms.

Basic Commodities - Types of commodities, Explanation of various types and their usage in cooking / Processing of cream, types of Butter and its uses classification of cheese and its uses.

Unit - II

Kitchen organization - listing of the classical kitchen Brigade and Kitchen Brigade in various category hotels. Flight kitchen, hospital and institution kitchen, attributes of kitchen staff and Job Description of Staff, Co-ordinating Departments, Layout of kitchen in various organizations, Raw material receiving Areas, storage Areas, Layout of service wash up area of kitchen.

Unit - III

Equipments and Fuels used - Different equipment used in food in food production. Mode of operatio, care and maintenance, Different types of fuel used.

Aims and objectives of food production.

Unit - IV

Quantitative and qualitative aspects, different types of basic stocks and sauces and their preservatives usage in food preparation.

Principles of food production - Classification Selection, Principles of cookery, effect of cooking usage in food preparation, cooking, Accompaninied garnishes and presentation of:

(a) Cereals and pulses (b) Egg Cookery

(c) Vegetable & Fruits (d) Meat & Meat Products

(e) Milk Products

Unit - V

Methods of cooking - types of cooking methods with proper examples.

Menu & Menu planning - origin and description of menu. Types of menu and difference between menus, planning and competition of Menu, factors and considerations of menu planning - Different courses of French Classical menu with Examples, Different kinds of Breakfast - Explanation of Brunch & lunch, Dinner and supper aftertation tea of high Tea etc.

PRACTICALS:

1. Identification of equipments, grocery and provision.
2. Preparation of basic stocks and Soups
3. Preparation of continental menus
4. Preparations of Cereals, Pulses, Milk,Meat product, Egg cookery,Fruit and Vegetables.
5. Garnishing presentation of carving.

Signature of the Chairman (B.O.S.) (20.....Exams)

REFERENCES:

1. Modern cookery - volumes - Thangam E. Phillip - 5th Edition, 2003, Orient Longman.
2. Theory of catering - Kinton and CeseramiELBS with hodder and Stoughton.
3. Food preparation theory - Eva Medwed Prentice
4. Practical professional cookery - Crockewell and KanuttmannMacmillam
5. Complete Cookery Manual - Antony O' Reilley (ELBS)

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Signature of the
Chairman (B.O.S.)
(20.....Exams)

3-1-104

B.Sc. (CT & HM)
I-Semester
CT & HM--102 FOOD PRODUCTION - I
Model Question Paper

Time : 3 Hrs | Marks : 75

Section-A

Answer any Five Questions
Each question carries 5 marks $5 \times 5 = 25$ M

1. What is cooking? Write about the origin of cooking?
2. What is the hygiene? Write in detail about personal hygiene?
3. Draw a kitchen brigade chart?
4. Write in detail about different method of cooking
5. Write in detail about different types of stocks?
6. Draw any Five vegetable cuttings
7. Functions of catering industry?
8. Write about manual Equipments ?

Section-B

Answer ALL Questions
Each question carries 10 marks $5 \times 10 = 50$ M

9. a) Write about various types of commodities and their usage in cooking.
   (or)
   b) Classify basic sauces and Explain and give atleast three derivatives for each sauces.

10. a) Explain bread making process in detail.
    (or)
    b) Explain kitchen equipments mechanical manual and machinery equipments

11. a) Explain menu-planning and points to consider while planning?
    (or)
    b) Explain French classical menu?

12. a) Explain in detailed the principles of food preparation in Five star hotels?
    (or)
    b) Write about different types fuel used in kitchen?

13. a) Draw the layout of Kitchen organization and explain?
    (or)
    b) Describe the difference between quantitative and quality in kitchen in detail?

Signature of the Chairman (B.O.S.)
(20.....Exams)

3-1-105

SUBJECT: CT& HM (Catering Tourism & Hotel Management)

SEMESTER- I

PAPER-I: 103 FOOD BEVERAGE SERVICES

Unit-I

Introduction to Catering Technology - Definition - Need and Scope - Types - Career - Opportunities - Functions of Catering Industry.

Unit - II

Food and Beverage Service organization - Food and Beverage Service Organization - Hierarchy, Job specification and Job description of Staff, Attributes of Food and Beverage Service Personnel - Co-ordinating with Other Departments.

Unit - III

Types Of Food And Beverage Service Outlets - About Various Types of Service Outlets, Brief Description about the Service Outlets. Difference Between Specialized Restaurant and Multi Casting Restaurant, Room Services, Banquets, Operations, Pantry, Food Pick-Up Areas, Stores and Linen Room, Kitchen Stewarding.

Unit - IV

Food and Beverage Service Area Equipments - Introduction of Various Areas. Describing the Area, Still Rooms Silver Room, Washup, Hot Plate, Dispense Bar & Spare - Linen Store - Lightening, colour etc. Different types of Linen and Furniture. Equipment and their Classification. Different Types of cutlery, Glassware, Crockery etc.

Unit - V

Food and Beverage Service - Types of Food Service, Description of Food Science, Cafeteria Service and Counter Service, Room Service and Banquet Hall Buffet Define Mise-en-Scene, Mise-en-Place, Restaurant Reservations, Wine - making.

PRACTICALS:

1. Familiarization of restaurant equipment.
2. Maintenance of the equipment and Silver
3. Menu planning
4. Description of Dishes and their accompartments.
5. Misen-en-seen and Mise-en-place.

REFERENCES:

1. Test Book of Food and Beverages Service - S.N. Bagchi&Anitha Sharma, Aman Publications, New Delhi, 1st Edition.
2. Food & Beverage Service - B.R. Lillicrap&Courius - 2003 ELBS.
3. Modern Restaurant Service - John Fuller - Stanley Thornupub Ltd.
4. Introduction to Modern Food & Beverage Service by William H Krant.

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Signature of the
Chairman (B.O.S.)
(20.....Exams)

3-1-105

B.Sc. (CT & HM)
I-Semester
CT & HM-103 FOOD & BEVERAGE SERVICE - I
Model Question Paper

Time : 3 Hrs | Marks : 75

Section-A

Answer any Five Questions
Each question carries 5 marks $5 \times 5 = 25$ M

1. Write the classification of food and Beverage service equipment.
2. Write about the rate of computer application in food and Beverage Service.
3. Explain the care and maintain of silver dining equipment.
4. Write the principles of Menu planning
5. Define Mise-en-Scene and Mise-en-place
6. Differentiate between cocktail and mock tail.
7. Mention 5 Principles of restaurant reservation.
8. Write about Banquets Service?

Section-B

Answer ALL Questions
Each question carries 10 marks $5 \times 10 = 25$ M

9. a) Define catering technology write the classification and function of catering organization

   (or)

   b) Write about various types of Food and Beverage Service Outlets.

10. a) Explain Food and Beverage Service sequence with illustrations.

    (or)

    b) Describe about the service area and explain about the linen furniture equipment used in it.

11. a) Define Beverage write classification. Explain the procedure of wine preparation.

    (or)

    b) What in Food Cost. Describe the different control methods allowed by Beverage organization to control the food cost.

12. a) Name the basic services, classify and give atleast three derivatives for each.

    (or)

    b) Write about classical kitchen brigade and kitchen brigade in 3 star hotel.

13. a) Write about various types of commodities and their usage in cooking.

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(20.....Exams)

(or)

b) Explain the Bread making process.

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(20.....Exams)

W.E.F. 2016-17

SEMESTER –I
DIFFERENTIAL EQUATIONS

60 Hrs

UNIT – I (12 Hours), Differential Equations of first order and first degree :

Linear Differential Equations; Differential Equations Reducible to Linear Form; Exact Differential Equations; Integrating Factors; Change of Variables.

***UNIT – II (12 Hours),* Orthogonal Trajectories.**

Differential Equations of first order but not of the first degree :

Equations solvable for p; Equations solvable for y; Equations solvable for x; Equations that do not contain. x (or y); Equations of the first degree in x and y – Clairaut's Equation.

UNIT – III (12 Hours), Higher order linear differential equations-I :

Solution of homogeneous linear differential equations of order n with constant coefficients; Solution of the non-homogeneous linear differential equations with constant coefficients by means of polynomial operators.

General Solution of f(D)y=0

General Solution of f(D)y=Q when Q is a function of x.

$\frac{1}{f(D)}$ is Expressed as partial fractions.

P.I. of f(D)y = Q when Q= be^{ax}

P.I. of f(D)y = Q when Q is b sin ax or b cos ax.

UNIT – IV (12 Hours), Higher order linear differential equations-II :

Solution of the non-homogeneous linear differential equations with constant coefficients.

P.I. of f(D)y = Q when Q= bx^k

P.I. of f(D)y = Q when Q= $e^{ax}V$

P.I. of f(D)y = Q when Q= xV

P.I. of f(D)y = Q when Q= x^mV

UNIT –V (12 Hours), Higher order linear differential equations-III :

Method of variation of parameters; Linear differential Equations with non-constant coefficients; The Cauchy-Euler Equation.

Reference Books :

1. Differential Equations and Their Applications by Zafar Ahsan, published by Prentice-Hall of India Learning Pvt. Ltd. New Delhi-Second edition.
2. A text book of mathematics for BA/BSc Vol 1 by N. Krishna Murthy & others, published by S. Chand & Company, New Delhi.
3. Ordinary and Partial Differential Equations Raisinghania, published by S. Chand & Company, New Delhi.
4. Differential Equations with applications and programs – S. Balachandra Rao & HR Anuradha-universities press.

Suggested Student Activities:

Seminar/ Quiz/ Assignments/ Project on Application of Differential Equations in Real life

(K. Ch. V. Subbaiah Naidu)
HOD of Mathematics & BOS
B.T College, Madanapalle.

W. E. F. 2016-17

B.Sc. PHYSICS SYLLABUS UNDER CHOICE BASED CREDIT SYSTEM

B.Sc. 1st Semester Physics

Paper I: Mechanics& Properties of Matter

(For Maths Combinations)

Work load: 60 hrs per semester **4 hrs/week**

UNIT-I (10 hrs)

1. Vector Analysis

Scalar and vector fields, gradient of a scalar field and its physical significance. Divergence and curl of a vector field with derivations and physical interpretation. Vector integration (line, surface and volume), Statement and proof of Gauss and Stokes theorems.

UNIT-II (10 hrs)

2. Mechanics of particles

Laws of motion, motion of variable mass system, Equation of motion of a rocket. Conservation of energy and momentum, Collisions in two and three dimensions, Concept of impact parameter, scattering cross-section, Rutherford scattering - derivation.

UNIT-III (16 hrs)

3. Mechanics of Rigid bodies

Definition of rigid body, rotational kinematic relations, equation of motion for a rotating body, angular momentum, Euler equations and its applications, precession of a top, Gyroscope, precession of the equinoxes.

4. Mechanics of continuous media

Elastic constants of isotropic solids and their relations, Poisson's ratio and expression for Poisson's ratio in terms of y, n, k. Classification of beams, types of bending, point load, distributed load, shearing force and bending moment, sign conventions.

UNIT-IV (12Hrs)

5. Central forces

Central forces, definition and examples, characteristics of central forces, conservative nature of central forces, conservative force as a negative gradient of potential energy, equation of motion under a central force. Derivation of Kepler's laws. Motion of satellites, idea of Global Positioning System (GPS).

UNIT-V (12 hrs)

6. Special theory of relativity

Galilean relativity, absolute frames. Michelson-Morley experiment, negative result. Postulates of special theory of relativity. Lorentz transformation, time dilation, length contraction, addition of velocities, mass-energy relation. Concept of four-vector formalism.

REFERENCE BOOKS:

1. B. Sc. Physics, Vol.1, Telugu Academy, Hyderabad
2. Fundamentals of Physics Vol. I - Resnick, Halliday, Krane ,Wiley India 2007

4/7/16

3. Unified Physics Vol., Mechanics, Waves and Oscillations, Jai Prakash Nath & Co. Ltd.
4. Fundamentals of Physics. Halliday/Resnick/Walker ,Wiley India Edition 2007.
5. Waves & Oscillations. S.Badami, V. Balasubramanian and K.R. Reddy, Orient Longman.
6. College Physics-I. T. Bhimasankaram and G. Prasad. Himalaya Publishing House.
7. Science and Technology of Ultrasonics- Baldevraj, Narosa, New Delhi,2004
8. Introduction to Physics for Scientists and Engineers. F.J. Buche. McGraw Hill.

Practical Paper II: Waves & Oscillations

Work load: 30 hrs per semester **2 hrs/week**

Minimum of 6 experiments to be done and recorded

1. Volume resonator experiment.
2. Determination of 'g' by compound/bar pendulum.
3. Simple pendulum normal distribution of errors - estimation of time period and the error of the mean by statistical analysis.
4. Determination of the force constant of a spring by static and dynamic method.
5. Determination of the elastic constants of the material of a flat spiral spring.
6. Coupled oscillators.
7. Verification of laws of vibrations of stretched string – sonometer.
8. Determination of frequency of a bar – Melde's experiment.
9. Study of a damped oscillation using the torsional pendulum immersed in liquid - decay constant and damping correction of the amplitude.
10. Formation of Lissajous figures using CRO.

Suggested student activities

Student seminars, group discussions, assignments, field trips, study project and experimentation using virtual lab

Examples

Seminars	- A topic from any of the Units is given to the student and asked to give a brief seminar presentation.
Group discussion	- A topic from one of the units is given to a group of students and asked to discuss and debate on it.
Assignment	- Few problems may be given to the students from the different units and asked them to solve.
Field trip	- Visit to Satish Dhawan Space Centre, Sriharikota / Thermal and hydroelectric power stations / Science Centres, any other such visit etc.
Study project	- Web based study of different satellites and applications.

Domain skills:

Logical derivation, experimentation, problem solving, data collection and analysis, measurement skills

***** Documental evidence is to be maintained for the above activities.**

11/7/16

MODEL PAPER

THREE YEAR B.Sc DEGREE EXAMINATION

CHOICE BASED CREDIT SYSTEM

I SEMESTER: PART II: PHYSICS

Paper I: Mechanics & Properties of Matter

(For Mathematics Combinations)

Time: 3 Hours Max. Marks: 75

Section-A (Essay type)

Answer All questions **Marks :5X10 = 50**

1. a) Explain gradient of scalar field and divergence of vector field with physical significance.

OR

b) State and prove Stroke's Theorem.

2. a) Derive an equation of motion of a rocket under constant gravitational field.

OR

b) Obtain the Ruther Ford's scattering cross section formula.

3.a) Derive the expression for precessional velocity of a symmetric top.

OR

b) Define the three coefficients of Elastic modulii and derive the relation between them.

4. a) Define a central force. Give two examples. Prove that a central force is a conservative.

OR

b) State Kepler's laws. Derive Kepler's second law from Newton's law of gravitation.

5. a) Describe the Michelson-Morley Experiment and discuss the results.

OR

b) Derive Lorentz transformation equations.

Section-B (Short answer type)

Answer any three questions **Marks: 3X5 = 15**

6. Define scalar and vector fields explain with examples.
7. Define impact parameter and scattering cross-section.
8. Classify the different types of beams.
9. Explain the idea of GPS.
10. Explain the length contraction.

Section-C

Answer any two questions **Marks: 2X5 = 10**

11. If $A= iy + j(x^2 + y^2) +k (yz + zx)$ find Curl A at point (2, -2 , 2).
12. 2 Kg. mass moving with a velocity of 10m/s collides with another 6 Kg. mass moving in opposite direction with a velocity of 20 m/s. During collision they stick together. Find their common velocity.
13. The Young's modulus for steel is $Y= 2 \times 10^{11}\ N/m^2$ and its rigidity modulus $\eta=8 \times 10^{10}\ N/m^2$ Find the Poison's ratio and its bulk modulus.
14. The mean distance of mars from sun is 1.524 times the distance of the earth from the sun. Compute the period of revolution of mars around sun.
15. Find the velocity with which a body has to move so that its mass will be double to its rest mass.

1-1-122

Subject : STATISTICS (with Mathematics combination)

SEMESTER - I

Paper - I : Descriptive Statistics and Probability

UNIT - I

Concepts of Primary and Secondary data. Methods of collection and editing of primary data, Designing a questionnaire and a schedule. Measures of Central Tendency - Mean, Median, Mode, Geometric Mean and Harmonic Mean.

UNIT - II

Measures of dispersion : Range, Quartile Deviation, Mean Deviation and Standard Deviation. Central and Non-Central moments and their interrelationship Sheppard's correlation for moments, Skewness and kurtosis.

UNIT - III

Basic concepts of Probability, random experiments, trial, outcome, sample space, event, mutually exclusive and exhaustive events, equally likely and favourable outcomes. Mathematical, Statistical, axiomatic definitions of probability. Conditional Probability and independence of events.

UNIT - IV

Addition and multiplication theorems of probability for 2 and for a n events. Boole's inequality and Baye's theorems and problems based on Baye's theorem.

UNIT - V

Definition of random variable, discrete and continuous random variables, functions of random variable. Probability mass function, Probability density function, Distribution function and its properties. Bivariate random variable - meaning, joint, marginal and conditional Distribution, independence of random variables.

Practicals - Semester - I

1. Diagrammatic representation of data (Bar and Pie)
2. Graphical representation of date (Histogram, Frequency Polygon, Frequency curves, Ogives)
3. Central and non central moments and Sheppard's corrections for moments.
4. Measures of Skewness and Kurtosis.
5. MS - Excel methods for the above serial numbers 1,2,4.

Reference Books:

1. Introduction to probability - Charles M. rinstead, J. Laurie Snell.
2. Fundamentals of Mathematical Statistics by VK Kapoor & S.C. Gupta
3. Fundamentals of Statistics - Goon gupta, Das Gupta
4. Sambavyatha avadi Sidhantam - Telugu Academy
5. Hoog, Taims Rao: Probability and Statistical Inference 7th edition Pearson.
6. B.A / B.Sc., I Year Statistics - descriptive Statistics, probability distribution - Telugu Academy - Dr. M. Jaganmohan Rao, Dr. N. Srinivasa Rao, Dr. P. Tirupathi Rao, Smt. D. Vijayalakshmi.

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Signature of the
Chairman (B.O.S.)
(20.....Exams)

1-1-122

THREE YEAR B.A / B.Sc. DEGREE EXAMINATIONS
FIRST SEMESTER - MODEL QUESTION PAPER
PART II – STATISTICS
(With Mathematics Combination)

Time : 3 hours Max Marks : 75

PART A

Answer any FIVE questions. Each question carries 5 Marks

5 X 5 = 25 Marks

1. Given two values X_1 and X_2 , prove that $AM \geq GM \geq HM$
2. Define skewness and give the measures of skewness.
3. Show that for discrete distribution $\beta_2 > 1$
4. Define mathematical definition of probability and give its properties.
5. Prove that if A & B are any two events, then
   $$P(A \cup B) = P(A) + P(B) - P(A \cap B)$$
6. Define conditional probability and Independent events.
7. A Random variable X has the following probability distribution

X	0	1	2	3	4	5	6	7	8
P(X)	a	3a	5a	7a	9a	11a	13a	15a	17a

   (i) Determine a

   (ii) Find P(X<3)

8. Define distribution function and give its properties

PART B

Answer one question from each unit. Each question carries 10 MARKS

5 X 10 = 50 Marks

UNIT – I

(a) What is meant by classification of data? What are the methods of classification

(OR)

(b) Find Mean and Mode to the following frequency distribution

X	1	2	3	4	5	6	7	8
f	4	9	16	25	22	15	7	3

UNIT – II

(a) Derive the central moments in terms of raw moments.

(OR)

(b) Prove that moments are independent of change of origin but not scale. Also give the Sheppard's Correction for moments.

Signature of the Chairman (B.O.S.) (20.....Exams)

1-1-122

UNIT – III

(a) Explain the Axiomatic definition of the probability and also give its properties.

(OR)

(b) If $B \subset A$ then prove that

(i) $P(A \cap \bar{B}) = P(A) - P(B)$

(ii) $P(B) \leq P(A)$

UNIT – IV

(a) State and Prove Boole's Inequality

(OR)

(b) Let A and B be two events such that

$P(A) = \frac{3}{4}$ and $P(B) = \frac{5}{8}$

Then show that (i) $P(A \cup B) \geq \frac{3}{4}$

(ii) $\frac{3}{4} \leq P(A \cap B) \leq \frac{5}{8}$

UNIT V

(a) A continuous random variable X has the following density function

$$f(x) = Ax^2, \quad 0 \leq x \leq 1$$

(i) Determine A

(ii) Find $P(0.2 \leq x \leq 0.5)$ and $P(x < 0.3)$

OR

(b) The joint p.d.f. of X and Y is given by $f(x,y) = 4xy\, e^{-(x^2+y^2)}$, x≥0, y≥0

Test whether X and Y are independent.

P. [signature]
Chairman, BOS in Statistics

Signature of the Chairman (B.O.S.) (20.....Exams)

3-1-118 R

SRI VENKATESWARA UNIVERSITY : : TIRUPATI
ZOOLOGY SYLLABUS FOR I SEMESTER
ZOOLOGY –PAPER-I (THEORY)
ANIMAL DIVERSITY OF INVERTBRATES

W.E.F. 2016-17

PERIODS- 60 **MAX. MARKS -75**

Unit-I

1.0 Brief History, Significance of Diversity Of Invertebrates

1.1 Phylum Protozoa:- General Characters and Outline Classification upto Classes With Examples; Type Study: Elphidium,

1.3 Phylum Porifera:- General Characters and Outline Classification Upto Classes with Examples; Type Study: Sycon, Canal System in Sponges.

Unit-II

2.0 Phylum Coelenterata :- General Characters and outline Classification Upto Classes with Examples; Type Study: Aurelia ,Polymorphism in Coelenterates: Corals and Coral Reef Formation.

2.1 Phylum Platyhelminthes :- General Characters and Outline Classification Upto Classes With Examples; Type Study: Fasciola hepatica.

2.2 Phylum Nemathelminthes :- General Characters and Outline Classification upto Classes with Examples.

Unit-III

3.0 Phylum Annelida :- General Characters and Outline Classification upto Classes with Examples; Type Study: Leech., Metamerism in Annelida.

3.1 Vermiculture : Scope, Significance of Vermiculture Earthworms Sps, Processing of Vermiculture,Vermicompost,Economic Importance of Vermicost.

Unit-IV

4.0 Phylum Arthropoda:- General Characters and Outline Classification Upto Classes with Examples; Type Study: Macrobrachium rosenbergii (Scampi).Onychophora:- Peripatus-Structure ,Affinities

4.1 Phylum Mollusca:- General Characters And Outline Classification Upto Classes With Examples.Pearl Formation in Pelecypoda. Torsion in Gastropoda.

Unit-V

5.0 Phylum Echinodermata: General Characters and Outline Classification upto Classes with Examples; Water Vascular System of Star Fish.

5.1 Invertebrates Larval Forms: Amphiblastula, Ephyra, Trochophora, Nauplius, Zoea,Mysis, Megalopa, Glochidium , Bipaneria .

5.2 Hemichordata: General Characters And Outline Classification Upto Classes with Examples; Balanoglossus:Structure , Affinities & Tornaria Larvae

Suggested Readings

1. Modern Text Book Of Zoology Invertebrates ---- R.L. Kotpal

2. Text Book of Invertebrates- Arumugam et.al.,

3. Economic Zoology- Saras Publication

4.Old Telugu academy

SRI VENKATESWARA UNIVERSITY : : TIRUPATI
ZOOLOGY MODEL QUESTION PAPER FOR I SEMESTER
ZOOLOGY –PAPER-I (THEORY)
ANIMAL DIVERSITY OF INVERTBRATES

TIME : 3. HOURS MAX. MARKS -75

Part-A (5X5=25)

Answer Any Five Questions, Each Question Carries Five Marks
Draw Diagrams Wherever Necessary.

1) Spicules
2) Sycon
3) Cephalic appendages
4) Mysis larva
5) Pearl Formation
6) Scampi.
7) Diptera
8) Halistemma

Part-B **(5X10=50)**

Answer All questions , Each Question Carries Ten Marks.
Draw Diagrams Wherever Necessary.

9 (a) Describe the life history of Elphidium

or

(b) Give an account of the structure& functions of various cells in sponges

.

10 (a) Give an account of Development in Aurelia.

Or

(b) Describe the Reproductive system in liver fluke.

11 (a) Write an essay on process of vermiculture.

Or

(b) Describe the external characters of leech.

12 (a) Give on account on the Structure & Affinities of Peripatus.

Or

(b) Explain the Torsion in Gastropoda.

13 (a) Describe the Water Vascular System in Star Fish.

Or

(b) Write about the affinities of Balanoglossus.

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SRI VENKATESWARA UNIVERSITY : : TIRUPATI
ZOOLOGY PRACTICAL SYLLABUS FOR I SEMESTER
ZOOLOGY –PAPER-I (THEORY)
ANIMAL DIVERSITY OF INVERTBRATES

PERIODS- 30 MAX. MARKS -50

Animal Diversity of Invertebrates

Observation of the following slides/specimens/models

Protozoa: Elphidium, paramecium –Binary fission,Conjugation.

Porifera: Spongilla, Euspongia, Sycon, Sycon-L.S,T.S.

Coelenterata: Obelia colony,Medusa ,Physalia, Velella,Corallium, Gorgonia, Aurelia,Pennatula.

Platyhelminthes: Planaria, Fasciola hepatica larval stages of Meracidum,Redia,Cercaria ,Echinococcus granulosus.

Nematehelminthes: Ascaris Male&Female ,Ancylostoma duodenale.

Annelida: Neries,Heteroneries,Aphrodite,Hirudo,Trochophore larva.

Arthropoda: Nauplius,Mysis,Zoea Larvae,Anopheles,culex, mouth parts (Male&Female). house fly mouth parts.Scorpion, Crab,Prawn,scolopendra, Sacculina,Limulus,Paripatus.

Mollusca: Chiton,Murex,Sepia,Loligo,Octopus,Nautilus,Glochidium Larva.

Echinodermata: Ophiothrix, Echinus,Clypeaster,Cucumaria, Antedon, Asterias, Bipinnaria larva.

Hemichordata : Balanoglossus,Tornaria larva.

Demonstration of dissection/dissected / Virtual Dissections: Leech / Prawn/Scorpion/Crab Digestive system, Prawn Appendages ,Prawn/Scorpion/Crab Nervous System , Pila/Unio Digestive System, Mounting of statocyst Mounting of Radula.

- Compulsory one species to be adopted for demonstration only by the faculty.

- Computer Aided Techniques as per U.G.C Guidelines.

Laboratory record work shall be submitted at the time of Practical Examination, Each practical batch should not have more than 20 students.

SRI VENKATESWARA UNIVERSITY : : TIRUPATI
ZOOLOGY MODEL QUESTION FOR I SEMESTER
ZOOLOGY –PAPER-I (THEORY)
ANIMAL DIVERSITY OF INVERTBRATES

MAX. MARKS -50

I) Draw a Labeled diagram of virtual dissection/dissected animals of -- -- -- -- -- -- -- 1X10 = 10M

II) Identification of six spotters/models/photographs, draw a labeled neat diagram with salient features. 6 x 5 = 30 M

*One from Protozoa,Porifera ,one from Cnidaria, Helmenthis, two from Annelida, Arthropoda two from Mollusca, Echinodermata, Hemichordate.

III) Certified Record 10 M

Without Practical record –Student is not admitted for University exam

Spotters

Identification } 1 M
Classification }
Labeled Diagram -2 M
Comments – 2 M

GENERAL ENGLISH SYLLABUSFOR B.A/B.Com/B.Sc COURSESunder CBCS

W.E.F. 2016-17

SEMESTER – II

Unit – I

PROSE

1. J. B.S Haldane: The Scientific Point of View
2. A.G. Gardiner : On Shaking Hands

Unit - II

POETRY

1. John Keats: Ode to Autumn
2. KishwarNaheed : I am not that Woman (from *An Anthology of Commonwealth Poetry* edited by C.D. Narasimhaiah)

Unit –III

SHORT STORY

1. Ruskin Bond : The Boy Who Broke the Bank
2. R. K. Narayan : Half a Rupee Worth

Unit – IV

ONE ACT PLAY

Anton Chekhov: The Proposal

Unit – V

LANGUAGE ACTIVITY

1. Classroom and Laboratory Activities
   - i. Transformation of Sentences (Voice, Speech and Degrees)
   - ii. Dialogue Practice (Oral)
   - iii. Listening Comprehension
2. Classroom Activity
   - i. Guided Composition
   - ii. Dialogue Writing
   - iii. Reading Comprehension

CHAIRMAN, BOS – ENGLISH
Sveeuniversity, Tirupati

1. Md.
(Md. NAIMUDDIN AHMED)
Members – BOS (English)

2. M. Sreelatha
(Dr M. SREELATHA)
Member – BOS (English)

SV UNIVERSITY, TIRUPATHI
THREE YEAR DEGREE EXAMINATIONS – 2016-17
ENGLISH PART – I A (MODEL PAPER)
SEMESTER II
Prose, Poetry, Short Story and One-Act Play

TIME: 3HRS MAX. MARKS: 75

I Attempt any **Three** of the following questions. **3x5= 15**

1. "Science directs people in many ways." How?
2. "Scientific point of view is morally equivalent of war." Explain.
3. Discuss the advantages and disadvantages of shaking hands.
4. Is AG Gardiner advocating in favor of the habit of shaking hands? Explain with suitable examples.
5. What are the influences of science on the life of an average man according to JBS Haldane?

II Attempt any **Three** of the following questions. **3x5= 15**

1. Analyze John Keats' concept of the autumn season.
2. Why does Keats compare autumn to the sun?
3. How does Kishwar Naheed portray her intense personal feelings in the poem, "I am not that Woman"?
4. What do you think of the poet on the basis of the poem, "I am not that Woman"?
5. What does John Keats mean by 'mists and mellow fruitfulness" in the poem?

III Attempt any **Two** of the following questions. **2x5= 10**

1. What does Nathu find the next morning in the story, "The Boy who Broke the Bank"?
2. Explain the impact of war on Subbaiah's business.
3. How did Subbaiah rise in fortune after his father's death?
4. What did the sweeper boy complain about?

IV Attempt any **Two** of the following questions. **2x5= 10**

1. Sketch the character of Natalya Stepanovna.
2. What is the central theme of Chekov's farce, "A Marriage Proposal"?

3. Describe how Anton Chekov makes fun of the rich landowners of his time in "A Marriage Proposal".

4. What is the first cause of argument between Natalya and Lomov? Elaborate.

V (A) Read the following passage and answer the questions that follow. **5x1= 5**

Nehru is like an English man. He was born in India, of Indian Blood, but he grew up an Englishman. His governess was English. His education was at the Harrow and Cambridge, and he studied Law at the Inner Temple. He knows English Literature, Constitutional History and Social Philosophy. Nehru himself points out that spiritually he hangs suspended between India and England. "They are both part of me and create in me a feeling of spiritual loneliness. I am a stranger and alien in the west. But in my own country also, sometimes, I have an exile's feeling."

a) What course did Nehru study in the Inner Temple?

b) In what area did Nehru feel that he 'hangs suspended between India and England'?

c) What does the first word "alien" mean?

d) In which country was Nehru feeling being in exile?

(B) Rewrite the following sentences as directed. **10x1=10**

1. Catch the bird. (Change it into passive voice)

2. The servant washes our clothes. (Change the voice)

3. My pen has been stolen. (Change it into active voice)

4. The job was rejected by the applicant. (Change the voice)

5. She said, "I don't believe you." (Change it into reported speech)

6. He said to the boy, "What are you doing here?" (Change it into reported speech)

7. John announced that he was going to the gym. (Rewrite it in direct speech)

8. He said to her, "How far is the museum from here?" (Change it into reported speech)

9. No other metal is as useful as iron. (Change it into superlative degree)

10. A sword is not as strong as a pen. (Change it into comparative degree)

(C) Write a meaningful paragraph using the hints given below and suggest a suitable title too. **5**

Swatch Bharat—a massive program—participation of all sections of society—awareness of cleanliness—pollution fee environment—outbreak of diseases—good health—happy living—Educational institutions—part of curriculum structure.

(D) Construct a dialogue between two friends discussing demonetization. **5**

బి.ఏ., బి.కాం., బి.యస్.సి., డిగ్రీ ప్రథమ సంవత్సరం

ద్వితీయభాష-తెలుగు పాఠ్యప్రణాళిక- W.E.F. 2016-17

సెమిస్టర్ - II

I ప్రాచీన కవిత్వం

అ) ధూర్జటి - సాయుజ్యము

శ్రీకాళహస్తి మాహాత్మ్యము - ద్వితీయాశ్వాసం (109-139)

త్రేతాంబుననొక్క... నుండి పన్నగంబు... వరకు

ఆ) చేమకూర వెంకటకవి - సుభద్రా పరిణయం

విజయ విలాసం - 3వ ఆశ్వాసం (93-139)

"తనయుని పెండ్లికేగ వలె ధాత్రికి" నుండి

"అటులందేరెక్కి దంపతులరుగ" వరకు

II ఆధునిక కవిత్వం

(అ) జాషువా - ఫిరదౌసి లేఖ ('ఆ సులతాను...' నుండి 'అనుచు విలిఖించె...' పద్యము వరకు)

(ఆ) గెద్దాపు సత్యం - 'చెట్టు' ఖండిక 1 నుండి 25 పద్యాలు

('శ్రీవిధానమ! ....' నుండి 'స్వావలంబన...' పద్యం వరకు)

(కవితావైజయంతి పద్యసంకలనం నుండి)

III కథానికలు

(అ) కేతు విశ్వనాథరెడ్డి - నమ్ముకున్న నేల

(ఆ) శీలా సుభద్రాదేవి - మార్పు వెనుక మనిషి

IV & V నవల

డాక్టర్ వి.ఆర్. రాసాని - బతుకాట

Telugu BOS chairperson

1) NBLN 13/12/16

2) K Gopichand

3) M 13/12/16

SRI VENKATESWARA UNIVERSITY, TIRUPATI

Model Question Paper Semester II

I B.A., / B.Com., / B.Sc., Degree Course from 2016 - 17

General Telugu

Time : 3 Hours **Max. Marks : 75**

Part - A

క్రిందివాటిలో ఏవైనా ఐదు ప్రశ్నలకు సమాధానాలు రాయండి 5x 5 = 25 మార్కులు

అందులో 3, 4 ప్రశ్నలకు ఒకదానిలో ఒక్కొక్కటి చొప్పున తప్పనిసరిగా జవాబివ్వండి

1. 'సాయుజ్యం' పాఠ్యభాగం ఆధారంగా హస్తి భక్తితత్పరతను వివరించండి.
2. 'సుభద్రా పరిణయం' పాఠ్యభాగం ఆధారంగా తెలుగువారి వివాహ వేడుకలను వివరించండి.
3. క్రిందివాటిలో ఒకదానికి సందర్భసహిత వ్యాఖ్యలు రాయండి

   (అ) నాది వృథా జన్మగాదె!

   (ఆ) అంతిపురమున ఉత్సవంబయ్యెనపుడు
4. క్రిందివాటిలో ఒకదానికి సందర్భసహిత వ్యాఖ్యలు రాయండి

   (అ) పండితులేమి చెప్పిరో

   (ఆ) గాయక వతంసమౌట నిక్కంబుగాదె
5. 'నమ్ముకున్ననేల' ఆధారంగా రాయలసీమ కరువును వివరించండి.
6. 'మార్పు వెనుక మనిషి' లో కోనసీమ వర్ణన.
7. 'బతుకాట' నవలలో చిత్రింపబడిన సామాజిక పరిస్థితులు.
8. 'చెట్టు' సారాంశాన్ని సంక్షిప్తంగా వివరించండి.

Part - B

1. క్రిందివానిలో ఒకదానికి సమగ్ర వ్యాఖ్య రాయండి 1×10=10 మార్కులు

   ఉదయగ్రావము పానవట్ట, మభిషేకోద ప్రవాహంబు వా

   ర్ధి, దరీ ధ్వాంతము ధూపధూమము, జ్వలదీపప్రభారాజి కౌ

   ముది, తారా నివహంబు లర్పిత సుమంబుల్‌గా దమోదూర సౌ

   ఖ్యదమై శీతగభస్తి బింబ శివలింగంబొప్పే బ్రాచీదిశన్

   (లేదా)

చెక్కెర వింటిరాజు నెకసెక్కెము లాడఁగ జాలు నెక్కుడుం
జక్కఁదనంబు గల్గు నెఱ సాహస పుం గొమరుండు మ్రొక్కఁగా
నక్కునఁ జేర్చి మేనిమిరి యౌదల మూర్కొని చొక్కుచుండె లో
నెక్కొను వేడ్క నిక్కు చెవి నీలని నెక్కు వజీరుఁడయ్యెడన్

2. 'సాయుజ్యము' ఆధారంగా ధూర్జటి కవితా వైభవము

(లేదా)

శివపూజలో సర్పము, ఏనుగు పూనిన పగను వివరించండి. 1×10=10

3. 'సుభద్రా పరిణయము' వృత్తాంతాన్ని వివరించండి

(లేదా)

చేమకూర ప్రతిపద్యచమత్కృతిని వివరించండి. 1×10=10

4. "ఫిరదౌసిలేఖ"లోని విశేషాలను తెలిపి దాని పర్యవసానాన్ని వివరించండి

(లేదా)

చెట్టు గొప్పదనాన్ని గెద్దాపు సత్యం ఏవిధంగా వర్ణించారు? 1×10=10

5. బతుకాట నవలలో సాంస్కృతిక విశేషాలను వివరించండి

(లేదా)

బతుకాట నవలలోని ప్రధాన పాత్రలను వివరించండి? 1×10=10

W.E.F. 2016-17 **2-02 R**

SECOND LANGUAGE-HINDI-OPTIONAL-PAPER 1 (B)

DIVISION OF HINDI SYLLABUS INTO FIVE UNTIS FOR SEMISTER SYSTEM

UNIT	II SEM
1. गद्य संदेश (Prose)	संस्कृति ओर साहित्य का परस्पर संबंध भारत एक है, हेच आई वी (AIDS)
2. कथा लोक (Short Stories)	जरिया भूख हडताल परमात्मा का कुत्ता
3. व्यकारण (Grammar)	कार्यालयीन हिंदी (Translation of Administrative Terminology from Hindi to English And English to Hindi)
4. व्यकारण (Grammar)	संधि विच्छेद
5. पत्र लेखन (Letter writing)	आवेदन पत्र

SECOND SEMISTER

Model Question Paper : नमूना प्रश्न पत्र

3 Hrs (B.A., B.Sc. & B.Com.) Total Marks : 75

Answer any five of the following:

(I) निम्न लिखित में से किन्ही पाँच प्रश्नों के उत्तर लिखिए। 5x5 = 25

1. जिस प्रकार समाज और साहित्य का संबंध अनिवार्य है उसी प्रकार संस्कृति और साहित्य का भी अनिवार्य है उसे सप्रसंग व्याख्या कीजिए ?
2. हमारी एकता का दूसरा प्रमाण यह है की उत्तर या दक्षिण चाहे जहाँ भी जाये जाएँ, आपको जगह-जगह पर एक ही संस्कृति के मंदिर दिखाई देंगे. सप्रसंग व्याख्या कीजिए।
3. इन रोगों के लिए समाज मे नियमित और आवश्यक रूप से जागरूकता अभियान चलाने की आवश्यकता है... सप्रसंग व्याख्या कीजिए।
4. रामायण और महाभारत से क्या शिक्षा प्राप्त होती है?
5. विविधता के भीतर भारत की एकता कैसे समाई हुई है?
6. विवेक बत्तरा का चरित्र-चित्रण कीजिए ?
7. भूख हडताल कहानी के शीर्षक की सार्थकता समझाये?
8. एच.आई.वी. / एड्स के विषाणु कैसे फैलते है ?

(II) निम्नलिखित सभी प्रश्नों के उत्तर दीजिए । 5x10 = 50

1. 'संस्कृति और साहित्य का परस्पर संबंध' पाठ का सारांश लिखिए

या

'जरिया' कहानी का सारांश लिखिए।

2. 'भारत एक है' कहानी का सारांश लिखिए ।

या

'भूख हड़ताल' कहानी का सारांश लिखिए ।

3. 'परमात्मा का कुत्ता' कहानी का सारांश लिखिए ।

या

एच.आई.वी./एड्स के बारे मे एक लेख लिखिए ।

4. लिपि किसे कहते है और कितने प्रकार के होते है? सोदाहरण समझाइये ।

या

निम्नलिखित हिन्दी शब्दों का अंग्रेजी में अनुवाद कीजिए ।

R. B. Vanishree 13/12/16

L Amaravyamma 13/12/16

K. Rao 13/12/16

1. आकाशवाणी
2. लेखा अनुभाग
3. न्यायालय
4. राजदूतावास
5. रोजगार कार्यालय
6. विदेशमंत्रालय
7. अतिथिगृह
8. अस्पताल
9. डाक कार्यालय
10. नगरपालिका

5. अनुवादक की नौकरी के लिए प्रबन्धक के नाम पर आवेदन पत्र लिखिए ।

या

निम्नलिखित अंग्रेजी शब्दों का हिन्दी में अनुवाद कीजिए

1. Director
2. Deputy
3. District judge
4. Examiner
5. Forest guard
6. Hindi officer
7. Head master
8. General secretary
9. Chairman
10. Department

RB- Vow Free
13/12/16

13/12/16

L. Arumyanma 13/12/2016

Part I (B) SANSKRIT

2-03

CBCS SEMESTER WISE SYLLABUS

II SEMESTER - W.E.F. 2015-16

PAPER – II POETRY, PROSE AND GRAMMAR – II

UNIT – I	POETRY	VASISHTHASRAMAGAMANAM – Raghuvamsam – 1st Canto – 35 – 95 Slokas
UNIT – II	POETRY – 1	GANGAAVATARANAM – Bhoja's Champu Ramayanam – Balakanda 2. UPADESAMRUTAM Selected verses from Sri Malayalayateendrasya Upadesamrutam by Sri Samudrala Lakshmanaiah –
UNIT – III	PROSE	1. PUSHPODBHAVA CHARITAM – DASAKUMARACHARITAM – PUURUAPEETHIKA 4th Chapter 2. KRSHIPHALAM – From KAALAAYA TASMAI NHMAH – 20th Chapter – written by Ogeti Parikshit Sarma Page : 273 – 277
UNIT – IV	GRAMMAR	1. Declensions – Nouns ending in Vowels, Nadee, Janu, Vadhoo, Matr, Phala, Vari and Madhu. 2. Conjugations – III Conjugation – Yudh IV Conjugation _ Ish VIII Conjugation – Likh, Kr IX Conjugation – Kreen X Conjugation – Kath, Ram, Vand
UNIT – V	GRAMMAR	1. SANDHI Halsandhi - LATVA, JASTVA Visarga Sandhi – Utra, Visargalopa, Raphadesa, Ooshma Sandhi 2. SAMASA Avyayibhavaa, Bahuvrihi.

Sri Venkateswara University
First year - B.A., B.Com., B.Sc.
Semester - II
QUESTION PAPER PATTERN

प्रश्नपत्रप्रणाली

Time : 3 hrs Max. Marks. 75

सूचना :- द्वितीय, तृतीय, चतुर्थ, पञ्चम, नवम प्रश्नाः संस्कृत भाषायामेव समाधेयाः।

Q.No. 2, 3, 4, 5 & 9 Should be answered in Sanskrit only.

प्रथमो भागः(25 Marks)

१. श्लोकपूरणं भावश्च	1 out of 2	1 x 4 = 4
२. शब्दाः (सम्पूर्णशब्दरूपाणि)	2 out of 4	2 x 3 = 6
३. धातवः (लकारे सर्वाणि रूपाणि)	2 out of 4	2 x $2^{1/2}$ =5
४. सन्धत्त(नामनिर्देशपूर्वकं)	5 out of 10	5 x 1 = 5
५. समासाः (नामनिर्देशपूर्वकं)	5 out of 8	5 x 1 = 5

द्वितीयो भागः(50 Marks)

६. निबन्धप्रश्नः	1 out of 2	1 x 10 =10
७. निबन्धप्रश्नः	1 out of 2	1 x 8 = 8
८. निबन्धप्रश्नः	1 out of 2	1 x 10 = 10
९. लघुप्रश्नाः	5 out of 10	5 x 2 = 10
१०. सन्दर्भवाक्यानि (from Unit-I&III)	4 out of 8	4 x 3 = 12
		75
Internal Assessment Mid- sem : 15		+ 25
Assignment/Seminar : 5, Attendance :5		100

1

Sri Venkateswara University
First year - B.A., B.Com., B.Sc.
Semester - II
SANSKRIT
MODEL QUESTION PAPER

प्रश्नपत्रप्रणाली

Time : 3 hrs Max. Marks. 75

सूचना :- द्वितीय, तृतीय, चतुर्थ, पञ्चम, नवम प्रश्नाः संस्कृत भाषायामेव समाधेयाः।

Q.No. 2, 3, 4, 5 & 9 Should be answered in Sanskrit only.

प्रथमो भागः(Part-A) 25 Marks

I. **श्लोकं पूरयित्वा भावं लिखत ।** 1x4=04

1. हैयङ्गवीनमादाय.....
.....मार्गशाखिनाम् ।
2. सेकान्ते .....
..... पायिनाम् ।

II. **द्वयोः शब्दयोः सर्वविभक्तिषु रूपाणि लिखत ।** 2x3=06

1.वधू 2. वारि 3. मातृ 4. मधु

III. **द्वयोः सर्वाणि लकार रूपाणि लिखत ।** $2x2^{1/2}$=05

1. लिखति 2. करिष्यति 3. चोरयिष्यति 4. वन्दते

IV. **पञ्च नामनिर्देशपूर्वकं सन्धत्त विश्लेषयत ।** 5x1=05

1. तत्+लयः 2. वाक्+ईशः 3.सुप् +अन्तः 4. शिवः+अहम्
5. गुरोः+आज्ञा 6.कः+चित् 7.रामः+तरति 8. नराः+इमे
9.नृपः+जयति 8. हरेः+द्रव्यम्

V. **पञ्चानां नाम निर्देशपूर्वकं विग्रह वाक्यानि लिखत ।** 5x1=05

1. प्रत्यहम् 2. यथाशक्ति 3.निर्मक्षिकम्
4. दत्तपशुः 5. महाबलः 6.सुपुत्रः
7. द्वित्राः 8. केशाकेशि 9.चक्रपाणिः 10.कृशोदरी

द्वितीयो भागः (Part-B) 50 Marks

VI. वसिष्ठमहर्षेः आश्रमं वर्णयत। 1x10=10

अथवा

राजदम्पत्योः वरिष्ठाश्रमं प्रति प्रयाणं कथमभूत्? अभिवर्णयत।

VII. गङ्गानद्याः वैशिष्ट्यम् उपवर्णयत। 1x8=08

अथवा

चम्पूकाव्यलक्षणं निर्दिश्य चम्पूकाव्येषु चम्पूरामायणस्य स्थानम् उपपादयत?

VIII. पुष्पोद्भवस्य मातापितृसमागमः कथमभूत्। 1x10=10

अथवा

कृषिफलम् इति पाठस्य सारांशं लिखत।

IX. **पञ्चानां लघुसमाधानानि लिखत ।** 5x2=10

1. कालिदासस्य ग्रन्थानां नामानि लिखत?
2. गङ्गा कथं जाह्नवी अभवत्?
3. पञ्चशीलानि कानि?
4. कदा मनुष्यता उदेति?

5. पण्डिताः गद्यमुद्दिश्य किमिति वदन्ति?
6. कस्मात् भूतानि जायन्ते?
7. राष्ट्रस्य जीवातवः के ?
8. कः सनातनः धर्मः?
9. दण्डिनः कृतीः लिखत ?
10. श्रावणस्य मातुलस्य गृहप्राङ्गणे के के पशवः अवर्तन्त?

X. चत्वारि ससन्दर्भं व्याख्यात। 4x3=12

1. अनुभावविशाषात्तु सेना परिवृत्ताविव।
2. सोऽयमापगामाप गामिव।
3. तात, भवते विज्ञापनीयानि बहूनि सन्ति।
4. अन्नं न निन्द्यात् ।
5. हिमनिर्मुक्तयोर्योगे चित्राचन्द्रमसोरिव।
6. पपात पार्वतीकान्तजटाकान्तारगह्वरे ।
7. क्षणमात्रमत्र भवता स्थीयताम् ।
8. मम पितामहः जन्मना विप्रः, कर्मणा कृषीवलः।

FOUNDATION COURSE **2-09**

COMMUNICATION SKILLS AND SOFT SKILLS-1 (CSS -1)

II SEMESTER – W.E.F.2016-17

COURSE CONTENT (30 hours)

Vocabulary is considered the key to communication and it plays a great role for learners in acquiring a language. The first unit, therefore, is on the different aspects of vocabulary.Since English is a predicate-oriented language, there are two units on grammar focusing on the verb phrase.Listening and speaking are the two receptive skills. Listening is the basic skill of communication, and reading helps a person refine their writing skills. Unit IV and Unit V are on listening and reading respectively.

Unit I: Vocabulary Building
1a. Prefixes and Suffixes
1b. Conversion
1c. Compounding
1d. Analogy
2. One-Word Substitutes
3. Words Often Confused
4. Synonyms and Antonyms
5. Phrasal Verbs

Unit II: Grammar - 1
1. Types of Verbs
2. Subject-Verb Agreement

Unit III: Grammar - 2
1. Meanings of Modals
2. Tense (Present and Past) and Aspect
3. The Several Possibilities for Denoting Future Time
4. Articles and Prepositions

Unit IV: Listening Skills

1. The Importance of Listening
2. Types of Listening
3. Barriers/Obstacles to Effective Listening
4. Strategies for Effective Listening

Unit V: Reading Skills

1. Skimming
2. Scanning
3. Intensive Reading and Extensive Reading
4. Comprehension

SV UNIVERSITY, TIRUPATHI
THREE YEAR DEGREE EXAMINATIONS – 2016-17
Foundation Course IV
First Year - SEMESTER II

Communication Skills and Soft Skills-1

TIME: 2 Hrs. **Max. Marks: 50**

I. Attempt the following questions.

(A) Fill in the gaps with appropriate **Antonyms** for the following underlined words **4 X ½ = 2**

a) In politics ten percent of people are honest and the rest are _____.
b) Do you want a prepaid telephone connection or a _____ one?
c) He tied his shoe laces but later_____ them.
d) Some parts of the machine are repairable but most of them are _____.

(B) Write the **Synonyms** for the following words. **4 X ½ = 2**

(1) Density (2) Guide (3) Indolence (4) Profit

(C) Match the following into appropriate **Compound Words**. **4 X ½ = 2**

A		**B**
1. News	(a)	stop
2. Time	(b)	values
3. Bus	(c)	table
4. Human	(d)	paper

(D) Write **Noun Forms** for the following words by adding a **Suffix**.**4 X ½ = 2**

(1) Identify (2) Organize (3) Inherit (4) generous

(E) Write O**ne Word Substitutes** for the following. **4 X ½ = 2**

(1) One who is recovering from illness
(2) One who hates women
(3) A collection of poems
(4) A handwriting that is not readable

(F) Write **sentences of your own** using any **THREE** of the following **Phrasal Verbs and Idioms.** **3 X 1 = 3**

(1) break out	(2) get through	(3) give up
(4) beat about the bush	(5) black sheep	(6) bag and baggage

(G) Answer the following choosing the **right option** given in the brackets. **4 X ½ = 2**

(1) We bought _____ (stationary/stationery) from this shop.
(2) She pursued _____ (dual/duel) careers in music and acting.
(3) She is _____ (week/weak) in English.
(4) She was a popular ruler throughout her _____ (reign/rain).

II. Correct the following sentences. **5 X 1 = 5**

(1) One of the soldiers were badly injured in the attacks.
(2) Most of the students has voted for Murali.
(3) Neither of the books are good.
(4) Everyone are invited to the party.
(5) The thief with his followers have escaped.

III. Answer the following.

(A) Answer the following choosing the **right option** given in the brackets. **5 X ½ = 2 ½**

(1) When _____ (be/do/have) you visit Ooty?
(2) What kind of music _____ (be/do/have) you like?
(3) How long _____ (be/do/have) you had that phone with you?
(4) I _____ (be/do/have) already seen that film.
(5) _____ (be/do/have) your sister older than you?

(B) Fill in the blanks with appropriate **forms of the verbs** given in brackets. **5 X ½ = 2 ½**

(1) When they arrived at the theatre the movie _____ (start)
(2) I _____ (have) a shower when the door bell rang.
(3) He _____ (get) up at 4.00 AM every day.
(4) I _____ (meet) the doctor tonight.
(5) Our teacher _____ (give) us the grades tomorrow.

(C) Fill up the following blanks with the suitable **articles**. **5 X ½ = 2 ½**

1. Copper is _____ useful metal.
2. _____ rich are happy in the world.
3. He is not _____ honorable man.
4. He is _____ Indian but his wife is _____ European.
5. He is _____ bravest man I know.

(D) Fill in the blanks with suitable **prepositions**. **5 X ½ = 2 ½**

(1) He worked _____ an hour.
(2) The poor fellow died _____ fever.
(3) The train starts _____ 7 O' clock.
(4) He killed the snake _____ a stick.
(5) He is seated _____ her.

IV. Answer any **TWO** of the following questions. **2 X 5 = 10**

1. What are the barriers to effective listening?
2. What is the difference between active and passive listening?
3. List three qualities of a good listener.
4. What are the factors that affect the listening process?
5. Write a note on the types of listening.

V. (**A.**) Answer any **ONE** of the following. **1 X 5 = 5**

1. Define skimming
2. Define scanning
3. Differentiate between intensive reading and extensive reading.

(B.) Read the following passage and answer the questions that are given below. **5 X 1 = 5**

Did you know that spiders are not insects? They are actually called arachnids, a group of animals related to insects that have eight legs and that have venom. There are many different kinds of spiders. They live all over the world and can be found in just about every habitat. Most like dark places, which may include your home, closets, or basement!

Spiders are very interesting. Some spin silk webs to catch and eat prey, while others attack their prey. Some spiders, like tarantulas, are large enough to eat lizards and mice! Many people are afraid of spiders because they bite. Most spiders, however, will only bite if they think they are danger and most are harmless. Spiders are actually helpful to people because many eat insect pests like cockroaches and mosquitoes.

1. Which question is NOT answered in the passage?

A. How many legs do spiders have? **B**. How long do spiders live?
C. What do spiders eat? **D.** Where would I find a spider?

2. Why are spiders helpful to people?

A. Some eat lizards. **B.** Some eat insect pests.
C. They have eight legs. **D.** They live all over the world.

3. Spiders are .....

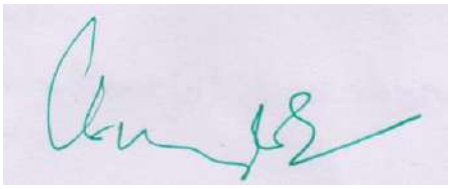
A. Related to insects **B.** Tarantulas
C. All harmful **D**. Insects

4. Spiders have .....

A. Eight legs **B**. Four legs
C. The passage does not mention any **D**. Six legs

5. Which is not true about spiders?

A. Spiders are actually helpful to people. **B.** All spiders are dangerous.
C. Some spiders attack their prey. **D.** Spiders like dark places.



CHAIRMAN
BOS, ENGLISH
SV UNIVERSITY, TIRUPATI

2-08R

FOUNDATION COURSE

INFORMATION & COMMUNICATION TECHNOLOGY –1 (ICT-1)
Computer Fundamentals and Office Tools

II SEMESTER – W.E.F. 2016 – 17

(30 Hours of Teaching Learning including Lab)

Unit-I:

Basics of Computers : Definition of a Computer - Characteristics and Applications of Computers – Block Diagram of a Digital Computer – Classification of Computers based on size and working – Central Processing Unit – I/O Devices.

Unit-II:

Primary, Auxiliary and Cache Memory – Memory Devices. Software, Hardware, Firmware and People ware – Definition and Types of Operating System – Functions of an Operating System – MS-DOS – MS Windows – Desktop, Computer, Documents, Pictures, Music, Videos, Recycle Bin, Task Bar – Control Pane.

Unit-III:

MS-Word

Features of MS-Word – MS-Word Window Components – Creating, Editing, Formatting and Printing of Documents – Headers and Footers – Insert/Draw Tables, Table Auto format – Page Borders and Shading – Inserting Symbols, Shapes, Word Art, Page Numbers, Equations – Spelling and Grammar – Thesaurus – Mail Merge

Unit-IV:

MS-PowerPoint

Features of PowerPoint – Creating a Blank Presentation - Creating a Presentation using a Template - Inserting and Deleting Slides in a Presentation – Adding Clip Art/Pictures -Inserting Other Objects, Audio, Video - Resizing and Scaling of an Object – Slide Transition – Custom Animation

Unit-V:

MS-Excel

Overview of Excel features – Creating a new worksheet, Selecting cells, Entering and editing Text, Numbers, Formulae, Referencing cells – Inserting Rows/Columns –Changing column widths and row heights, auto format, changing font sizes, colors, shading.

Reference Books:

1. Fundamentals of Computers by ReemaThareja, Publishers : Oxford University Press, India
2.Fundamentals of Computers by V.Raja Raman, Publishers : PHI
3. Microsoft Office 2010 Bible by John Walkenbach, Herb Tyson, Michael R.Groh and FaitheWempen, Publishers : Wiley

B. A. HISTORY

I Year B. A. Programme (UG) Courses – Under CBCS
Semester – II - W.E.F. 2016-17
Paper – II (Core Paper)
EARLY MEDIEVAL INDIAN HISTORY & CULTURE (600 A.D to 1526 A. D.)
(Indian History and Culture from 647 to 1526 A.D)

Unit – 1	Harsha & His Times: Administration, Religion – Hiuen Tsang -Polity, Society, Economy and Culture from 7th to 11th Century A. D. under Chalukyas of Badami& Eastern Chalukyas of Vengi.
Unit – II	Age of later Pallavas during 7th& 8th Centuries A. D.: Contribution to Cultural Development & Art & Architecture; The Chola Empire from 9th to 12 Century A. D.: Rise of the Empire, Administration and Cultural Life.
Unit - III	Conditions in India on the eve of Turkish Invasions; Early Invasions: Traces of Arab Invasion, Ghazni & Ghori; Delhi Sultanate (1206 to 1290 A.D.) under Slave Dyanasty.
Unit - IV	Delhi Sultanate (1290 to 1526 A.D.): Khaljis: Expansion & Consolidation, Administrative & Economic Reforms - The Tughlaqs - Decline & Disintegration of the Delhi Sultanate; Administration, Society, Economy, Technology, Religion, Art & Architecture under the Sultanate.
Unit – V	Cultural Development in India between 13th& 15th Centuries A. D.: Impact of Islam on Indian Society and Culture – Bhakti and Sufi Movements – Emergence of Composite Culture.

References:

1	Basham, A.L (ed) A Cultural History of India
2	Champakalakshmi, R Trade, Ideology and Urbanization : South India 300 BC – AD 1300
3	Chandra, S History of Medieval India (800 – 1700)
4	Chattopadyay, B.D The Making of Early Medieval India. (Delhi, 1994)
5	Habib, Irfan, Medieval India: The Study of a Civilization
6	Habibullah, A.B.M, The Foundation of Muslim Rule in India
7	Kumar Sunil, The Emergence of the Sultanate of Delhi
8	Nizami, K.A. Some Aspects of Religion and Politics in India in the 13th c
9	K.A. NilakantaSastri, A History of South India from Prehistoric Times to the Fall of Vijayanagara
10	K.A.NilkantaSastri, The Cholas
11	Shireen Moosvi, The Economy of the Mughal Empire
12	Stein, B Peasant, State & Society in Medieval South India
13	Yazdani, G. (ed) The Early History of the Deccan
14	R.C.Majumdar, The Age of Imperial Kanauj

Project: Students may be asked to prepare a project on influence of Islam and Hinduism in their respective areas.

Encourage students to write their autobiography or biography of their inspiringpersonalities

B.A: HISTORY
I YEAR B.A. Programme (UG) Courses – under CBCS
SEMESTER –II
Paper-II (Core Paper)
Early Medival Indian Histroy & Culture (600 ad TO 1526 AD)
(Indian History and Culture from 647 to 1526 AD)
w.e.f: academic year 2016-17.

Time: 3 Hrs **Max. Marks: 75**

PART– A

Answer any 5 Questions choosing one question from each unit

(Marks:5 x 10 =50 marks)

1. a) Estimate the Achievements of Harshvardana

or

b) Explain the social economic and cultural conditions under chalukyas of Badami

2. a) Explain the contribution of Pallavas to the culture and Arts & Architecutre

Or

b) Write the Administration of Cholas

3. a) Write the causes and results of Arab Invasion

Or

b) Explain the greatness of Balban

4. a) Narate the Market Reforms of Allauddin Khilj?

Or

b) Explain the Social and Economic conditions under Delhi Sultanate

5. a)Describe the contribution of Vijayanagaras to the south Indian Culture

Or

b) Write the impact of Islam on Indian Society and Culture

PART– B

Answer any FIVE questions: **5 x 5 = 25 M**

6. Hiuen Tsamg
7. Pula Kesin-II
8. Mahabalipuram
9. Sultana Rajiya
10. Rudrama Devi
11. Astha Diggajas
12. Qutub Minar
13. Meerabai

13/12/16
Member-BOS History(UG)
Cell: 9490281736.

S Reddemma
(S. Reddemma)
Head
Dept. of. History.
9985679141

K. Venkata
(K. VENKATA RAO)
CHAIRMAN
BOS - HISTORY
Date: 13/12/2016

1-2-107R

B.A. ECONOMICS

Semester – II, Paper -2

W.E.F. 2016-17

Micro Economics - Production and Price theory

Module - 1

Production function-Concept of homogeneous production function-Cobb- Douglas Production function- Law of variable proportions-Law of Returns to Scale - Different Concepts of Costs – Explicit & Implicit, Opportunity, Total – fixed and Variable Costs, Marginal & Average Costs & its Relationship. Concept of Revenue – Total, Marginal & Average Revenue and Break – Even Point

Module - 2

Analyse different types of Market structures - Perfect Competition - Price determination and equilibrium of firm and industry under perfect competition - Monopoly - Price determination - Price discrimination.

Module - 3

Monopolistic competition - price determination - Oligopoly - Kinked demand curve approach.

Module - 4

Marginal Productivity theory of distribution - Theories of wage determination Subsistence theory of wages, Standard of living theory of wages, Modern theory of wages Wages and collective bargaining - concept of minimum wage.

Module - 5

Theory of Rent: Ricardian theory of rent - Quasi rent concept of Alfred Marshall. Theories of Interest - Classical, Neo-classical and Keynes Liquidity Preference theory - Profit - dynamic, innovations, Risk and Uncertainty theories.

REFERENCES:

1. R.G. Lipsey and K.A.Chrystal - "Economics", Oxford University Press, 10/e, 2004.
2. P.A.Samuelson & W.D. Nordhaus-"Economics", Tata Mc.Graw Hill, 18/e, 2005.
3. N.Gregory Mankiw-"Principles of Economics", Thompson 2015.
4. H.L.Ahuja-"Advanced Economic Theory"' S.Chand, 2004.
5. M.L.Seth-"Micro Economics", Laxmi Narayana Agarwal, 2015.
6. Bilas, A.-"Micro Economic Theory", International Student Edition, Mc.Graw Hill, 1971.
7. Telugu Academy Publications
8. AUSDE - Study Material
9. D.M. Mithani & G.K. Murty - Business Economics, Himalaya Publishing, 2015.

10. Bilas, A.-"Micro Economic Theory", International Student Edition, Mc.Graw Hill, 1971.

Sri Venkateswara University - Tirupati - CBCS

B.A - Economics - Semester - II - paper - II w.e.f. 2016-2017.

MICRO ECONOMICS - PRODUCTION & PRICE THEORY.

MODEL QUESTION PAPER

Time: 3 hours | Max. Marks: 75

PART - A

Answer any FIVE Questions from the following; 5x5 = 25.

1. Production Function → ఉత్పత్తి ఫలం
2. Explicit and Implicit Costs → ప్రకటిత, అప్రకటిత వ్యయాలు.
3. Marginal and Average Revenues → ఉపాంత మరియు సగటు రాబడులు
4. Types of Monopoly → ఏకస్వామ్యంలోని రకాలు.
5. Price Rigidity → ధర దృఢత్వం
6. Concept of Minimum Wage → కనీసవేతన భావన
7. Concept of Quasi Rent → కృత్రిమ భాటకం
8. INNOVATIONS → నవకల్పనలు.

PART - B.

Answer any FIVE Questions from the following; 10x5 = 50.

9. (a) Explain the law of Variable proportions?
చరానుపాత సిద్ధాంతమును గూర్చి వివరించండి?

(OR)

(b) Explain the production function of Cobb-Douglas Theory?
కాబ్-డగ్లస్ యొక్క ఉత్పత్తి ప్రతిఫల సిద్ధాంతమును వివరించుము?

10. (a) write about price determination under perfect Competition?
సంపూర్ణ పోటీ మార్కెట్ లో ధర నిర్ణయం ఏవిధంగా జరుగును? వివరించుము?

(OR)

(b) write about price determination under Monopoly?
ఏకస్వామ్యం లో ధర నిర్ణయం ఏవిధంగా జరుగునో వివరించండి?

P.T.O.

11. (a) write about price determination under oligopoly with the help of kinked Demand curve?
కింక్డ్ డిమాండు రేఖ సహాయముతో పరిమిత స్పోమ్యంలో ధర నిర్ణయం ఏ విధంగా జరుగుతుంది వివరించుము?

(OR)

(b) write about price determination under Monopolistic Competition?
ఏక స్వామ్య పోటీ మార్కెట్ లో ధరనిర్ణయం ఏ విధంగా జరుగును?

12. (a) Describe the Theory of Marginal productivity of Distribution?
ఉపాంత ఉత్పాదకత పంపిణీ సిద్ధాంతమును గూర్చి వివరించుము?

(OR)

(b) Describe the Theory of Modern wages?
ఆధునిక వేతన సిద్ధాంతము ను గూర్చి వివరించుము?

13. (a) Explain the Keynesian liquidity preference Theory?
కీన్సు యొక్క ద్రవ్యత్వాభిరుచి వడ్డీ సిద్ధాంతమును గూర్చి వివరింపుము?

(OR)

(b) write about prof. Knight Risk and uncertainity Theory?
prof. నైట్ యొక్క అనిశ్చిత తత్వ లాభ సిద్ధాంతమును గూర్చి వివరింపుండి?

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CHAIR MAN
Board of Studies

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FIRST YEAR: SEMESTER – II
B.A POLITICAL SCIENCE
PAPER – II (CORE): POLITICAL INSTITUTIONS
(CONCEPTS, THEORIES AND INSTITUTIONS)

Unit – I Constitutionalism

1. The purpose of constitutional law, Theory of Separation of powers.
2. Structural forms of the Modern State, Basic features of Parliamentary and presidential forms of Governments.

Unit – II Territorial Davison of Authority of the Modern State

1. Basic features of Federal forms of Government.
2. Basic features of Unitary form of Government.

Unit – III Institutional forms of the Modern State.

1. Democracy, Basic features of Classical and Modern Representative Democracy.
2. Models of Democracy, Procedural Democracy and Substantive Democracy.

Unit – IV Organs of Government.

1. Legislative powers and functions.
2. Executive – Types, Powers and Functions

Unit - V Judiciary

1. Judiciary – Powers and functions.
2. Judicial review, Judicial Activism.

Reference books:

1. Andrew Heywood (2007) Politics 3rd edition, Palgrave Macmillan, New York.
2. Held, David (2006) Models of Democracy 3rd edition Oxford Polity Press.
3. Brich A.H (2009) The Concepts and Theries of Democracy, London Routledge.
4. Bogdanor, V (Ed) (1988) Constitutions in Democratic Politics Gower, Aldershot.
5. Scott Gordon (1999) Controlling the State: Constitutionalism from Ancient Athens to Today, Cambridge, Harvard University Press.

BOS chairperson: 13/12/2k16

Members : 01 13/12/16

02 13/12/16

03 13/12/16

SRI VENKATESWARA UNIVERSITY,TIRUPATHI
MODEL-QUESTION PAPER
Ist YEAR SEMESTER – II (CBCS)
B.A POLITICAL SCIENCE
PAPER II: POLITICAL INSTITUTIONS
(CONCEPTS AND THEORIES AND INSTITUTIONS)

Time: Three hours **Marks: 75**

SECTION- A (5x5= 25 marks)

Answer any FIVE questions
Each question carries 5 marks

1. Constitution
2. Oligarchy
3. Federal System
4. Unitary Government
5. Direct Democracy
6. Substantive Democracy
7. Unicameralism
8. Plural Executive
9. Judicial Review
10. Administrative Law

SECTION- B (5x10= 50 marks)

Answer all the questions
Each question carries 10 marks

1. (a) Define the Separation of Powers and explain its importance.
   (OR)
   (b) Compare the basic features of parliamentary and presidential form of Government.

2. (a) Discuss the basic features of Federal system of Government.
   (OR)
   (b) Critically examine the merits and demerits of unitary form of Government.

3. (a) Discuss the basic features of democracy.
   (OR)
   (b) Compare the Procedural democracy and substantive democracy.

4. (a) Examine the role of Legislature in democracy.
   (OR)
   (b) Discuss the Powers and Functions of executive.

5. (a) Explain the role of Judiciary in democracy.
   (OR)
   (b) Write an essay on Judicial Activism.

BOS chairperson: 13/12/2016
Members: 01 13/12/16
02 13/12/16
03 13/12/16

1-2-103

బి.ఏ. డిగ్రీ మొదటి సంవత్సరము పాఠ్యప్రణాళిక

ADVANCED TELUGU - 2015 - 2016

II సెమిస్టర్

1. వేమన	– వేమన పారిస్ పత్రి నుండి 25 పద్యాలు ఎంపిక చేసినవి.
2. ఏసుగు లక్ష్మణకవి	– (అను) నీతిశతకం (భర్తృహరి అనువాదం) 25 పద్యాలు ఎంపిక చేసినవి.
3. గడియారం వేంకటశేషశాస్త్రి	– శివాజీ పట్టాభిషేకం – శివభారతం
4. రాయిప్రోలు	– కోయిల
5. ఎండ్లూరి సుధాకర్	– గోసంగి

Updated
(S. H. SOUBHAGYAMMA)
Chairperson.
B.O.S. Telugu.

Semister - II

Part - II Telugu (Advanced Telugu) Paper - I

I BA Semister - II Model Paper

Time 3 hrs **Marks 75**

Part - A

క్రింది వానిలో ఐదింటిని సమాధానాలు వ్రాయండి 3, 4 ప్రశ్నలు తప్పనిసరిగ వ్రాయాలి.

$5 \times 5 = 25$

1. వేమన హేతువాద దృక్పథాన్ని తెలపండి
2. సుభాషిత రత్నావళిలో పరోపకార పద్ధతి తెలపండి.
3. క్రింది వాటికి సందర్భ సహిత వ్యాఖ్య చేయండి.

   అ – "తలలు బోడులైన తలపులు బోడులా ।

   ఆ – "జగతి నుపకర్తలకు నిది సహజగుణము॥
4. అ. సుచరితంబుల నిల్పుము రామరాజ్యమున్.

   ఆ. భువనములెల్ల నాదమయంబొనరించదవు.
5. శివాజీ – పింగళే మంత్రితో పట్టాభిషేకాన్ని గూర్చి చర్చించిన విధము.
6. కోయిల పాటలోని యితివృత్తం ఏమైవుంటుందని కవి ఊహించాడు.
7. గోసంగి గేయంలోని కవి భావాన్ని తెలపండి.
8. వేమన తాత్త్విక భావాలు తెల్పండి.

Part - B

క్రింది పద్యాలలో ఒక దానికి సమగ్రవ్యాఖ్య చేయండి

1. అ – ఆరంభించరు నీచమానవులు... **10 మార్కులు**

   ఆ – కత్తులు దున్ని రక్తముల కాల్వల .... పెద్దల ధర్మము పెద్ద సేయలనే.
2. వేమన కవితా రీతులను వివరించండి, **10 మార్కులు**

   లేదా

   సుభాషిత రత్నావళి లోని సుజనపద్ధతి విశిష్ఠతను, ధైర్యపద్ధతి ప్రశస్తిని తెలపండి.

3. గురువు సమర్థ రామదాసు శివాజీకి చేసిన హితోపదేశాన్ని తెల్పండి. **10 మార్కులు**

లేదా

గడియారం వేంకటేషశాస్త్రి గారి శివభారతంలోని కవితా రీతులు తెల్పండి.

4. కోయిల గూర్చి రాయప్రోలు వర్ణించిన విధము **10 మార్కులు**

లేదా

కోయిల ఆధారంగా రాయప్రోలువారి కవితా మాధుర్యాన్ని తెల్పండి

5. ఎండ్లూరి సుధాకర్ గారి గోసంగిలో దళితవాదాన్ని వివరించండి **10 మార్కులు**

లేదా

దళిత అభ్యుదయాన్ని రచయిత చిత్రించిన విధమును తెల్పండి.

(S. H. SOWBHAGYAMMA)
Chairperson BOS Telugu

1-2-101R

SRI VENKATESWARA UNIVERSITY; TIRUPATI

I B.Com/ B.Com(CA)/B.Com(Tax)/B.Com(ASM)/B.A (Accountancy) ;

SEMESTER – II – W.E.F. 2016-17

DSC 1B – FUNDAMENTALS OF ACCOUNTING-II

Unit-I: DEPRECIATION

Methods of Depreciation - Straight line method - Diminishing balancing method - Annuity method - Depreciation fund method - Problems.

Unit-II: PROVISIONS AND RESERVES

Meaning – Provision Vs Reserve – Preparation of Bad debts A/c –RBDD A/c – Provision for Discount on Debtors A/c'.

Unit-III: BILLS OF EXCHANGE

Meaning of Bill –Features of bill – Parties in the Bill – Discounting of Bill – Renewal of Bill – Entries in the books of Drawer and Drawee (Problems).

Unit-IV: CONSIGNMENT ACCOUNTS

Consignment - Features - Proforma invoice - Account sales – Del-credre Commission - Accounting treatment in the books of consigner and consignee - Valuation of closing stock - Abnormal loss – Problems.

Unit-V: JOINT VENTURE ACCOUNTS

Joint venture - Features - Difference between joint venture and consignment – Accounting procedure - methods of keeping records - Problems.

Reference Books:

1. Tulsan, Accountancy-I, McGraw Hill Co.
2. R.L. Gupta & V.K. Gupta, Principles and Practice of Accounting, Sultan Chand
3. T. S. Reddy and A. Murthy - Financial Accounting, Margham Publications.
4. S.P. Jain & K.L Narang, Accountancy-I, Kalyani Publishers.
5. V.K. Goyal, Financial Accounting, Excel Books
6. T.S. Grewal, Introduction to Accountancy, Sultan Chand & Co.
7. Haneef and Mukherjee, Accountancy-I, Tata McGraw Hill

8. Arulanandam, Advanced Accountancy, Himalaya Publishers
9. S.N.Maheshwari & V.L.Maheswari, Advanced Accountancy-I, Vikas Publishers.

SRI VENKATESWARA UNIVERSITY
MODEL QUESTION PAPER
I B.Com Semester – II
DSC 1B – Fundamentals of Accounting-II
(common to B.Com (CA); B.A (Accountancy)

Time: 3 Hours Max. Marks: 75

Section A

Answer any **Five** of the following Questions

(5 x 3= 15 Marks)

1. (a) Define Depreciation-
   (b) Provision for Bad debts - Journal entry
   (c) Account Sales
   (d) Features of Joint Venture
   (e) Write any three causes for depreciation?
   (f) Write any three differences between Provision and Reserve?
   (g) Delcredre Commission
   (h) Find annual Depreciation – Cost of the Machine Rs.9,500
   Installation Charges Rs.500; Estimated Scrape Value Rs.1000
   Estimated Life of the Machine 5 years
   (i) Parties in the bill of exchange
   (j) Characteristic features of a bill

Section - B

Answer any ONE Question from each unit.

(5 ×12 =60 Marks)

UNIT – I

2. On 1st January, 2007, machinery was purchased by X for Rs.60,000. On 1st July, 2008 additions were made to the extent of Rs.30,000. On 1st April, 2009, further additions were made to the extent of Rs.16,000.

   On 30th June, 2009 machinery, the original value of which was Rs.10,000 on 1st January, 2007, was sold for Rs.8,000. Depreciation is charged at 10% p.a. on original cost. So the machinery Account for the years from 2007 to 2010 in the books of X. X Closes his books on 31st December of every year.

3. A firm purchases a 5 years' lease for Rs.40,000 on 1st January. It decides to write off depreciation on the Annuity Method, presuming the rate of interest to be 5% per annum. The annuity tables show that a sum of Rs.9,239 should be written off every year. Show the Lease Account for five years. Calculations are to be made to the nearest-rupee.

UNIT – II

4. A firm desires to debit its Profit and Loss Account with a uniform figure every year in respect of repairs and renewals. It expects that considering the life of the asset in question Rs.10,000 will be the average amount to be spent per year. Actual repairs are Rs.1,000 in the first year, Rs.2,300 in the second year and Rs.3,700 in the third year. Show the Provision for Repairs and Renewals Account.

5. From the following figures you are required to prepare:
   i) Bad Debts Account ii) Provision for Bad Debts Account
   iii) Profit and Loss Account.

April 1, 2012	Provision for Bad Debts	Rs.2,500
March 31, 2013	Bad Debts	Rs.3,600
	Debtors	Rs.40,000

   Make provision for bad debts at 5% on debtors.

UNIT - III

6. On 1st January 2015 Venkatesh sold goods worth Rs.5,000 to Nagarjuna and drew a bill on Nagarjuna for 3 months for the same amount. Nagarjuna accepted the bill and returned it to Venkatesh. On 1st February 2015, Venkatesh endorsed the bill in favour of his creditor Prabhakar in settlement of his debt. The bill was honoured on due date. Pass the necessary journal entries in the books of Venkatesh, Nagarjuna and Prabhakar.

7. Narayana purchased goods for Rs.20,000 from Ravindra on 1st March 2015. Ravindra drew upon Narayana a bill of exchange for the same amount payable after four months. The bill was immediately discounted by Ravindra with his bank @ 6% p.a. On the due date the bill was dishonoured and Bank paid Rs.250 as noting charges. Pass the necessary journal entries in the books of Ravindra and Narayana.

UNIT – IV

8. Ram & Co. of Calcutta consigned 150 cases of goods at Rs.500 each to Raghava of Bombay. The consignor pays Rs.1,200 for insurance and for freight Rs.1,500. Raghava sent an advance for Rs.40,000 through cheque and sent an account sales showing the gross proceeds at Rs. 1,16,000. The expenses paid by Raghava were dock dues Rs.2,000, carriage Rs.3.000, warehousing expenses Rs.4,000. He sent the amount due to the consignor after deducting 4 per cent commission. Show necessary A/c's in the books of both.

9. 300 bicycles were consigned by Ramanujam Bicycle Co., Delhi to Superior Bros., Chennai Rs.800 each. Ramanujam Co. paid freight Rs.10,000 and insurance in transit Rs 3,500. During transit 30 bicycles were totally damaged by fire. Superior Bros.took delivery of the remaining bicycles and paid Rs.3,500 for octroi.

Superior Bros. sent a bank draft to Ramanujam Co. for Rs.1,50,000 as advance payment and later sent an Account Sales showing that 250 bicycles were sold at Rs.1000 each. Expenses incurred by Superior Bros. is entitled to commission of 5%. Prepare the consignment Account, Accidental Loss Account and Superior Bros. Account in the books of Ramanujam Bicycle Co., Delhi assuming that a claim from insurance company was settled for Rs.18,000.

UNIT – V

10. A and B enter into joint venture sharing profit 3/5ths and 2./5ths. A is to purchase timber in Madhya Pradesh and forward it to B in Delhi. A purchases timber worth Rs.10,000 and pays Rs.1,000 as expenses. B received the consignment and immediately accepted A/s draft for Rs.8,000. A got it discounted for Rs.7,850. B sold the timber for Rs.16,000. He had to spend Rs.350 for fire insurance and Rs.300 for rent. Under the agreement he is entitled to a commission of 5% on sales. SGive ledger accounts in the books of A and B.

11. Ramesh and Naresh undertook the construction of a building for Ideal Engineering Co. Ltd. for a contract price of Rs.3,00,000 payable as to Rs.2,00,000 by installments in cash and Rs.1,00,000 in fully paid debentures of a company. Ramesh put Rs.75,000 and Naresh Rs.45,000 in a joint banking account opened for the purpose. They are to share profits and losses equally. The following amounts were spent.
On wages Rs.75,000; On Materials Rs.1,58,000 and On plant Rs.20,000.

The contract was completed and the price duly received. The joint venture was closed by Ramesh taking up all the debentures at an agreed valuation of Rs.95,000. Half of the plant was taken over by Naresh and the other half was sold for Rs.12,000. Naresh also took over unused stock of materials at a mutually agreed price of Rs.8,000. Prepare necessary ledger accounts.

SRI VENKATESWARA UNIVERSITY

B.Com., / B.A., / B.Sc., – COMPUTER APPLICATION

I YEAR – II – SEMESTER - W.E.F.2016-17

DSC3B: FUNDAMENTALS OF OPERATING SYSTEMS

Total Marks:75

Unit -1 Introduction to Operating System

Introduction to Operating Systems, Role (Functions) of Operating Systems, Types of Operating Systems, User Interface, Concept of Process and Running Programs by OS, Files & Folders(Organizing, Attributes, and Sharing), Managing Hardware, PC Operating System, Network (Server) Operating System, Embedded Operating Systems

Unit -2 Overview of Popular Operating Systems

DOS, Windows NT, Windows XP, Windows Vista, Windows 7, Windows 2000Server, Windows Server 2008, UNIX, Macintosh Operating Systems, Android, iOS

[unit 1 & 2 from book 1]

Unit -3 Roles/Functions of Operating System

Multi-Processing, Fault Tolerance and Load Balancing, Overview of Data Safety(RAID), Disk Defragmentation, Backup and Recovery, Security (Concept of User and Group, Fileand Folder Permission, Firewall), Workgroups, Domains, and Active Directory, Over view of Server Roles

Unit -4 Introduction to Linux Operating System

Introduction to Linux, History of Linux, Strengths and Weaknesses of LINUX, Features of Linux, LINUX Distributions, Basic Commands of Linux

Unit- 5 Introduction to Android

History of Android, Design goals , Memory management, Processor management, device management, file management, security management User interface.

Reference Books:

1. **Peter Norton**, "Introduction to Computers",TMH
2. **Understanding Operating Systems By Ann McHoes, Ida M. Flynn**
3. **Alan Carter, "Windows 2000 MCSE Study System"**
4. **Pfaffenberger**, "Linux Commands Instant Reference", BPBPublication

5. **Silberschatz& Galvin**, “Operating System Concepts”, Wiley, 5th Ed.
6. **Sumitabha Das**, “UNIX Concepts and Applications”, THM, 4th Ed.

S.V. UNIVERSITY; TIRUPATI

MODEL QUESTION PAPER – W.E.F. 2016-17

I B.Com., / B.Sc., / B.A., (CA); SEMESTER – II

DSC 3B: FUNDAMENTALS OF OPERATING SYSTEM

Time : 3 Hours Max. Marks : 75

SECTION A

Answer any **Five** of the following Questions

(5 x 3 = 15 Marks)

1. (a) What is Memory Management?
   (b) Multi-Processing
   (c) What is command-User interface?
   (d) Workgroups
   (e) Backup and recovery
   (f) Firewall
   (g) List the file and directory commands in Linux.
   (h) Difference b/w single user OS and Multi-user OS.
   (i) Differences b/w desktop OS and Mobile OS.
   (j) How the security is maintain in Android Mobile.

Section - B

Answer any ONE Question from each unit. (5 × 12 = 60 marks)

UNIT I

2. What is Operating system? Explain the role of operating system.
3. Explain different kinds of desktop operating systems?

UNIT – II

4. What is DOS? Explain any 5 internal and external commands.
5. How you differentiate between Windows, Linux and Macintosh.

UNIT - III

6. Explain overview of the Data safety (RAID).
7. Explain workgroup, Domains and role of server.

UNIT – IV

8. Explain Linux advantages and disadvantages briefly.
9. Explain overview of Linux?

UNIT – V

10. Explain design goals of Android.
11. Explain device and file management in Android.

SRI VENKATESWARA UNIVERSITY : TIRUPATI

STATISTICS SYLLABUS (II YEAR)

SEMESTER – II – W.E.F. 2015-16

(CBCS With Non Maths Combination BA)

Paper – II : DESCRIPTIVE STATISTICS

UNIT - I

Statistics :Definition and its applications to various disciplines, Scope, Limitation, Collection of Data: Primary and Secondary data, Methods of collection of primary data, Sources of secondary data, Conduct of statistical inquiry, Preparation of questionnaire and schedule, Editing of primary and secondary data.

UNIT - II

Classification: Characteristics, types of classification of data, Frequency distribution, Tabulation: Objectives, Parts of tabulation, Rules of tabulation, Types of Tabulation: simple, complex and manifold tables.

UNIT - III

Diagrammatic Presentation: Advantages and Disadvantages, One dimensional Diagrams: Simple, Sub Divided, Multiple, Percentage bar diagrams, Two dimensional diagrams: Square, Rectangle and Circle or Pie diagrams. Graphic Presentation: Histogram, frequency polygon, frequency curve, Ogive curves

UNIT - IV

Measures of Central tendency: Characteristics of good average, Various Measures: Arithmatic Mean(AM) and properties, Geometric Mean(GM), Harmonic Mean(HM), Median and Mode with their merits and demerits, Graphical location of median and mode, Weighted averages, Simple problems

UNIT - V

Measures of Dispersion: Characteristics of good measures of dispersion: Various Measures: Range, Quartile Deviation(Q.D), Mean Deviation(M.D), Standard Deviation(S.D)and properties, Coefficient of variation, Lorenz Curve, Simple problems

Reference Books:

1. Fundamentals of mathematical statistics: S.C.Guptha and V.K. Kapoor
2. Outlines of statistics, Vol II: Goon Guptha, M.K.Guptha and Das Guptha B
3. Introduction to mathematical Statistical : Hoel P.G
4. Random variable and Prabability Distribution: BA/BSc I year statistics- Telugu Academy
5. Business Statistics : R.S.Bhardwaj
6. Statistics Made simple Do it yourself on PC By K.V.S. Sarma

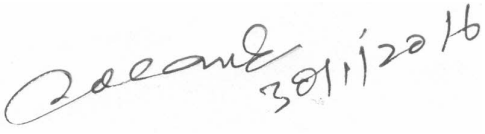
Recd 30/1/2016

7. Applied Statistics with Microsoft Excel By Gerald Keller

Practical Paper - II

1. Construction of Simple Bar Diagram
2. Construction of Sub divided Bar Diagram
3. Construction of Multiple Bar Diagram
4. Construction of Percentage Bar Diagram
5. Construction of Pie Chart
6. Construction of Histogram, Frequency polygon and Frequency Curve
7. Construction of Histogram and determination of mode
8. Construction of Ogive curves and determination of median
9. Computation of mean, median and mode of frequency distribution
10. Computation of HM, GM of frequency distribution
11. Computation of Quartile Deviation
12. Computation of mean deviation
13. Computation of Standard deviation for un grouped dada
14. Computation of Standard deviation for grouped data
14. Computation of Coefficient of variation for un grouped data
15. Computation of Coefficient of variation for grouped data

Note : The above practical are to be done using M S Excel and SPSS Package where ever it is possible



THREE YEAR B.A. DEGREE EXAMINATION

CBCS - SECOND SEMESTER

Part - II - STATISTICS (NM)

Paper II : DESCRIPTIVE STATISTICS

New syllabus w.e.f. 2015 - 16

MODEL PAPER

Time : 3 Hours Max Marks : 75

PART - A

Answer any **FIVE** of the following questions. Each question carries **5** marks **5X5 = 25 Marks**

1. Define Statistics . And explain the characteristics of the statistics.
2. Explain that main source of secondary data.
3. What is tabulation. Explain the various parts of the table.
4. Explain the construction of Histogram and Fequency Polygon.
5. Explain the construction of Pie diagram.
6. Define Geometric Mean and write it's merits and demerits.
7. Define measures of Dispersion. What are the different measures of dispersion.
8. Define standard deviation and coefficient of variation.

PART - B

Answer **ONE** question from each unit. Each question carries 10 marks. **5x10 = 50 Marks**

UNIT – I

9. What is primary data? State various methods of collecting primary data and discuss their relative measures.

(OR)

10. Discuss the Scope of statistics. Explain that uses of statistics in the field of business and economics.

UNIT – II

11. Classify the following data by taking class interval such that their mid - values are 17, 22, 27, 32 and so on :

30, 42, 30, 54, 40, 48, 15, 17, 51, 42, 25, 41, 30, 27, 42, 36, 28, 26, 37, 54, 44, 31, 36, 40, 36, 22, 30, 31, 19, 48, 16, 42, 32, 21, 22, 46, 33, 41, 21.

(OR)

12. What is classification and explain different types of classification? What are the uses of tabulation.

Received 30/1/2016

UNIT – III

13. Discuss the various methods of diagrammatic representation of data.

(OR)

14. Represent the following data be less than ogive and more than ogive

Class interval	10-20	20-30	30-40	40-50	50-60	60-70	70-80
Frequency	10	25	30	50	40	30	15

UNIT - IV

15. Compute median for the following data

Class Interval	0-50	50-100	100-150	150-200	200-250	250-300	300-350
Frequency	7	16	31	48	26	14	8

(OR)

16. The mean marks got by 300 students in the subject statistics are 45. The mean of the top of them was found to be 70 and mean of the 100 was 20. What is the mean of the remaining 100 students.

UNIT - V

17. Compute Q D from the following data

Class	0-10	10-20	20-30	30-40	40-50	50-60	60-70
Frequency	8	16	22	30	24	12	6

(OR)

18. Calculate S D and coefficient of variation for the following data

Class Interval	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50
Frequency	18	32	50	75	125	150	100	90	50	20

Revised 30/1/2016

SRI VENKATESWARA UNIVERSITY

W.E.F.2016-17

B.Com (GENERAL) - SEMESTER – II

Sl. No.	Course	Name of the subject	Total Marks	Mid. Sem. Exam	Sem. End Exam	Teaching Hours**	Credits
1.	First Language	English	100	25	75	4	3
2.	Second Language	(Tel/Hindi/Urdu/Sans)	100	25	75	4	3
3.	Foundation Course -3	ICT-1 (Information & communication Technology)	50	---	50	2	2
4.	Foundation Course-4	Communication & Soft Skills-1	50	---	50	2	2
5.	DSC 1 B	Fundamentals of Accounting-II	100	25	75	6	4
6.	DSC 2 B	Business Environment	100	25	75	6	4
7.	DSC 3 B	Business Economics-II	100	25	75	6	4
Total			**600**	**125**	**475**	**30**	**22**

1-2-101R

SRI VENKATESWARA UNIVERSITY; TIRUPATI

I B.Com/ B.Com(CA)/B.Com(Tax)/B.Com(ASM)/B.A (Accountancy) ;
SEMESTER – II – W.E.F. 2016-17
DSC 1B – FUNDAMENTALS OF ACCOUNTING-II

Unit-I: DEPRECIATION

Methods of Depreciation - Straight line method - Diminishing balancing method - Annuity method - Depreciation fund method - Problems.

Unit-II: PROVISIONS AND RESERVES

Meaning – Provision Vs Reserve – Preparation of Bad debts A/c –RBDD A/c – Provision for Discount on Debtors A/c'.

Unit-III: BILLS OF EXCHANGE

Meaning of Bill –Features of bill – Parties in the Bill – Discounting of Bill – Renewal of Bill – Entries in the books of Drawer and Drawee (Problems).

Unit-IV: CONSIGNMENT ACCOUNTS

Consignment - Features - Proforma invoice - Account sales – Del-credre Commission - Accounting treatment in the books of consigner and consignee - Valuation of closing stock - Abnormal loss – Problems.

Unit-V: JOINT VENTURE ACCOUNTS

Joint venture - Features - Difference between joint venture and consignment – Accounting procedure - methods of keeping records - Problems.

Reference Books:

1. Tulsan, Accountancy-I, McGraw Hill Co.
2. R.L. Gupta & V.K. Gupta, Principles and Practice of Accounting, Sultan Chand
3. T. S. Reddy and A. Murthy - Financial Accounting, Margham Publications.
4. S.P. Jain & K.L Narang, Accountancy-I, Kalyani Publishers.
5. V.K. Goyal, Financial Accounting, Excel Books
6. T.S. Grewal, Introduction to Accountancy, Sultan Chand & Co.
7. Haneef and Mukherjee, Accountancy-I, Tata McGraw Hill
8. Arulanandam, Advanced Accountancy, Himalaya Publishers
9. S.N.Maheshwari & V.L.Maheswari, Advanced Accountancy-I, Vikas Publishers.

I B.Com; II Semester – W.E.F. 2016-17 2-2-103R

DSC 2 B: BUSINESS ENVIRONMENT

Unit – I: Overview of Business Environment

Business Environment – Meaning – Macro and Micro Dimensions of Business Environment –Types and Determinants – Changing Scenario and implications – Indian Perspective – Global perspective- Social Responsibilities of Business

Unit – II: Economic Growth

Meaning of Economic growth – Factors Influencing Development – Balanced Regional Development.

Unit – III - Development and Planning

Rostow's stages of economic development - Meaning – Types of plans – Main objects of planning in India – NITI Ayog and National Development Council – Five year plans.

Unit – IV : Economic Policies

Economic Reforms and New Economic Policy – New Industrial Policy – Fiscal Policy – Objectives and Limitations – Union budget – Structure and importance of Union budget – Monetary policy.

Unit – V -Social, Political and Legal Environment

Concept of Social Justice - Schemes - Political Stability - Leal Changes.

Suggested Readings:

1. Rosy Joshi and Sangam Kapoor : Business Environment.
2. Francis Cherunilam : Business Environment.
3. S.K. Mishra and V.K. Puri : Economic Environment of Business.
4. K. Aswathappa : Essentials of Business Environment.

I B.Com; II SEMESTER – W.E.F. 2016-17 2-2-102 R

DSC 3 B - BUSINESS ECONOMICS-II

Unit-I: Production and Costs: Techniques of Maximization of output, Minimization of costs and Maximization of profit - Scale of production - Economies of Scale – Internal and External Economies - Costs of Production – Production Function – Law of variable proportions.

Unit – II- Market structure I

Meaning and definition of Market – Market structure - Perfect competition Characteristics - Price determination - Monopoly – Characteristics - Price determination - Distinguish between perfect competition and Monopoly.

Unit-III-Market structure II

Monopolistic Competition – Characteristics – Product differentiation - Price determination in short and long run – Distribution – Concepts only.

Unit-IV-National Income:

National Income – Definition – concepts GDP-GNP – NNP – National Income at Factor of cost - Per capita Income – Personal and Disposal Income- Methods of measuring National Income.

Unit-V Structural Reforms: Concepts of Economic liberalization, Privatization, Globalization -WTO Objectives Agreements - Functions - Trade cycles - Meaning – Phases.

Reference Books:

1. Aryasri and Murthy, Business Economics, McGraw Hill
2. S.Sankaran, Business Economics, Margham Publications, Chennai.
3. H.L Ahuja, Business Economics, Sultan Chand & Sons
4. KPM Sundaram, Micro Economics
5. Mankiw, Principles of Economics, Cengage Publications
6. Mithani, Fundamentals of Business Economics, Himalaya Publishing House
7. DAR Subrahmanyam &V Hari Leela, A Text Book on Business Economics, Maruthi Publishers.
8. A.V. R. Chary, Business Economics, Kalyani Publishers, Hyderabad.

SRI VENKATESWARA UNIVERSITY
MODEL QUESTION PAPER
I B.Com Semester – II
DSC 1B – Fundamentals of Accounting-II
(common to B.Com (CA); B.A (Accountancy)

Time: 3 Hours Max. Marks: 75

Section A

Answer any **Five** of the following Questions

(5 x 3= 15 Marks)

1. (a) Define Depreciation-
   (b) Provision for Bad debts - Journal entry
   (c) Account Sales
   (d) Features of Joint Venture
   (e) Write any three causes for depreciation?
   (f) Write any three differences between Provision and Reserve?
   (g) Delcredre Commission
   (h) Find annual Depreciation – Cost of the Machine Rs.9,500
   Installation Charges Rs.500; Estimated Scrape Value Rs.1000
   Estimated Life of the Machine 5 years
   (i) Parties in the bill of exchange
   (j) Characteristic features of a bill

Section - B

Answer any ONE Question from each unit.

(5 ×12 =60 Marks)

UNIT – I

2. On 1st January, 2007, machinery was purchased by X for Rs.60,000. On 1st July, 2008 additions were made to the extent of Rs.30,000. On 1st April, 2009, further additions were made to the extent of Rs.16,000.

   On 30th June, 2009 machinery, the original value of which was Rs.10,000 on 1st January, 2007, was sold for Rs.8,000. Depreciation is charged at 10% p.a. on original cost. So the machinery Account for the years from 2007 to 2010 in the books of X. X Closes his books on 31st December of every year.

3. A firm purchases a 5 years' lease for Rs.40,000 on 1st January. It decides to write off depreciation on the Annuity Method, presuming the rate of interest to be 5% per annum. The annuity tables show that a sum of Rs.9,239 should be written off every year. Show the Lease Account for five years. Calculations are to be made to the nearest-rupee.

UNIT – II

4. A firm desires to debit its Profit and Loss Account with a uniform figure every year in respect of repairs and renewals. It expects that considering the life of the asset in question Rs.10,000 will be the average amount to be spent per year. Actual repairs are Rs.1,000 in the first year, Rs.2,300 in the second year and Rs.3,700 in the third year. Show the Provision for Repairs and Renewals Account.

5. From the following figures you are required to prepare:
   i) Bad Debts Account ii) Provision for Bad Debts Account
   iii) Profit and Loss Account.

April 1, 2012	Provision for Bad Debts	Rs.2,500
March 31, 2013	Bad Debts	Rs.3,600
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   Make provision for bad debts at 5% on debtors.

UNIT - III

6. On 1st January 2015 Venkatesh sold goods worth Rs.5,000 to Nagarjuna and drew a bill on Nagarjuna for 3 months for the same amount. Nagarjuna accepted the bill and returned it to Venkatesh. On 1st February 2015, Venkatesh endorsed the bill in favour of his creditor Prabhakar in settlement of his debt. The bill was honoured on due date. Pass the necessary journal entries in the books of Venkatesh, Nagarjuna and Prabhakar.

7. Narayana purchased goods for Rs.20,000 from Ravindra on 1st March 2015. Ravindra drew upon Narayana a bill of exchange for the same amount payable after four months. The bill was immediately discounted by Ravindra with his bank @ 6% p.a. On the due date the bill was dishonoured and Bank paid Rs.250 as noting charges. Pass the necessary journal entries in the books of Ravindra and Narayana.

UNIT – IV

8. Ram & Co. of Calcutta consigned 150 cases of goods at Rs.500 each to Raghava of Bombay. The consignor pays Rs.1,200 for insurance and for freight Rs.1,500. Raghava sent an advance for Rs.40,000 through cheque and sent an account sales showing the gross proceeds at Rs. 1,16,000. The expenses paid by Raghava were dock dues Rs.2,000, carriage Rs.3.000, warehousing expenses Rs.4,000. He sent the amount due to the consignor after deducting 4 per cent commission. Show necessary A/c's in the books of both.

9. 300 bicycles were consigned by Ramanujam Bicycle Co., Delhi to Superior Bros., Chennai Rs.800 each. Ramanujam Co. paid freight Rs.10,000 and insurance in transit Rs 3,500. During transit 30 bicycles were totally damaged by fire. Superior Bros.took delivery of the remaining bicycles and paid Rs.3,500 for octroi.

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UNIT – V

10. A and B enter into joint venture sharing profit 3/5ths and 2./5ths. A is to purchase timber in Madhya Pradesh and forward it to B in Delhi. A purchases timber worth Rs.10,000 and pays Rs.1,000 as expenses. B received the consignment and immediately accepted A/s draft for Rs.8,000. A got it discounted for Rs.7,850. B sold the timber for Rs.16,000. He had to spend Rs.350 for fire insurance and Rs.300 for rent. Under the agreement he is entitled to a commission of 5% on sales. SGive ledger accounts in the books of A and B.

11. Ramesh and Naresh undertook the construction of a building for Ideal Engineering Co. Ltd. for a contract price of Rs.3,00,000 payable as to Rs.2,00,000 by installments in cash and Rs.1,00,000 in fully paid debentures of a company. Ramesh put Rs.75,000 and Naresh Rs.45,000 in a joint banking account opened for the purpose. They are to share profits and losses equally. The following amounts were spent.
On wages Rs.75,000; On Materials Rs.1,58,000 and On plant Rs.20,000.

The contract was completed and the price duly received. The joint venture was closed by Ramesh taking up all the debentures at an agreed valuation of Rs.95,000. Half of the plant was taken over by Naresh and the other half was sold for Rs.12,000. Naresh also took over unused stock of materials at a mutually agreed price of Rs.8,000. Prepare necessary ledger accounts.

Sri Venkateswara University
Model Paper
I I B.Com / B.Com(CA) / B.Com(ASM) / B.Com(Tax) - Semester – II
DSC 2 B - Business Environment

Time : 3 Hours **Max. Marks : 75**

Section A

Answer any **Five** of the following Questions **(5 x 3 = 15 Marks)**

1. (a) Business Environment
   (b)Global Perspective
   (c)Economic Growth
   (d) National Development Council
   (e) Five year plans
   (f)Union Budget
   (g)Economic Reforms
   (h)Political Stability
   (i)Legal Environment
   (j)Economic Development

Section - B

Answer any ONE Question from each unit. **(5 x12 = 60 Marks)**

UNIT I

2. What are Micro and Macro Dimensions of Business Environment?
3. What are Social Responsibilities of Business?

UNIT – II

4. What are the factors influencing Economic Development?
5. What is Balanced Regional Development?

UNIT – III

6. Explain the Rostow's stages of Economic Development.
7. What are the objectives of Planning in India?

UNIT – IV

8. Write note on New Industrial Policy?
9. Explain the structure and importance of Union Budget.

UNIT – V

10. Explains the concepts of Social Justice?
11. Write a note on Legal Environment?

Sri Venkateswara University
Model Paper
I B.Com-Semester – II,
DSC 3 B - Business Economics-II

Time : 3 Hours Max. Marks : 75

Section A

Answer any **Five** of the following Questions

(5 x 3 = 15 Marks)

1. (a) Production function
   (b) Cost of Production
   (c) Classification of Markets
   (d) Monopoly
   (e) Product differentiation
   (f) Imperfect competition
   (g) Gross Domestic Product (GDP)
   (h) National Income at Factor Cost
   (i) Privatization
   (j) Globalization

Section - B

Answer any ONE Question from each unit.

(5 ×12 = 60 Marks)

UNIT I

2. What is meant by Economies of scale? Explain internal and external economies.
3. Explain the concept of law of variable proportions.

UNIT – II

4. How is the price determined under perfect competition
5. Distinguish between Perfect Competition and Monopoly

UNIT – III

6. What are the characteristic features of Monopolistic competition?
7. Explain the concept of theory of distribution.

UNIT – IV

8. What are the various methods of measuring National Income?
9. What are the concepts of National Income?

UNIT – V

10. What are the objectives and functions of WTO?
11. Describe the phases of trade cycles.

SRI VENKATESWARA UNIVERSITY

W.E.F 2016-17

B.Com (CA)- Semester – II

Sl. No.	Course	Name of the subject	Total Marks	Mid. Sem. Exam	Sem. End Exam	Teaching Hours**	Credits
1.	First Language	English	100	25	75	4	3
2.	Second Language	(Tel/Hindi/Urdu/Sans)	100	25	75	4	3
3.	Foundation Course -3	ICT-1 (Information & communication Technology)	50	---	50	2	2
4.	Foundation Course-4	Communication & Soft Skills-1	50	---	50	2	2
5.	DSC 1 B	Fundamentals of Accounting-II	100	25	75	6	4
6.	DSC 2 B	Business Environment	100	25	75	6	4
7.	DSC 3 B	Fundamentals of Operating Systems	100	25	75	4	4
		Practical's	50	-	50	2	2
Total			**650**	**125**	**525**	**30**	**24**

1-2-101R

SRI VENKATESWARA UNIVERSITY; TIRUPATI

I B.Com/ B.Com(CA)/B.Com(Tax)/B.Com(ASM)/B.A (Accountancy) SEMESTER – II

W.E.F. 2016-17

DSC 1B – FUNDAMENTALS OF ACCOUNTING-II

Unit-I: DEPRECIATION

Methods of Depreciation – Straight line method – Diminishing balancing method – Annuity method – Depreciation fund method – Problems.

Unit-II: PROVISIONS AND RESERVES

Meaning – Provision Vs Reserve – Preparation of Bad debts A/c – RBDD A/c – Provision for Discount on Debtors A/c'.

Unit-III: BILLS OF EXCHANGE

Meaning of Bill –Features of bill – Parties in the Bill – Discounting of Bill – Renewal of Bill – Entries in the books of Drawer and Drawee (Problems).

Unit-IV: CONSIGNMENT ACCOUNTS

Consignment – Features – Proforma invoice – Account sales – Del-credre Commission – Accounting treatment in the books of consigner and consignee – Valuation of closing stock - Abnormal loss – Problems.

Unit-V: JOINT VENTURE ACCOUNTS

Joint venture – Features – Difference between joint venture and consignment – Accounting procedure – methods of keeping records – Problems.

Reference Books:

1. Tulsan, Accountancy-I, McGraw Hill Co.
2. R.L. Gupta & V.K. Gupta, Principles and Practice of Accounting, Sultan Chand
3. T. S. Reddy and A. Murthy – Financial Accounting, Margham Publications.
4. S.P. Jain & K.L Narang, Accountancy-I, Kalyani Publishers.
5. V.K. Goyal, Financial Accounting, Excel Books
6. T.S. Grewal, Introduction to Accountancy, Sultan Chand & Co.
7. Haneef and Mukherjee, Accountancy-I, Tata McGraw Hill
8. Arulanandam, Advanced Accountancy, Himalaya Publishers
9. S.N.Maheshwari & V.L.Maheswari, Advanced Accountancy-I, Vikas Publishers.

2-2-103R

I B.Com; II Semester
DSC 2 B: Business Environment

Unit – I: Overview of Business Environment

Business Environment – Meaning – Macro and Micro Dimensions of Business Environment – Types and Determinants – Changing Scenario and implications – Indian Perspective – Global perspective- Social Responsibilities of Business

Unit – II: Economic Growth

Meaning of Economic growth – Factors Influencing Development – Balanced Regional Development.

Unit – III - Development and Planning

Rostow's stages of economic development - Meaning – Types of plans – Main objects of planning in India – NITI Ayog and National Development Council – Five year plans.

Unit – IV : Economic Policies

Economic Reforms and New Economic Policy – New Industrial Policy – Fiscal Policy – Objectives and Limitations – Union budget – Structure and importance of Union budget – Monetary policy.

Unit – V -Social, Political and Legal Environment

Concept of Social Justice - Schemes - Political Stability - Leal Changes.

Suggested Readings:

1. Rosy Joshi and Sangam Kapoor : Business Environment.
2. Francis Cherunilam : Business Environment.
3. S.K. Mishra and V.K. Puri : Economic Environment of Business.
4. K. Aswathappa : Essentials of Business Environment.

I YEAR – II – SEMESTER - W.E.F.2016-17

DSC3B: FUNDAMENTALS OF OPERATING SYSTEMS

Total Marks:75

Unit -1 Introduction to Operating System

Introduction to Operating Systems, Role (Functions) of Operating Systems, Types of Operating Systems, User Interface, Concept of Process and Running Programs by OS, Files & Folders(Organizing, Attributes, and Sharing), Managing Hardware, PC Operating System, Network (Server) Operating System, Embedded Operating Systems

Unit -2 Overview of Popular Operating Systems

DOS, Windows NT, Windows XP, Windows Vista, Windows 7, Windows 2000Server, Windows Server 2008, UNIX, Macintosh Operating Systems, Android,iOS

[unit 1 & 2 from book 1]

Unit -3 Roles/Functions of Operating System

Multi-Processing, Fault Tolerance and Load Balancing, Overview of Data Safety(RAID), Disk Defragmentation, Backup and Recovery, Security (Concept of User and Group, Fileand Folder Permission, Firewall), Workgroups, Domains, and Active Directory, Over view of Server Roles

Unit -4 Introduction to Linux Operating System

Introduction to Linux, History of Linux, Strengths and Weaknesses of LINUX, Features of Linux, LINUX Distributions, Basic Commands of Linux

Unit- 5 Introduction to Android

History of Android, Design goals , Memory management, Processor management, device management, file management, security management User interface.

Reference Books:

1. **Peter Norton**, "Introduction to Computers",TMH
2. **Understanding Operating Systems By Ann McHoes, Ida M. Flynn**
3. **Alan Carter, "Windows 2000 MCSE Study System"**
4. **Pfaffenberger**, "Linux Commands Instant Reference", BPBPublication
5. **Silberschatz& Galvin**, "Operating System Concepts", Wiley, 5th Ed.
6. **Sumitabha Das**, "UNIX Concepts and Applications", THM, 4th Ed.

SRI VENKATESWARA UNIVERSITY
Model Question Paper
I B.Com Semester – II
DSC 1B – Fundamentals of Accounting-II
(common to B.Com (CA); B.A (Accountancy)

Time: 3 Hours Max. Marks: 75

Section A

Answer any **Five** of the following Questions **(5 x 3= 15 Marks)**

1. (a) Define Depreciation-
   (b) Provision for Bad debts - Journal entry
   (c) Account Sales
   (d) Features of Joint Venture
   (e) Write any three causes for depreciation?
   (f) Write any three differences between Provision and Reserve?
   (g) Delcredre Commission
   (h) Find annual Depreciation – Cost of the Machine Rs.9,500
   Installation Charges Rs.500; Estimated Scrape Value Rs.1000
   Estimated Life of the Machine 5 years
   (i) Parties in the bill of exchange
   (j) Characteristic features of a bill

Section - B

Answer any ONE Question from each unit. (5 ×12 =60 Marks)

UNIT – I

2. On 1st January, 2007, machinery was purchased by X for Rs.60,000. On 1st July, 2008 additions were made to the extent of Rs.30,000. On 1st April, 2009, further additions were made to the extent of Rs.16,000.

   On 30th June, 2009 machinery, the original value of which was Rs.10,000 on 1st January, 2007, was sold for Rs.8,000. Depreciation is charged at 10% p.a. on original cost. So the machinery Account for the years from 2007 to 2010 in the books of X. X Closes his books on 31st December of every year.

3. A firm purchases a 5 years' lease for Rs.40,000 on 1st January. It decides to write off depreciation on the Annuity Method, presuming the rate of interest to be 5% per annum. The annuity tables show that a sum of Rs.9,239 should be written off every year. Show the Lease Account for five years. Calculations are to be made to the nearest-rupee.

UNIT – II

4. A firm desires to debit its Profit and Loss Account with a uniform figure every year in respect of repairs and renewals. It expects that considering the life of the asset in question Rs.10,000 will be the average amount to be spent per year. Actual repairs are Rs.1,000 in the first year, Rs.2,300 in the second year and Rs.3,700 in the third year. Show the Provision for Repairs and Renewals Account.

5. From the following figures you are required to prepare:
   i) Bad Debts Account ii) Provision for Bad Debts Account
   iii) Profit and Loss Account.

April 1, 2012	Provision for Bad Debts	Rs.2,500
March 31, 2013	Bad Debts	Rs.3,600
	Debtors	Rs.40,000

   Make provision for bad debts at 5% on debtors.

UNIT - III

6. On 1st January 2015 Venkatesh sold goods worth Rs.5,000 to Nagarjuna and drew a bill on Nagarjuna for 3 months for the same amount. Nagarjuna accepted the bill and returned it to Venkatesh. On 1st February 2015, Venkatesh endorsed the bill in favour of his creditor Prabhakar in settlement of his debt. The bill was honoured on due date. Pass the necessary journal entries in the books of Venkatesh, Nagarjuna and Prabhakar.

7. Narayana purchased goods for Rs.20,000 from Ravindra on 1st March 2015. Ravindra drew upon Narayana a bill of exchange for the same amount payable after four months. The bill was immediately discounted by Ravindra with his bank @ 6% p.a. On the due date the bill was dishonoured and Bank paid Rs.250 as noting charges. Pass the necessary journal entries in the books of Ravindra and Narayana.

UNIT – IV

8. Ram & Co. of Calcutta consigned 150 cases of goods at Rs.500 each to Raghava of Bombay. The consignor pays Rs.1,200 for insurance and for freight Rs.1,500. Raghava sent an advance for Rs.40,000 through cheque and sent an account sales showing the gross proceeds at Rs. 1,16,000. The expenses paid by Raghava were dock dues Rs.2,000, carriage Rs.3.000, warehousing expenses Rs.4,000. He sent the amount due to the consignor after deducting 4 per cent commission. Show necessary A/c's in the books of both.

9. 300 bicycles were consigned by Ramanujam Bicycle Co., Delhi to Superior Bros., Chennai Rs.800 each. Ramanujam Co. paid freight Rs.10,000 and insurance in transit Rs 3,500. During transit 30 bicycles were totally damaged by fire. Superior Bros.took delivery of the remaining bicycles and paid Rs.3,500 for octroi.

   Superior Bros. sent a bank draft to Ramanujam Co. for Rs.1,50,000 as advance payment and later sent an Account Sales showing that 250 bicycles were sold at Rs.1000 each. Expenses incurred by Superior Bros. is entitled to commission of 5%. Prepare the

consignment Account, Accidental Loss Account and Superior Bros. Account in the books of Ramanujam Bicycle Co., Delhi assuming that a claim from insurance company was settled for Rs.18,000.

UNIT – V

10. A and B enter into joint venture sharing profit 3/5ths and 2./5ths. A is to purchase timber in Madhya Pradesh and forward it to B in Delhi. A purchases timber worth Rs.10,000 and pays Rs.1,000 as expenses. B received the consignment and immediately accepted A/s draft for Rs.8,000. A got it discounted for Rs.7,850. B sold the timber for Rs.16,000. He had to spend Rs.350 for fire insurance and Rs.300 for rent. Under the agreement he is entitled to a commission of 5% on sales.

    Give ledger accounts in the books of A and B.

11. Ramesh and Naresh undertook the construction of a building for Ideal Engineering Co. Ltd. for a contract price of Rs.3,00,000 payable as to Rs.2,00,000 by installments in cash and Rs.1,00,000 in fully paid debentures of a company. Ramesh put Rs.75,000 and Naresh Rs.45,000 in a joint banking account opened for the purpose. They are to share profits and losses equally. The following amounts were spent.
    On wages Rs.75,000; On Materials Rs.1,58,000 and On plant Rs.20,000.

    The contract was completed and the price duly received. The joint venture was closed by Ramesh taking up all the debentures at an agreed valuation of Rs.95,000. Half of the plant was taken over by Naresh and the other half was sold for Rs.12,000. Naresh also took over unused stock of materials at a mutually agreed price of Rs.8,000. Prepare necessary ledger accounts.

Sri Venkateswara University
Model Paper
I I B.Com - Semester – II
DSC 2 B - Business Environment

Time : 3 Hours **Max. Marks : 75**

Section A

Answer any **Five** of the following Questions **(5 x 3 = 15 Marks)**

1. (a) Business Environment
   (b)Global Perspective
   (c)Economic Growth
   (d) National Development Council
   (e) Five year plans
   (f)Union Budget
   (g)Economic Reforms
   (h)Political Stability
   (i)Legal Environment
   (j)Economic Development

Section - B

Answer any ONE Question from each unit. **(5 x12 = 60 Marks)**

UNIT I

2. What are Micro and Macro Dimensions of Business Environment?
3. What are Social Responsibilities of Business?

UNIT – II

4. What are the factors influencing Economic Development?
5. What is Balanced Regional Development?

UNIT – III

6. Explain the Rostow's stages of Economic Development.
7. What are the objectives of Planning in India?

UNIT – IV

8. Write note on New Industrial Policy?
9. Explain the structure and importance of Union Budget.

UNIT – V

10. Explains the concepts of Social Justice?
11. Write a note on Legal Environment?

S.V. UNIVERSITY; TIRUPATI

MODEL QUESTION PAPER – W.E.F. 2016-17

I B.Com., / B.Sc., / B.A., (CA); SEMESTER – II

DSC 3B: FUNDAMENTALS OF OPERATING SYSTEM

Time : 3 Hours Max. Marks : 75

SECTION A

Answer any **Five** of the following Questions

(5 x 3 = 15 Marks)

1. (a) What is Memory Management?
   (b) Multi-Processing
   (c) What is command-User interface?
   (d) Workgroups
   (e) Backup and recovery
   (f) Firewall
   (g) List the file and directory commands in Linux.
   (h) Difference b/w single user OS and Multi-user OS.
   (i) Differences b/w desktop OS and Mobile OS.
   (j) How the security is maintain in Android Mobile.

Section - B

Answer any ONE Question from each unit. (5 × 12 = 60 marks)

UNIT I

2. What is Operating system? Explain the role of operating system.
3. Explain different kinds of desktop operating systems?

UNIT – II

4. What is DOS? Explain any 5 internal and external commands.
5. How you differentiate between Windows, Linux and Macintosh.

UNIT - III

6. Explain overview of the Data safety (RAID).
7. Explain workgroup, Domains and role of server.

UNIT – IV

8. Explain Linux advantages and disadvantages briefly.
9. Explain overview of Linux?

UNIT – V

10. Explain design goals of Android.
11. Explain device and file management in Android.

3-2-102R

B.Sc., BIOTECHNOLOGY

B. Sc.I – SEMESTER II

W.E.F. 2016-17

BT 201 BIOCHEMISTRY

UNIT I

NUCLEIC ACIDS AND CHROMOSOMES

Chemical structure and base composition of nucleic acids, Chargaff's rules, Watson Crick Model (B-DNA), deviations from Watson-Crick model, other forms of DNA (A- and Z-DNA), forces stabilizing nucleic acid structures, (hydrogen bonds and hydrophobic associations, base stacking). Maxam and Gilbert DNA sequencing, structure of t-RNA.

Chromatin structure: Nucleosome structure (10 nm fibre, experiments leading to discovery of nucleosomal structure, types of histones,. Role of telomere and centromere, telomeric and centromeric repeat sequences.

UNIT II

AMINO ACIDS AND PROTEINS

Amino acids: Structure of amino acids occurring in proteins, classification of amino acids (pH based, polarity based and nutrition based), Physico-chemical properties of amino acids (solubility, boiling and melting points, reactions like Edman's, Sanger's, Dansyl chloride, ninhydrin). Titration curves of neutral, basic and acidic amino acids.Primary structure of proteins: Determination of primary structure (end group analysis, cleavage of disulfide bonds, amino acid composition, use of endopeptidase specificity, sequence determination, assignment of disulfide position).

Secondary structure of proteins: The α-helix, β-structures (parallel, antiparallel, mixed, β-turn). Tertiary structure of proteins: Forces that stabilize the structure (electrostatic forces, hydrogen and disulfide bonds, hydrophobic associations), myoglobin as an example of tertiary structure, concept of domains, protein denaturation. Quaternary structure of proteins: Forces stabilizing quaternary structure, advantages of oligomeric proteins.

UNIT III:

CARBOHYDRATES

Definition, classification, nomenclature of carbohydrates, structures of monosaccharides, disaccharides and polysaccharides (structures of starch and glycogen as examples of homopolysaccharides). Concept and examples of heteropolysaccharides. Outlines of metabolism of carbohydrates and their in born errors of metabolism

LIPIDS

Types of lipids, structures of saturated and unsaturated fatty acids, triglycerides, phospholipids, plasmalogens, gangliosides and sphingolipids. Terpenoids and isoprenoids - definition and representative structures, steroids. Concept of acid value, saponification value and iodine value. Outlines of metabolism of fatty acids, cholesterol, steroids and products of poly unsaturated fatty acids.

UNIT IV

ENZYMES

Terminology: Active site, allosteric site, Holoenzyme, apoenzyme, coenzyme, substrate, inhibitor, activator, modulator etc.Classification and nomenclature. Concept of isoenzymes (example Lactate Dehydrogenase) and multienzymes (example pyruvate dehydrogenase) Substrate Specificity (bond specificity, group specificity, absolute specificity, stereo-specificity, proof-reading mechanism), lock and key and induced fit models.

Concept of allosteric enzymes (brief idea of ATCase as an example ,

Mechanisms of catalysis: Acid-base, covalent and metal ion catalysis.

Assay of Enzymes: Concept of activity, specific activity, turnover number, units of enzyme activity (katal, international unit), spectrophotometric methods of assay of enzymes (simple and coupled assay), very brief idea of other methods.

Enzyme kinetics: Michaelis-Menten equation, effect of substrate concentration, effect of enzyme concentration, effect of Ph and temperature, temperature quotient, single reciprocal(Eadie-Hoffstee equation) and double reciprocal plots(Lineweaver-Burke plots), enzyme inhibition kinetics (reversible inhibition types – competitive, uncompetitive and non-competitive), brief idea of irreversible inhibition.

UNIT V

BIOENERGETICS: Concept of free energy, Entropy, Enthalpy & Redox Potential. High energy compounds,.

Glycolysis (pathway, entry of other monosachharides and disaccharides, regulation, inhibitors)

Gluconeogenesis: Bypass reactions.

Structure of mitochondria.

METABOLISM OF NITROGENOUS COMPOUNDS

Transamination (mechanism). Oxidative & Non-oxidative deamination.

Urea cycle: Detailed account, linkage of urea & TCA cycle, compartmentation of urea cycle, regulation,. Biosynthesis and degradation of of purines and pyrimidines:.

B.Sc. I
SEMESTER II PRACTICALS
Biotechnology – W.E.F. 2016-17
BT 202 Macromolecules & Enzymology

1. Formol titration of glycine.
2. Quantitative Estimation of proteins by Biuret method
3. Determination of albumin & A/G ratio in serum.
4. Estimation of DNA by Diphenylamine method
5. Estimation of RNA by Orcinol method
6. Quantitative estimation of amino acids using Ninhydrin reaction.
7. Qualitative Analysis of sugars and proteins.
8. Quantitative estimation of sugars (Dinitrosalicylic acid method).
9. Estimation of glucose by Benedict's quantitative method
10. Quantitative estimation of proteins by Lowry's method.
11. Extraction and quantification of total lipids.
12. Determination of saponification value of Fats
13. Determination of Acid Value of Fats
14. Isolation of urease and demonstration of its activity
15. Assay of protease activity.
16. Preparation of starch from Potato and its hydrolysis by salivary amylase.
17. Assay of alkaline phosphatase
18. Immobilization of enzymes / cells by entrapment in alginate gel
19. Effect of temperature / pH on enzyme activity

*** Minimum of Ten practicals are mandatory**

BSc I BIOTECHNOLOGY
Semester II
MODEL QUESTION PAPER
COURSE CODE: BT 201
COURSE NAME: BIOCHEMISTRY

Time 3 Hrs Marks 75

Attempt any *five* questions from Part A and *all* questions from Part B

PART A (5x3=15 Marks)

Note: At least one question must be set from each UNIT

1. Structure of Purine
2. C Value paradox
3. Edman Reaction
4. Pka values
5. Structure of Galactose
6. Properties of terpinoids
7. Lock and Key hypothesis
8. Reduction of Oxygen

PART B

Answer the following **(5x12=60 Marks)**

9 (a) Explain the forces involved in DNA structure

Or

(b). What are histones? Discuss their nature

10 (a) Write on the titration curves of acidic aminoacids.

Or

(b) Describe the secondary structures of proteins.

11 (a) What is meant by in born error? Discuss at least two disorders related to carbohydrates.

Or

(b) Explain with suitable examples on classification of aminoacids.

12 (a) Define isoenzyme. Explain on the isoenzymes of LDH

Or

(b) Discuss on the derivation of Michaelis Menten Equation

13 (a) Write on energy conversion in chemical reaction. Write on energy rich molecules.

Or

(b), Discuss in detail on TCA cycle.

BSc I BIOTECHNOLOGY
Semester II
MODEL QUESTION PAPER
COURSE CODE: BT 201
COURSE NAME: BIOCHEMISTRY

Time 3 Hrs Marks 75

Attempt any *five* questions from Part A and *all* questions from Part B

PART A (5x3=15 Marks)

Note: At least one question must be set from each UNIT

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2. C Value paradox

3. Edman Reaction

4. Pka values

5. Structure of Galactose

6. Properties of terpinoids

7. Lock and Key hypothesis

8. Reduction of Oxygen

PART B

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(b) Discuss on the derivation of Michaelis Menten Equation

13 (a) Write on energy conversion in chemical reaction. Write on energy rich molecules.

Or

(b), Discuss in detail on TCA cycle.

3-2-103R

W.E.F. 2016-17

I B. Sc - SEMESTER- II: BOTANY THEORY SYLLABUS

Paper –II : Diversity of Archaegoniates &Plant Anatomy

Total hours of teaching 60hrs @ 4 hrs per week

UNIT – I: BRYOPHYTES

(12hrs)

1. Bryophytes: General characters, Classification (up to classes)
2. Structure, reproduction and Life history of *Marchantia*, and *Funaria.*
3. Evolution of Sporophyte in Bryophytes.

UNIT - II: PTERIDOPHYTES

(12hrs)

1. Pteridophytes: General characters, classification (up to Classes)
2. Structure, reproduction and life history of *Lycopodium,* and *Marsilea.*
3. Heterospory and seed habit.
4. Evolution of stele in Pteridophytes.

UNIT – III: GYMNOSPERMS

(12hrs)

1. Gymnosperms: General characters, classification (up to classes)
2. Morphology, anatomy, reproduction and life history of *Pinus and Gnetum*
3. Economic importance with reference to wood, essential oils and drugs

UNIT –I V: Tissues and Tissue systems

(12hrs)

1. Meristems - Root and Shoot apical meristems and their histological organization.
2. Tissues – Meristematic and permanent tissues (simple, complex, secretory)
3. Tissue systems–Epidermal, ground and vascular.

UNIT – V. Secondary growth

(12hrs)

1. Anomalous secondary growth in *Achyranthes, Boerhaavia* and *Dracaena.*
2. Study of local timbers of economic importance-Teak, Rosewood, Red sanders and Arjun (Tella maddi).

Signature of the Chairman / Chairperson (B.O.S.) : 13/12/16

Signature of the Members: 1. K. Sujatha 13/12/16

2. 13/12/2016

3. B. Lab 13/12/16.

Suggested activity: Collection of *Marsilea* sporocarp, *Pinus* needles, male and female cones, study of *Pinus* pollen grains, collection of locally available economically useful timbers.

Books for Reference:

1. Cavers, Frank ( ): The inter-relationships of the Bryophytes New Phytologist, Indian Reprint.
2. Smith, G.M. (1955): Cryptogamic Botany Vol. II. (2nd Edition) (Bryophytes & Pteridophytes) Tata McGraw Hill Publishing Co., New Delhi.
3. Parihar, N.S. ( ): An Introduction to embryophyta – Vol.II. Bryophyta Central Book Depot, Allahabad.
4. Watson, E.V. (1968): British Mosses & Liverworts Cambridge University Press, U.K
5. Eames, A.J. (1936) : Morphology of Vascular Plants (Lower Groups) McGraw Hill, N.Y.
6. Parihar, N.S. (19) : An Introduction to Embryophyta Vol.II Pteridophyta Central Book Depot., Allahabad.
7. Smith, G.M. (1955) : Cryptogamic Botany Vol.II (2nd Edn.,) (Bryophytes & Pteridophytes) Tata McGraw Hill Publishing Co., New Delhi.
8. Sporne, K.R. (1970) : The Morphology of Pteridophytes (The Structure of Ferns and Allied Plants) Hutchinson University Library, London
9. Bierhorst, D.W. (1971) : Morphology of Vascular Plants, The MacMillan Co., N.Y. & Collier- MacMillan Ltd., London.
10. Coulter, J.M.& C.J. Chamberlain (1964) : Morphology of Gymnosperms Central Book Depot, Allahabad.
11. Sporne, K.R. (1971): The Morphology of Gymnosperms (The Structure and Evolution of Primitive seed Plants) Hutchinson University Library, London.
12. Esau, K. (1965) : Vascular Differentiation in Plants. Holt, Rinehart & Winston, N.Y., Chicago, San Fransisco, Toronto, London.
13. Eames, A.J., & Mc Daniels, L.H.(1979) : An Introduction to Plant anatomy Tata-McGraw-Hill Publishing Co., (P) Ltd. Bombay, New Delhi.
14. Esau. K.(1980) : Plant Anatomy, (2nd Edition) Wiley Eastern Ltd., New Delhi.

Signature of the ~~Chairman~~ / Chairperson (B.O.S.) : 13/12/16

Signature of the Members:

1. K. Sujatha 13/12/16.
2. 13/12/2016
3. 13/12/16

W.E.F. 2016-17
I B.Sc SEMESTER -II
BOTANY PRACTICAL SYLLABUS
Paper-II: Diversity of Archaegoniates & Plant Anatomy
Total hours of laboratory Exercises 30 hrs @ 2 per week

1. Morphology (vegetative and reproductive structures) , anatomy of the following : *Marchantia, Funaria, Lycopodium* and *Pinus.*
2. Anatomy:
   a) Demonstration of double staining technique.
   b) Tissue organization in root and shoot apices using permanent slides
   c) Preparation of double staining slides
   d) Anomalous secondary structure of *Achyranthes, Boerhavia* and *Dracaena.*
   e) Anatomical study of wood in T.S., T.L.S. and R.L.S.
3. Field visits to local timber depots.

13/12/16

Signature of the ~~Chairman~~ / Chairperson (B.O.S.) :

Signature of the Members: 1. Dr. K. SUJATHA K. Sujatha 13/12/16

2. 13/12/2016

3. B. Lakshmi (D. G. NAIDU) 13/12/16

W.E.F. 2016-2017

I B.Sc., SEMESTER –II: BOTANY PRACTICAL MODEL PAPER II
II P: Diversity of Archaegoniates & plant Anatomy

1. Section cutting of material -A — 9 Marks
   (Slide 3 marks, diagrams-3 marks, Identification-3 marks)
2. Section cutting of material -B — 9 Marks
   (Slide 3 marks, diagrams-3 marks, Identification-3 marks)
3. Section cutting of material -C — 10 Marks
   (Slide 4 marks, diagrams-3 marks, Identification-3 marks)
4. Identification of spotters -D, E, and F — 3x4 =12 marks
5. Record (submission compulsory) — 10 marks

Total : 50 Marks

Key:

A. Bryophyta/ Pteridophyta material
B. Gymnosperm material.
C. Anatomy material.
D. Whole specimen or permanent slide of Bryophyta/ Pteridophyta
E. Whole specimen or permanent slide of Gymnosperm.
F. Whole specimen or permanent slide of wood.

Signature of the ~~Chairman~~ / Chairperson (B.O.S.) : 13/12/16

Signature of the Members:

1. K. Sujatha 13/12/16
2. 13/12/2016
3. B. Lada 13/12/16

W.E.F. 2016-2017

I - B.Sc BOTANY

SEMESTER - II

Paper II - T Diversity of Archaegoniates & Plant Anatomy

Time: 3 hrs **Max Marks: 75**

SECTION - A(సెక్షన్ - ఎ)

(Short Answer Type Questions) 5X5 = 25M

Answer any FIVE Questions

ఏదైనా **ఐదు** ప్రశ్నలకు సమాధానములు వ్రాయుము

(Draw neat and labelled diagrams where ever necessary)

అవసరమైన చోట పటము గీసి భాగములను గుర్తించుము

1. Funaria Protonema - ఫ్యునేరియా ప్రథమ తంతువు
2. Lycopodium Cone L.S - లైకోపోడియం శంఖువు నిలువు కోత
3. Gnetum Ovule - నీటమ్ అండము
4. Parenchyma - మృదుకణజాలము
5. Properties of wood - కలప ధర్మాలు
6. Gemma Cup - జెమ్మాకప్పు
7. ~~Stomata~~ Pinus - pollen grain - ~~పత్రరంధ్రము~~ పైనస్ - పరాగ రేణువు
8. Types of vascular bundles - నాళికాపుంజాలు - రకాలు

SECTION - B(సెక్షన్ - బి)

5X10 = 50M

Answer All questions

క్రింది వానిలో **అన్ని** ప్రశ్నలకు జవాబులు వ్రాయుము

9 (a). Evolution of sporophytes in Bryophyta.

బ్రయోఫైట్స్‌లో సిద్ధ బీజదాల పరిణామ క్రమాన్ని వివరించుము.

(or)

(b). Give an account of sexual reproduction in Marchantia.

మార్ఛాంషియాలో లైంగిక ప్రత్యుత్పత్తిని వివరించుము.

10. (a). Write an essay on heterospory and seed habit.

భిన్న సిద్ధ బీజత మరియు విత్తన ధారణ పైన వ్యాసాన్ని వ్రాయండి.

(or)

(b). Internal structure of Marsilea sporocarp.

మార్సిలియా స్పోరోకార్పు అంతర్నిర్మాణమును వివరింపుము.

13/12/16
BOS Chairperson

1. K. Sujatha 13/12/16
2. 13/12/2016
3. B. Lakshmi 13/12/16

10. Write different types of Ion uptake? Describe Active Transport of Ions in detail?

అయాన్ల శోషణ ఎన్ని రకాలు? సక్రియ శోషణ విధానాన్ని వివరించండి.

[OR]

Describe the process of protein synthesis in plants.

మొక్కలలో జరుగు ప్రోటీన్ల సంశ్లేషణను గూర్చి వ్రాయుము.

11. What is 'Z' scheme, Descirbe in detail.

'Z' నమూనా అంటే ఏమిటి? వివరించండి.

[OR]

Substantiate how C_4 Plants are more efficient than C_3 plants

C_4 మొక్కలు C_3 మొక్కలకంటే సమర్థమైనవి. ఎలా?

12. What is EMP Pathway, Describe in detail?

E.M.P. మార్గము అనగానేమి? విశదీకరించండి.

[OR]

Describe the process of β - oxidations of lipids.

క్రొవ్వు ఆమ్లాలలో జరుగు β - ఆక్సీకరణను వివరించండి.

13. Define phyto hormone. Describe the effect of auxins on plants.

ఫైటో[redacted] హార్మోన్‌ను నిర్వచించండి? ఆక్సిన్‌లపై వ్యాసము వ్రాయండి.

[OR]

Describe different types of photoperiodism write about the role of phytochrome in flowering.

మొక్కల కాలావధిని వర్ణించండి. మొక్కలు పుష్పించుటలో ఫైటోక్రోమ్ పాత్రను వివరించండి.

13/12/16
BOS Chairperson

1. K. Sujatha 13/12/16

2. 13/12/2016

3. 13/12/16

(D.GOVINDARAJULU)
B.O.S. MEMBER

SEMESTER II – W.E.F. 2015-16

3-2-106

Paper II (Physical & General Chemistry) 60 hrs (4 h / w)

PHYSICAL CHEMISTRY 30 hrs (2h / w)

UNIT-I

Solidstate l0h

Symmetry in crystals. Law of constancy of interfacial angles. The law of rationality of indices. The law of symmetry. Definition of lattice point, space lattice, unit cell. Bravis lattices and crystal systems. X-ray diffraction and crystal structure. Bragg's law. Determination of crystal structure by Bragg's method. Indexing of planes and structure of NaCl and KC1 crystals. Defects in crystals. Stoichiometric and non-stoichiometric defects.

UNIT-II

1.Gaseous state 6 h

Compression factors, deviation of real gases from ideal behavior. Vander Waal's equation of state. P-V Isotherms of real gases, Andrew's isotherms of carbon dioxide, continuity of state. Critical phenomena. The vander Waal's equation and the critical state. Law of corresponding states.Relationship between critical constants and vander Waal's constants. Joule Thomson effect.

2.Liquid state 4 h

Structural differences between solids, liquids and gases. Liquid crystals, the mesomorphic state. Classification of liquid crystals into Smectic and Nematic. Differences between liquid crystal and solid/liquid. Application of liquid crystals as LCD devices.

UNIT-III

Solutions l0h

Liquid-liquid - ideal solutions, Raoult's law. Ideally dilute solutions, Henry's law. Non-ideal solutions. Vapour pressure - composition and vapour pressure- temperature curves. Azeotropes-HCl-H_2O, ethanol-water systems and fractional distillation. Partially miscible liquids-phenol-water, trimethylamine-water, nicotine-water systems. Effect of impurity on consulate temperature. Immiscible liquids and steam distillation.

Nernst distribution law. Calculation of the partition coefficient. Applications of distribution law.

GENERAL CHEMISTRY30 hrs (2h / w)

UNIT-IV

l.Surface chemistry **8 h**

Definition of colloids. Solids in liquids(sols), preparation, purification, properties - kinetic, optical, electrical. Stability of colloids, Hardy-Schulze law, protective colloid.
Liquids in liquids (emulsions) preparation, properties, uses. Liquids in solids (gels) preparation, uses.
Adsorption: Physical adsorption, chemisorption. Freundlisch, Langmuir adsorption isotherms. Applications of adsorption

2.Chemical Bonding **7h**

Valence bond theory, hybridization, VB theory as applied toClF_3**,** Ni(CO)**$_4$,** Molecular orbital theory - LCAO method, construction of M.O. diagrams for homo-nuclear and hetero-nuclear diatomic molecules (N_2, O_2, CO and NO).

UNIT-V

Stereochemistry of carbon compounds **15 h**

Molecular representations- Wedge, Fischer, Newman and Saw-Horse formulae.
Optical isomerism: Optical activity- wave nature of light, plane polarised light, optical rotation and specific rotation.
Chiral molecules- definition and criteria(Symmetry elements)- Definition of enantiomers and diastereomers – Explanation of optical isomerism with examples Glyceraldehyde, Lactic acid, Alanine, Tartaric acid, 2,3-dibromopentane.
D,L and R,S configuration methods and E,Z- configuration with examples.

LABORATORY COURSE -II

Practical-II (At the end of Semester-II)**30** hrs (3 h / w)

Qualitative inorganic analysis **40 Marks**

Analysis of mixture salt containing two anions and two cations (From two different groups) from the following:

Anions: Carbonate, sulphate, chloride, bromide, iodide, acetate, nitrate, borate, phosphate.

Cations: Lead, copper, iron, aluminum, zinc, manganese, calcium, strontium, barium, potassium and ammonium.

Record **10 Marks**

Total : 50 Marks

List of Text Books

1.Advanced physical chemistry by Gurudeep Raj

2. Advanced physical chemistry by Bahl and Tuli

3. Advanced Inorganic Chemistry Vol-I by Satyaprakash, Tuli, Basu and Madan

4. Stereochemistry by P.S.Kelsi

5. Stereochemistry of Organic compounds by D. Nasipuri

6. Telugu Academy Textbook of Chemistry Vol- I (English medium)

7. Unified chemistry Vol- I by K.Ramarao and Y. R. Sharma (Kalyani Publishers)

8.Unified chemistry Vol- I by O.P.Agarwal

List of Reference Books

1. Principles of physical chemistry by Prutton and Marron

2. Solid State Chemistry and its applications by Anthony R. West

3. Text book of physical chemistry by K L Kapoor

4. Text book of physical chemistry by S Glasstone

5. Stereochemistry of Organic compounds by E L Eliel

6. Advanced Organic Chemistry by F A Carey and R J Sundberg

SRI VENKATESWARA UNIVERSITY

Model Question paper for **2nd Semester** of **B.Sc** degree course from the academic year **2015-16**

Name of the Subject: **CHEMISTRY**

Section – I

Answer any **Five** of the following:

1. Write notes on Bravis Lattices
2. Write notes on Joule-Thomson effect.
3. What are liquid crystals? Write any two important applications of them.
4. State and explain Nernst Distribution law
5. Write the difference between physical adsorption and chemical adsorption
6. Explain the structure of $Ni(CO)_4$ based on Valence Bond Theory
7. What are enantiomers and diastereomers
8. Write notes on Newman Projection formula.

Section - II

Answer **All** the Questions

9. a) Explain the defects in crystals

   (OR)

   b) State Bragg's law and explain how crystal structure is determined by Bragg's method?

10. a) Deduce the values of Critical constants in terms of Vander waal's constants

    (OR)

    b) i). Explain smectic liquid crystals.
    ii). State and explain law of corresponding states.

11. a) What is critical solution temperature? Explain phenol-water system?

    (OR)

    b) Explain Henry's law and Azeotropic mixtures with examples.

12. a) Define colloids? Explain different preparatory methods of colloids.

    (OR)

    b) Derive Langmuir adsorption isotherm.

13. a) Draw the molecular orbital diagrams of O_2 and N_2. Calculate the bond order in these molecules.

    (OR)

    b) i) Explain E-Z configuration in alkenes
    ii) Explain optical isomerism in tartaric acid.

Object Oriented Programming with C++

Unit-1

Introduction:- Programming Language generations, Object Oriented Paradigm, Basics of OOPs, Benefits, Applications of OOPs, Object Oriented Languages, Difference between OOPs and Procedure Oriented Programming

Unit - 2

Introduction to C++, General Structure of a C++ program, cin and cout objects, Keywords, identifiers, Constants, variables, Data types in C++, Operators-scope resolution operator, Control structures: Conditional statements and Looping statements, Functions –function with default arguments, inline functions, function overloading, reference variables Arrays - Single and multidimensional arrays.

Unit-3

Object and Classes-Structure and Class, Defining a class, defining member functions, member function with object as arguments and argument as return type, array of objects, static member data and member function, friend function and friend class.

Constructor and destructors-characteristics of constructor, constructor types-default, parameterized, copy and dynamic, constructor overloading.

Unit-4

Operator overloading, defining operator function, overloading unary, binary and relational operators

Inheritance-benefits of inheritance, types of inheritance, methods overriding, virtual functions.

Unit- 5

C++ Streams and File handling-Stream class, unformatted i/o operations, formatting of output-ios class functions and flags, manipulators, Files-File classes, file types, file functions.

Error handling, command-line arguments

Reference Books

1. Object Oriented Programming with C++ - M.T. Somashekara, D.S.Guru, H.S. Nagendraswamy, K.S. Manjunatha, PHI 2nd Edition
2. Object Oriented Programming with C++ - E. Balagurusamy, 4th Edition, Tata Mc Graw Hill Publication 3. Object Oriented Programming in C++ - Robert Lafore, 4th Edition, Pearson Education
4. Object-Oriented Programming with ANSI and Turbo C++.

13/12/16

13/12/16

B.Sc I yr II Semester

Object Oriented Programming with C++

Time: 3 Hrs **Max. Marks: 75**

SECTION – A

1. **Answer any 5 Questions :** **5 x 5 =25 M**

a) Define class and its scope.
b) Define operators and its types.
c) What is polymorphism and advantages.
d) Difference between if and switch.
e) Explain ios class function statements.
f) What is destructor? How to Define?
g) Explain multi-Dimension array.
h) List the Error handling functions in 'C++'.
i) Explain unary operators in C++.
j) Explain member functions in C++ ?

SECTION – B

Answer one question from each unit. Each carries equal marks: **5 x 10 = 50 M**

UNIT- I

2. What is OOPs? Explain the advantages and applications of OOPs.

(or)

3. Write the difference between OOPs and Procedure Oriented Programming.

UNIT- II

4. a. Define cin and cout statements with suitable example.
   b. Explain different data types in C++.

(or)

5. Describe functions with suitable example.

UNIT- III

6. What is an object? Explain how the class is defined?

(or)

7. What is constructor? How the constructors are created with suitable example.

UNIT- IV

8. What is operator overloading? Define binary and relational operators.

(or)

9. What are the benefits of inheritance? How the virtual functions are created with suitable example.

UNIT - V

10. Explain C++ streams and their types.

(or)

11. Explain the file classes and its functions.

13/12/16

13/12/16

SRI VENKATESWARA UNIVERSITY

DEPARTMENT OF CT& HM (Catering Tourism & Hotel Management)
Choice Based Credit System (C.B.C.S) Syllabus and Scheme Of Examination

Course: BSc **(WITH EFFECT FROM THE ACADEMIC YEAR 2015 -2016)** **Subject: CT&HM**

Semester II	Part 1		Language 1	4	0	4	25	75	100
			Language 2	4	0	4	25	75	100
	SK/FC		Environmental Studies	1	2	2	25	25	50
			ICT	1	2	2	25	25	50
	Part 2	CTHM 201	Bakery	4	-	4	25	75	100
			Practicals	-	3	2	-	50	50
		CTHM 202	Front office - I	4	-	4	25	75	100
			Practicals	-	3	2	-	50	50
		CTHM 203	Accommodation Operation - I	4	-	4	25	75	100
			Practicals	-	3	2	-	50	50
			Total Marks	**22**	**13**	**30**			**750**

3-2-119

FIRST YEAR
II SEMESTER – W.E.F. 2015-16
CT & HM-201 BAKERY-I

Theory: 4 hrs/week
Practicals : 3 hrs/week

THEORY:

Unit-I

Baking, History of baking,Importance of baking under the Principles of baking and fermented goods – Equipments.

Unit – II

Ingredients :Flour, baking powder,Yeast, eggs,Fat,Essence.Icing-Types of icing, importance ofIngredients to get a final product,Time and temperature-Role of time and temperaturein baking.

Unit – III

Bread making / process Faulty breads and perfect bread, stale breadmoulds, roasting,Combined method of cooking – Changes taking place during fermentation – Bread improments.

Unit – IV

Baking in ancient times, Commercial baking, Benefit of baking,Influenceof Baking, various types of bread, commercial and cultural significance.

Unit – V

Know the methods of making Biscuits, Cakes, Puff, Pastry decoration – various methods – cake ingredients and role – cake faults – Making puff pastry – cake decorations.

PRACTICALS:

1. Preparing Breads(3)
2. Preparing Biscuits(3)
3. Preparing Cakes(3)
4. Preparing Icing(3)

REFERENCES:

1. Baking 100 Everyday Recipes (100 Recipes) Hardcover – 1 Jan 2015by Parragon Books
2. Cupcakes and Muffins 100 Everyday Recipes (100 Recipes) Hardcover – 1 Jan 2015by Parragon
3. The Big Book of Treats Paperback – 24 Mar 2014by PoojaDhingra (Author)
4. Complete Book of Baking: Over 400 Recipes for Pies, Tarts, Buns, Muffins, Cookies and Cakes, Shown in 1800 Step-by-step Photographs Paperback – Import, 1 Sep 2012by Martha Day

B.Sc. (CT & HM)
II-Semester
CT& HM -201 BAKERY
Model Question Paper

Time : 3 Hrs **Marks : 75**

Section-A

Answer any Five Questions
Each question carries 5 marks **5 × 5 = 25 M**

1. Define baking in detail?
2. What is a bread?
3. What is icing?
4. Write about dry method of cooking?
5. Write the importance of yeast in baking?
6. Write the importance of baking powder in baking?
7. What is a stale bread?
8. Write the history of Baking?

Section-B

Answer ALL Questions
Each question carries 10 marks **5 × 10 = 50 M**

9. a) Write the role of Time and Temperature in Baking?
   (or)
   b) Differentiate between a good and a faulty bread?

10. a) Write about different types of icing?
    (or)
    b) Write the role of all important ingredients in details?

11. a) Trace the history of baking and its importance in industry?
    (or)
    b) Write about different methods of cooking and Comparebaking with different method of cooking ?

12. a) Write about different types of flour used in baking andtheir benefit?
    (or)
    b) Write in detail about cultural and commercialSignificance of baking ?

13. a) Explain the methods of making cakes in detail?
    (or)
    b) What is mean by Bread improves and explain?

3-2-104

FIRST YEAR
II SEMESTER – W.E.F. 2015-16
CT&HM-202 FRONT OFFICE

Theory: 4 hrs/week
Practicals : 3 hrs/week

THEORY:

Unit-I

Introduction to Hospitality Industry – The history of Travel – Hotels and their classification – Classification of Guest – Understanding Guest Service.

Unit – II

Hotel Management and Organization – Principles of Management – Basic Management function – Hotel Organization – Hotel Automated system – Introduction to Integrated property management system.

Unit – III

Front office systems – Key terms – Management System – Other Applications – The Guest Cycle – Stages of Guest Stay – External Agencies.

Unit – IV

Front Office Management – Front Office Organization and Job descriptions – Basic Functions of the Front office – Front Office – Uniformed Services – Organization large and small Hotel Front Office – Job Description of Front Office Personnel

Unit – V

Competencies of Front Office professional – Competencies – Establishing Room Rates – Room Rate methodologies – for costing Room Availability – Introduction Influences or forecasts – Fore cost formula

PRACTICALS:

1. Whitney reservation system
2. Checking in guest with confirmed booking
3. Lobby attendant
4. Errand Card
5. Welcome slip
6. Handling walk in guest and change of room

REFERENCES:

1. Front Office Management – S.K. Bhatnagar, 1st Edition, 2004 Frank Bros, Chennai.
2. Careers and Training in Hotels – Hjayter, Roy
3. Hotel Reception, Reception and Cashier – White, Paul B and Hellen (Heinemann)
4. Basic Hotel Front Office Procedures – Werner, Palter.

B.Sc. (CT & HM)
II-Semester
CT&HM -202 FRONT OFFICE-I
Model Question Paper

Time : 3 Hrs **Marks : 75**

Section-A

Answer any Five Questions
Each question carries 5 marks **5 × 5 = 25 M**

1. Write about the history of travel.
2. Classification of hotels.
3. What is mean by principles of management?
4. Draw the Hotel organization chart?
5. Write the Functions of Basic Management?
6. What are the benefits of positive attitude?
7. What is the difference between needs and wants?
8. Give the difference between status and self-esteen?

Section-B

Answer ALL Questions
Each question carries 10 marks **5 × 10 = 50 M**

9. a) Give the differences with examples between physical security and emotional security?

(or)

b) What is the differences between marketing and sales?

10. a) Explain the various pricing strategies?

(or)

b) Explain detail the operating budjet?

11. a) What are the local agencies that influence food operations how do they do so?

(or)

b) How does legal environment impact the business.

12. a) Key control is a vital activity in front Offices expalin?

(or)

b) What are the influence of fore costing?

13. a) Why is forecasting to the front office professionals

(or)

b) Draw the guest cycle and explain it?

3-2-105

FIRST YEAR
II SEMESTER – W.E.F. 2015-16
CT & HM-203 ACCOMMODATION OPERATION-I

Theory: 4 hrs/week

Practicals : 3 hrs/week

THEORY:

Unit-I

Introduction to Hotel Industry – Classification of Hotels – Star rating of Hotels – Hotel Department – House keeping Department – Importance of Housekeeping – Responsibilities of Housekeping Department – Organizational Structure – Housekeeping personnel personal attributes of Housekeeping staff.

Unit – II

Layout of the Department – Co-ordination with other departments – The professional Housekeeper – Housekeeping in other Institution – Managing Housekeeping Personal – Documents for Personal Management.

Unit – III

Determining staff strength – Recruiting – selecting – Hiring – Orienting – Training scheduling motivating employees – Performance appraisal – Time and Motivation Studies and Job Analysis – Team work and Leadership – Employee Welfare and Discipline.

Unit – IV

Contracts and outsourcing – Defining Outsourcing and contracts – When are out sourcing and contracts. Contract Services in housekeeping – When are outsourced service considered – Pricing of Contracts – Advantages and Disadvantages of outsourcing.

Unit – V

Planning Housekeeping operations – The Planning process – Daily routines and system – The Housekeeping Day – Leave Application procedure – Gate Pass Procedure.

PRACTICALS:

1. Floor Cleaning
2. Different Linen and Cleaning procedures – Bath Room cleaning
3. Cleaning procedure of carpet.
4. Bed making
5. Metals polishing methods and equipments.

REFERENCES:

1. Hotel, Hostel and hospital, housekeeping, Branson, Joan, Ce Lemox (Hodder and Stoughton), 2003
2. Housekeeping Supervision: Fellows, John (Pitman publishers)
3. Commercial Housekeeping and maintenance: Iris Jones (Stanley thornox Pub)

B.Sc. (CT & HM)
II-Semester
CT&HM 203 – ACCOMMODATIONOPERATION-I
Model Question Paper

Time : 3 Hrs **Marks : 75**

Section-A

Answer any Five Questions
Each question carries 5 marks **5 × 5 = 25 M**

1. Write about Introduction to the hospitality industry:
2. Describe the star rating of hotels?
3. What is mean by importance of housekeeping.
4. Draw the Layout of housekeeping?
5. Write any five personal attributes of housekeeping staff?
6. Write any five aminities of housekeeping department
7. Define outsorcing and contrcts?
8. Write the classification of hotels?

Section-B

Answer ALL Questions
Each question carries 10 marks **5 × 10 = 50 M**

9. a) Describe the co-ordination with other departments.
   (or)
   b) Determine the staff recurting and selecting?

10. a) Write the about the Job analysis?
    (or)
    b) When are out sourced services considered?

11. a) Describe the planning of housekeeping operations?
    (or)
    b) Write different types of documents for personal management?

12. a) Explain responsibilities of housekeeping department?
    (or)
    b) Advantages and disadvantages of out sourcing?

13. a) Explain the employee welfare and disciplines?
    (or)
    b) Write about organization structure in house keeping department.

B.A./B.Sc. FIRST YEAR MATHEMATICS SYLLABUS PAPER - II
(SEMESTER – II)
SOLID GEOMETRY

UNIT – I (12 hrs) : The Plane :

Equation of plane in terms of its intercepts on the axis, Equations of the plane through the given points, Length of the perpendicular from a given point to a given plane, Bisectors of angles between two planes, Combined equation of two planes, Orthogonal projection on a plane.

UNIT – II (12 hrs) : The Line :

Equation of a line; Angle between a line and a plane; The condition that a given line may lie in a given plane; The condition that two given lines are coplanar; Number of arbitrary constants in the equations of straight line; Sets of conditions which determine a line; The shortest distance between two lines; The length and equations of the line of shortest distance between two straight lines; Length of the perpendicular from a given point to a given line; Intersection of three planes; Triangular Prism.

UNIT – III (12 hrs) : Sphere :

Definition and equation of the sphere; Equation of the sphere through four given points; Plane sections of a sphere; Intersection of two spheres; Equation of a circle; Sphere through a given circle; Intersection of a sphere and a line; Power of a point; Tangent plane; Plane of contact; Polar plane; Pole of a Plane; Conjugate points; Conjugate planes; Angle of intersection of two spheres; Conditions for two spheres to be orthogonal; Radical plane; Coaxial system of spheres; Simplified from of the equation of two spheres.

UNIT – IV (12 hrs) : Cones :

Definitions of a cone; vertex; guiding curve; generators; Equation of the cone with a given vertex and guiding curve; Enveloping cone of a sphere; Equations of cones with vertex at origin are homogenous; Condition that the general equation of the second degree should represent a cone; Condition that a cone may have three mutually perpendicular generators; Intersection of a line and a quadric cone; Tangent lines and tangent plane at a point; Condition that a plane may touch a cone; Reciprocal cones; Intersection of two cones with a common vertex; Right circular cone; Equation of the right circular cone with a given vertex; axis and semi-vertical angle.

UNIT – V (12 hrs) Cylinders :

Definition of a cylinder; Equation to the cylinder whose generators intersect a given conic and are parallel to a given line; Enveloping cylinder of a sphere; The right circular cylinder; Equation of the right circular cylinder with a given axis and radius.

Prescribed Text Book : Scope as in Analytical Solid Geometry by Shanti Narayan and P.K. Mittal Published by S. Chand & Company Ltd. Seventeenth Edition.
Sections :- 2.4, 2.7, 2.9, 3.1 to 3.8, 6.1 to 6.9, 7.1 to 7.8.

Reference Books :

1. V Krishna Murthy & Others "A text book of Mathematics for BA/B.Sc Vol 1, Published by S. Chand & Company, New Delhi.
2. P.K. Jain and Khaleel Ahmed, "A text Book of Analytical Geometry of Three Dimensions", Wiley Eastern Ltd., 1999.
3. Co-ordinate Geometry of two and three dimensions by P. Balasubrahmanyam, K.Y. Subrahmanyam, G.R. Venkataraman published by Tata-MC Gran-Hill Publishers Company Ltd., New Delhi.

Note : Concentrate on Problematic parts in all above units.

K. Ch. V. Subbaiah Naidu
BOS Chairman
Mathematics
B.T College
Madanapalle.

S.V.UNIVERSITY, MODEL PAPER.

THREE YEAR B.A/B.Sc DEGREE EXAMINATIONS.

CHOICE BASED CREDIT SYSTEM

II SEMESTER

PART II : MATHEMATICS

Paper II : SOLID GEOMETRY

(New Syllabus w.e.f 2015-16)

Time: 3 hours Max Marks :75

SECTION - A

Answer any FIVE of the following questions. Each question carries 5 marks(5X5 = 25).

1. Find the distance between the planes $2x-3y+z = 5$ and $6x-9y+3z = 5$.
2. Find the equation of theplane passing through the line of intersection of the planes $3x-2y+6z+2=0$, $2x-y+2z+2= 0$and the point (1,-2,1).
3. Show that the line $\frac{x+1}{-1} = \frac{y+2}{3} = \frac{z+5}{5}$lies in the plane $x+2y-z =0$.
4. Show that the lines $\frac{x-1}{2} = \frac{y-2}{3} = \frac{z-3}{4}, \frac{x-2}{3} = \frac{y-3}{4} = \frac{z-4}{5}$are coplanar.
5. Find the equation of the sphere with (2,-1, 4) and (-2,2,-2) as the extremities of the diameter.
6. Find the polar plane of the point (0,-1,1)w.r.t the sphere $x^2+y^2+z^2-2x+4y+6z-11= 0$.
7. Show that the reciprocal cone $ax^2 + by^2 + cz^2 =0$ is $\frac{x^2}{a} + \frac{y^2}{b} + \frac{z^2}{c} = 0$.
8. Find the equation of the cylinder whose generators intersect the curve $ax^2 + by^2 = 2z$, $lx + my + nz= p$ and parallel to Z- axis.

(P.T.O)

SECTION - B

Answer ALL of the five questions. Each question carries 10marks (5X10 = 50).

9a. A variable plane is at a constant distance 'p' from the origin and meets the axes in A,B,C. Show that the locus of the centroid of the tetrahedron OABC is $x^{-2} + y^{-2} + z^{-2} = 16p^{-2}$.

OR

b. Prove that the equation 2x+-6y-12z+18yz+2zx+xy=0 represents a pair of planes and hence find the angle between them.

10a. Find the image of the line $\frac{x-1}{2} = \frac{y-2}{3} = \frac{z-3}{4}$ in the plane x+y+z = 1.

OR

b. Find the shortest distance and equation between the skew lines

$$\frac{x-1}{2} = \frac{y-2}{3} = \frac{z-3}{4} \quad and \quad \frac{x-2}{3} = \frac{y-4}{4} = \frac{z-5}{5}$$

11a. Show that the four points (-8,5,2),(-5,2,2),(-7,6,6),(-4,3,6) are concyclic.

OR

b. Find the limiting points of the coaxal system defined by spheres $x^2+y^2+z^2+4x-2y+2z+6=0$ and $x^2+y^2+z^2+2x-4y-2z+6=0$.

12a. Find the equations of the lines of intersection of the plane 3x+4y+z = 0and the cone $15x^2-32y^2-7z^2=0$

OR

b. Find the equation of the right circular cone with vertex at (1,0,1) and passing through (1,1,1).Also the axis of the cone makes equal angles with coordinate axes.

13a. Find the equation of the right circular cylinder whose guiding curve is $x^2+y^2+z^2 = 0$, x-y+z=3

OR

b. Find the enveloping cylinder of the sphere $x^2+y^2+z^2+2x-4y-1= 0$ having its generators parallel to x = y = z.

K. Ch. V. Subbaiah Naidu
Boc Chairman, Mathematics
B.T. College
Madanapalle. 8331895531

B.Sc MICROBIOLOGY (CBCS) SYLLABUS
FIRST YEAR – SEMESTER- II – W.E.F. 2015-16

3-2-115

MBT- 201 : MICROBIAL BIOCHEMISTRY & METABOLISM

TOTAL HOURS: 48 **CREDITS: 4**

UNIT-I **No. of hours: 10**

Outline classification and general characteristics of carbohydrates (monosaccharides, disaccharides and polysaccharides).
General characteristics of amino acids and proteins.
Structure of nitrogenous bases, nucleotides, nucleic acids.
Fatty acids (saturated and unsaturated), lipids (spingolipds, sterols and phospholipids).

UNIT-II **No. of hours: 8**

Principle and applications of Colorimerty
Chromatography (paper, thin-layer and column),
Spectrophotometry (UV & visible),
Centrifugation and Gel Electrophoresis.

UNIT-III **No. of hours: 10**

Properties and classification of Enzymes.
Biocatalysis- induced fit and lock and key models.
Coenzymes and Cofactors.
Factors affecting catalytic activity.
Inhibition of enzyme activity- competitive, noncompetitive, uncompetitive and allosteric.

UNIT-IV **No. of hours: 10**

Microbial Nutrition –Nutritional requirements and uptake of nutrients by cells.
Nutritional groups of microcroorganisms- autotrophs, heterotrophs, mixotrophs.
Growth media- synthetic, complex, selective, enrichment and differential media.
Microbial Growth- different phases of growth in batch cultures, Synchronous, continuous, biphasic growth.
Factors influencing microbial growth.
Methods for measuring microbial growth – Direct microscopy, viable count estimates, turbiodometry and biomass.

UNIT-V **No. of hours: 10**

Aerobic respiration -Glycolysis, HMP path way, ED path way, TCA cycle, Electron transport, oxidative and substrate level phosphorylation.
Anaerobic respiration (Nitrate).

Fermentation - Alcohol and lactic acid fermentations.
Outlines of oxygenic and anoxygenic photosynthesis in bacteria.

MBP- 201: MICROBIAL BIOCHEMISTRY & METABOLISM

TOTAL HOURS: 48 **CREDITS: 2**

1. Qualitative Analysis of Carbohydrates
2. Qualitative Analysis of Aminoacids
3. Colorimetric estimation DNA by diphenylamine method
4. Colorimetric estimation of proteins by Biuret/Lowry method
5. Paper chromatographic separation of sugars and amino acids
6. Preparation of different media- Synthetic and Complex Media
7. Setting and observation of Winogradsky column.
8. Estimation of CFU count by spread plate method/pour plate method.
9. Bacterial growth curve.
10. Factors affecting bacterial growth – pH.
11. Factors affecting bacterial growth – Temperature.
12. Factors affecting bacterial growth –Salt

SUGGESTED READING

Berg JM, Tymoczko JL and Stryer L (2011) **Biochemistry**, W.H.Freeman and Company

Caldwell, D.R. (1995). **Microbial Physiology and Metabolism**, W.C. Brown Publications, Iowa, USA.

Campbell, PN and Smith AD (2011) **Biochemistry** Illustrated, 4th ed., Published by Churchill Livingstone

Elliot, W.H. and Elliot, D.C. (2001). **Biochemistry and Molecular Biology**, 2 nd Edition, Oxford University Press, U.S.A.

Gottschalk, G. (1986). **Bacterial Metabolism**, SpringerVerlag, NewYork.

Lehninger, A.L., Nelson, D.L. and Cox, M.M. (1993). **Principles of Biochemistry**, 2 nd Edition, CBS Publishers and Distributors, New Delhi.

Madigan, M.T., Martinkl, J.M. and Parker, J. (2010). **Brock Biology of Microorganisms**, 9th Edition, MacMillan Press, England.

Moat, A.G. and Foster, J.W. (1995). **Microbial Physiology**, JohnWiley, New York.

Nelson DL and Cox MM (2008) Lehninger **Principles of Biochemistry**, 5th Edition., W.H. Freeman and Company.

Prescott, M.J., Harley, J.P. and Klein, D.A. (2010). **Microbiology.** 5th Edition, WCB Mc GrawHill, New York.

Reddy, S.R. and Reddy, S.M. (2004). **Microbial Physiology**, Scientific Publishers, Jodhpur, India.

Sashidhara Rao, B. and Deshpande, V. (2007). **Experimental Biochemistry**: A student Companion. I.K. International Pvt. Ltd.

Stanier, R.Y., Adelberg, E.A. and Ingram, J.L. (1991). **General Microbiology**, 5th Ed.,Prentice Hall of India Pvt. Ltd., New Delhi.

Tymoczko JL, Berg JM and Stryer L (2012) **Biochemistry:** A short course, 2nd ed., W.H.Freeman

Voet,D. and Voet J.G (2004) **Biochemistry** 3rd edition, John Wiley and Sons

White, D. (1995). **The Physiology and Biochemistry of Prokaryotes**, Oxford University Press, New York.

Willey MJ, Sherwood, LM & Woolverton C J (2013) Prescott, Harley and Klein's **Microbiology** by. 9th Ed., McGrawHill

SUBJECT:: B.Sc., MICROBIOLOGY (CBCS) MODEL QUESTION PAPER
FIRST YEAR – SEMESTER II
MBT-201 : MICROBIAL BIOCHEMISTRY & METABOLISM
Time 3 hrs Max marks -75
SECTION-A

I ANSWER ANY FIVE OF THE FOLLOWING **5 x 5 M= 25 marks**

Draw labeled diagrams wherever necessary

1. Role of Sphingolipids
2. Principle of PAGE
3. Role of Co-factor
4. Allosterism means
5. Biphasic growth of bacteria
6. Principle of Turbidometery
7. Microbial Viable count
8. Define Mixotrophs

SECTION- B

II ANSWER ANY FIVE OF THE FOLLOWING **5 x 10 M= 50 marks**

Draw labeled diagrams wherever necessary

9. a) Write the classification of Carbohydrates with suitable examples.

Or

b) Draw the structure of DNA and explain in detail.

10. a) Explain the principle and application of Thin layer chromatography.

Or

b) Discuss the factors affecting catalytic activity.

11. a) Differentiate the competitive and non-competitive inhibition of enzyme activity.

Or

b) What are the Nutritional requirements needs for microbial growth? Explain.

12. a) Discuss the factors influence the microbial growth in detail.

Or

b) Explain the mechanism of HMP pathway in a pictorial way.

13. a) What is fermentation? Discuss the alcohol fermentation method in detail.

Or

b) List out various selective media for microbial growth and write their significance.

PHYSICS

W.E.F. 2016-17

Paper II: Waves & Oscillations
(For Maths Combinations)
II SEMESTER

Work load: 60 hrs per semester **4 hrs/week**

UNIT-I (12 hrs)

1. Simple Harmonic oscillations

Simple harmonic oscillator and solution of the differential equation - Physical characteristics of SHM, torsion pendulum - measurements of rigidity modulus, compound pendulum - measurement of 'g', Principle of superposition, beats, combination of two mutually perpendicular simple harmonic vibrations of same frequency and different frequencies. Lissajous figures.

UNIT-II (12 hrs)

2. Damped and forced oscillations

Damped harmonic oscillator, solution of the differential equation of damped oscillator. Energy considerations, comparison with un-damped harmonic oscillator, logarithmic decrement, relaxation time, quality factor, differential equation of forced oscillator and its solution, amplitude resonance and velocity resonance.

UNIT-III (10 hrs)

3. Complex vibrations

Fourier theorem and evaluation of the Fourier coefficients, analysis of periodic wave functions - square wave, triangular wave, saw tooth wave, simple problems on evaluation of Fourier coefficients.

UNIT-IV (17hrs)

4. Vibrating strings: 8 hrs

Transverse wave propagation along a stretched string, general solution of wave equation and its significance, modes of vibration of stretched string clamped at ends, overtones and harmonics. Energy transport and transverse impedance.

5. Vibrations of bars: 9 hrs

Longitudinal vibrations in bars - wave equation and its general solution. Special cases (i) bar fixed at both ends (ii) bar fixed at the midpoint (iii) bar fixed at one end. Tuning fork.

UNIT-V (9 hrs)

6. Ultrasonics: 9hrs

Ultrasonics, properties of ultrasonic waves, production of ultrasonics by piezoelectric and magnetostriction methods, detection of ultrasonics, determination of wavelength of ultrasonic waves. Applications of ultrasonic waves.

REFERENCE BOOKS:

1. B.Sc. Physics Vol.1, Telugu Academy, Hyderabad.
2. Waves and Oscillations. N. Subramanyam and Brijlal, Vikas Pulications.

11/7/16

3. Unified Physics, Vol. 1, S.L. Gupata & S. Guptha, Jai Prakash Nath& Co, Meerut.
4. College Physics-I. T. Bhimasankaram and G. Prasad. Himalaya Publishing House.
5. University Physics -FW Sears, MW Zemansky& HD Young,Narosa Publications, Delhi
6. Mechanics, S.G.Venkatachalapathy, Margham Publication, 2003.

Practical paper 1: Mechanics & Properties of Matter

Work load: 30 hrs per semester **2 hrs/week**

Minimum of 6 experiments to be done and recorded

1. Viscosity of liquid by the flow method (Poiseuille's method).
2. Young's modulus of the material of a bar (scale) by uniform bending.
3. Young's modulus of the material a bar (scale) by non- uniform bending.
4. Surface tension of a liquid by capillary rise method.
5. Determination of radius of capillary tube by Hg thread method.
6. Viscosity of liquid by Searle's viscometer method.
7. Bifilar suspension – moment of inertia of a regular rectangular body.
8. Determination of moment of inertia using Fly-wheel.
9. Determination of the height of a building using a sextant.
10. Rigidity modulus of material of a wire-dynamic method (torsional pendulum)

Suggested student activities

Student seminars, group discussions, assignments, field trips, study project and experimentation using virtual lab

Examples

Seminars	- A topic from any of the Units is given to the student and asked to give a brief seminar presentation.
Group discussion	- A topic from one of the units is given to a group of students and asked to discuss and debate on it.
Assignment	- Few problems may be given to the students from the different units and asked them to solve.
Field trip	- Visit to Satish Dhawan Space Centre, Sriharikota / Thermal and hydroelectric power stations / Science Centers, any other such visit, etc.
Study project	- Web based study of different satellites and applications.

Domain skills:

Logical derivation, experimentation, problem solving, data collection and analysis, measurement skills

***** Documental evidence is to be maintained for the above activities.**

4/7/16

MODEL PAPER – W.E.F. 2016-17

THREE YEAR B.Sc DEGREE EXAMINATION

CHOICE BASED CREDIT SYSTEM

II SEMESTER: PART II: PHYSICS

Paper II: Waves & Oscillations

(For Mathematics Combinations)

Time: 3 Hours Max. Marks: 75

Section-A (Essay type)

Answer All questions **Marks :10x5 = 50**

1. a) What is simple harmonic motion ? Derive the equation of motion of simple harmonic oscillator.

OR

b) What is compound pendulum. Derive an equation to determine the acceleration due to gravity using it.

2. a) Derive an expression for the motion of damped harmonic oscillator and find its solution.

OR

b) What are forced oscillations? Derive and solve the differential equation of it

. 3.a) State and prove Fourier theorem and obtain Fourier constants.

OR

b) Analyse a square wave using Fourier theorem.

4. a) Derive an expression for the velocity of transverse wave in stretched string.

OR

b) Derive an expression for the velocity of longitudinal wave in a bar.

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Signature of the Members:

5. a) Describe the production of ultrasonics using Magnetostriction method.

OR

b) Explain the experimental determination of the wavelength of ultrasonics using acoustic grating.

Section-B (Short answer type)

Answer any three questions **Marks: 5 x3 = 15**

6. Write a note on Lissajous figures.
7. Explain the quality factor and sharpness of resonance.
8. Explain the energy transport in strings.
9. Write a short note on turning fork.
10. Write the applications of ultrasonics.

Section-C

Answer any two questions **Marks: 5x2 = 10**

11. The spring is stretched by 8 cm by a force of 10N. Find the force constant of the spring. What will be the time period of a 4Kg mass suspended by it.
12. In what time will the amplitude of a damped harmonic oscillator be reduced to half its initial value, if the decay modulus is 1 sec?
13. Find the Fourier's series for the saw-tooth function given by $y= \frac{a}{T} t$ for $0<t<T$.
14. A steel wire 100 cm long has mass of 10 gm. It is stretched by a tension of 400 N. Find the frequency of the wire in fundamental mode of vibration.
15. A piezo-electric crystal has a thickness 2mm has density 3200kg/m^3. If it is made of Material of Young's modulus 8 x 10^{10} N/m^3. What is its fundamental frequency.

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SRI VENKATESWARA UNIVERSITY : TIRUPATI

STATISTICS SYLLABUS (I YEAR)

W.E.F. 2015-16

Semester – II (CBCS With Maths Combination Common to BA/BSc)

Paper – II : Mathematical Expectation and Probability Distributions

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UNIT - I

Mathematical Expectation: Mathematical expectation of a function of a random variable. Raw and central moments and covariance using mathematical expectation and properties with simple problems. Addition and multiplication theorems on expectation. Definition of moment generating function (m.g.f), cumulant generating function (c.g.f), characteristic function (c.f), probability generating function (p.g.f) and their properties with proofs, applications. Chebyshev's , and Cauchy-Schwartz's inequalities and their applications

UNIT - II

Discrete distributions: Bernoulli, Binomial, Poisson, Negative binomial distributions . Properties of these distributions such as mean, variance, mode, recurrence relationship, m.g.f , c.f., c.g.f., p.g.f , Reproductive property and their limiting cases(wherever exists) and their real life applications.

UNIT - III

Geometric Distribution: Mean, variance , m.g.f ., c.f., and Lack of Memory, Hyper-geometric distribution: Mean, variance , m.g.f ., c.f., limiting case of Hyper-geometric and their real life applications.

UNIT – IV

Continuous distributions: Rectangular, Exponential, Gamma distributions and Properties of thesedistributions such as mean, variance, m.g.f., c.f., Mean deviation bout mean of Rectangular distribution, Lack of memory of exponential distribution, Beta of two kinds (mean and variance only) their real life applications.

UNIT - V

Normal distributions: Definition, properties such as mean, median, mode, variance, m.g.f., c.f., c.g.f., Odd and even order Moments, Mean deviation about mean, Additive - Reproductive Property, Area property, Q.D,M.D,S.D are approximately 10:12:15, and its importance., Normal distribution as a limiting case of Binomial and Poisson distributions. Cauchy distribution : Definition and c.f. only).

Reference Books:

1. Fundamentals of mathematical statistics: S.C.Guptha and V.K. Kapoor
2. Outlines of statistics, Vol II: Goon Guptha, M.K.Guptha and Das Guptha B
3. Introduction to mathematical Statistics : Hoel P.G
4. Random variable and Probability Distribution: BA/BSc I year statistics- Telugu Academy
5. Statistics Made simple Do it yourself on PC By K.V.S. Sarma
6. Applied Statistics with Microsoft Excel By Gerald Keller.

Practical Paper – II : Mathematical Expectation and Probability Distributions

1.Fitting of Binomial distribution and calculate expected frequencies (Direct method)
2.Fitting of Binomial distribution and calculate expected frequencies (Recurrence relation method)
3.Fitting of Poisson distribution and calculate expected frequencies (Direct method)
4.Fitting of Poisson distribution and calculate expected frequencies (Recurrence relation method)
5.Fitting of Negative Binomial distribution and calculate expected frequencies (Direct method)
6.Fitting of Negative B. D and calculate expected frequencies (Recurrence relation method)
7.Fitting of Geometric distribution and calculate expected frequencies (Direct method)
8.Fitting of Geometric distribution and calculate expected frequencies (Recurrence relation method)
9.Fitting of Normal distribution and calculate expected frequencies (Area method)
10.Fitting of Normal distribution and calculate expected frequencies (Ordinates method)
11.Fitting of Exponential distribution and calculate expected frequencies(Direct method)
12. Fitting of Cauchy distribution and calculate expected frequencies

Note : The above practical are to be done using M S Excel and SPSS Package where ever it is possible

THREE YEAR B.A. / B.Sc DEGREE EXAMINATION

CBCS - SECOND SEMESTER

Part - II - STATISTICS (WM)

Paper II : Mathematical Expectation & Probability Distributions

(New syllabus w.e.f. 2015 – 16)

MODEL PAPER

Time : 3 Hours Max Marks : 75

PART - A

Answer any five of the following questions. Each question carries 5 marks 5x5 = 25 Marks

1. Define mathematical expectation. Write the properties of mathematical expectations.
2. Define moment generating function and state it's properties.
3. Define Bernoulli distribution and find its mean and variance
4. State and prove Cauchy Schwartz Inequality.
5. Find m.g.f of Poisson Distribution
6. Show that mean is less than variance in negative binomial distribution.
7. In normal distribution show that Q.D., M.D., & S.D. are approximately 10:12:15.
8. Define Cauchy distribution. Find its characteristic function.

PART - B

Answer **ONE** question from each unit. Each question carries 10 marks. **5x10 = 50 Marks**

UNIT - I

9. Define characteristic functions and state and prove it's properties.

(OR)

10. State and prove addition theorem of mathematical expectation.

UNIT – II

11. Define poisson distribution and derive poisson distribution as a limiting form of Binomial Distribution.

(OR)

12. Derive the recurrence relation formula for moments of Binomial Distribution.

UNIT – III

13. State and prove memory less property of geometric distribution.

(OR)

14. Find mean and variance of Hyper geometric distribution.

UNIT - IV

15. Define Exponential distribution. Find its mean and variance.

(OR)

16. Define Beta distribution of first kind. Find its mean and variance.

UNIT - V

17. Define Normal Distribution. State the properties of Normal Distribution.

(OR)

18. Derive Normal Distribution as a limiting case of poisson distribution.

SRI VENKATESWARA UNIVERSITY: : TIRUPATHI
W.E.F. 2016-17
ZOOLOGY SYLLABUS FOR II SEMESTER
ZOOLOGY –PAPER-II (THEORY)
ANIMAL DIVERSITY –CHORDATES

PERIODS- 60 MAX. MARKS -100

UNIT-1 (PROTOCHORDATA)

1.1. Origin of Chordata.
1.2. Chordata: Distinctive Features & Classification of up to class level.
1.3. Protochordata : Sailent Features
1.4. Herdmania; Structure, Life History & Retrogressive Metamorphosis.

UNIT-2: CYCLOSTOMATA & FISHES

2.1. Cyclostomata: General characters & Difference between Petromyzon and Myxine
2.2. Fishes: General Characters& Classification up to sub-class level with examples
2.3. Migration of Fishes
2.4. Types of Scales in Fishes

UNIT-3: AMPHIBIA & REPTILIA

3.1 Amphibia: General characters & Classification up to the level of order with examples
3.2. Type Study: *Rana hexadactyla*: External Features, Skeleton System (Skull, Girdles and Limb bones only), Digestive System, Respiratory System, Heart, Arterial System, Venous System and Central Nervous System (Brain & Spinal cord).
3.3. Reptelia: General Characters & Classification up to the level of order with examples.

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UNIT-4 (AVES)

4.1 Aves: General Characters & Classification up to sub-class level with examples

4.2. Type Study: Columba livia - External Features, Digestive System, Respiratory systems, Heart and Double Circulation (Systemic and Pulmonary Circulations).

4.3. Migration of Birds.

4.4. Flight adaptations in Birds

4.5. Evolutionary Significance of Archaeopteryx.

UNIT-5 (MAMMALIA & ZOOGEOGRAPHY)

5.1 Mammalia: General Characters & Classification up to sub class level with examples

5.2. Dentition in Mammals

5.3. Geographical Features of Oriental Region & its Fauna.

5.4. Geographical Features of Australian Region & its Fauna.

5.5. Geographical Features of Ethiopean Region & its Fauna.

SUGGESTED READINGS

1. **E.L.Jordan and P.S Verma** ' Chordate Zoology'-S .Chand Publications
2. **Mohan P Arora 'Chordata** –I,Himalaya Publishing House Pvt.ltd.
3. **Marshal, Parker and Haswell** 'Text book of vertebrates.' ELBS and Mc Millan , England .
4. **Alfred Sherwood Romer**. Thomas S Pearson' The Vertebrates body, Sixth edition, CBS college publishing Saunders College Publishing.
5. **George C**.Kent,Robert K Carr. Comparative Anatomy of the Vertebrates,9th ed. Mc Graw Hill.
6. **Kenneth Kardong Veretbrates** : Comparative Anantomy Function and Evolution,4th ed, 'McGraw Hill.
7. **J**.W.Young The life of Vertebrates , 3rd ed, Oxford University Press.
8. **Harvey Pough F, Christine M Janis, B Heiser,** Vertebrate Life, Pearson 6th ed, pearson Education Inc. 2002.
9. **R.L Kotpal,** Modern text book of Zoology, Rastagi Publications.

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SRI VENKATESWARA UNIVERSITY : : TIRUPATHI

ZOOLOGY PRACTICAL SYALLABUS FOR II SEMESTER
ZOOLOGY –PAPER-II (Practical) – W.E.F. 2016-17
ANIMAL DIVERSITY –CHORDATES

Periods-30 **Max. Marks-50**

Observation of the following Slides/Spotters/Models/Handouts.

Protochordata : Herdmania , Amphioxus,

Cyclostomes : Petromyzon, Myxine

Pisces : Labeo rohita, Catla, Channa, Clarius, Hippo Campus, Exocoetus, Echeneis, Anguilla, Pristis, Tarpedo, Protopterous or any one Dipnoi Fish.

Fish Scales- Placoid, Cycloid, Ctenoid Scales

Amphibla : Hyla , Rachophorus, Icthyophis, siren, Amblystoma, Axolotal Larva.

Reptelia : Chamaeleon, Uromastix, Draco, Trionix, Naja, Bungarus, Enhydrina, Russels viper , Crocadilus.

Aves : Passer, Columba,
Collection and study of different feathers (Quill, Contour, Filoplume & Down) of Columba.

Mammalia : Ornithorhyncus, Tachyglossus, hedgehog, Loris, Manis.

Osteology : Skelton of Frog or Pigeon - Skull, Pectoral girdle, Pelvic girdles, Fore & Hind Limb bones.

Demonstration of dissection/ Dissected/ Virtual dissection.

1. Arterial system of Frog / Calotes / Bird / Rat.
2. Venous System of Frog / Calotes / Bird / Rat.
3. Digestive System of Frog / Calotes / Bird / Rat.

❖ Certified Laboratory record should be submitted at the time of Practical examination.

13/12/16

Signature of the Chairman / Chairperson (B.O.S.) :

Signature of the Members: 1) 13/12/16. 13/12/16

SRI VENKATESWARA UNIVERSITY : : TIRUPATHI
ZOOLOGY MODEL QUESTION PAPER FOR II SEMESTER
ZOOLOGY –PAPER-II (THEORY) – W.E.F. 2016-17
ANIMAL DIVERSITY –CHORDATES

TIME-3Hrs **Max. Marks-75**

PART-A

I. Answer any Five of the following **5X5=25**
Each question carry 5 marks

1. General Charcters of Urochordates
2. Placoid Scale
3. Types of scales in fishes
4. Frog Skull
5. Migration of Birds
6. Urodela
7. Archaeopteryx
8. Prototheria

PART-B

II. Answer any five questions .each question carry 10.marks
10X 5=50

9. List three distinctive features of chordates and explain the origin of chordata..

Or

Describe life history of Herdmania with an emphasis on Retrogressive. metamorphosis .

10. Write an essay on Migration of fishes.

Or

Give on account of Arterial System in Frog

11. Classify Amphibia up to orders with Suitable examples

Or

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Classify the class reptilia up to the level of order list their features and give examples.

12. Give an account on flight adaptations in birds

Or

List the general characters of birds and classify them up to Sub-class level and give examples.

13. Write an essay on Dentition in Mammals

Or

Describe the geographical features of Australian Region and give an account on its fauna.

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Signature of the Members:

SRI VENKATESWARA UNIVERSITY : : TIRUPATHI
ZOOLOGY MODELPRACTICAL EXAMINATION FOR II SEMESTER
ZOOLOGY –PAPER-II (Practical) – W.E.F. 2016-17
ANIMAL DIVERSITY –CHORDATES

TIME-2 Hrs **Max. Marks-50**

1. Identify the given dissection and Draw a labeled diagram 10 Marks
2. Identify, write identification points & draw labeled diagrams of the following spotters.

   A, B, C, D, E, F, G (One each from Prochordates, Fishes, Amphibia Reptiles , Aves , and Osteology) 6 X5 = 30 M
3. Certified Practical record 10 M

Without Practical record –Student is not admitted for exam

Spotters

Identification } 1 M
Classification }

Labeled Diagram -2 M

Comments – 2 M

Signature of the Chairman / Chairperson (B.O.S.) :

Signature of the Members:

13/12/16.

13/12/16

GENERAL ENGLISH SYLLABUSFOR B.A/B.COM/B.SC COURSES UNDER CBCS W.E.F. 2016-17

SEMESTER –III

Unit –I
PROSE

1. M.K. Gandhi: Shyness My Shield (from *The Story of My Experiments with Truth)*
2. Alexis C. Madrigal: Why People Really Love Technology: An Interview with Genevieve Bell

Unit –II
POETRY

1. Gabriel Okara: Once upon a Time
2. Seamus Heaney: Digging

Unit –III
SHORT STORY

1. JhumpaLahiri: The Interpreter of Maladies
2. Shashi Deshpande: The Beloved Charioteer

Unit –IV
ONE ACT PLAY

GurajadaAppa Rao: *Kanyasulkam,* translated by C. Vijayasree& T. VijayaKumar (Acts I & II)

Unit –V
LANGUAGE ACTIVITY

1. Classroom and Laboratory Activities
   i. JAM Sessions
   ii. Note Taking
   iii. Reporting for the Media
   iv. Expansion of an idea
2. Classroom Activity
   i. Transformation of sentences (Simple-Complex-Compound Sentences)
   ii. Note Making
   iii. Report Writing
   iv. Writing for the Media

Note: In classroom instruction it may be ensured that the theoretical and practical components of CSS-II complement the language activity in this semester.

SV UNIVERSITY, TIRUPATHI
THREE YEAR DEGREE EXAMINATIONS – 2016-17
ENGLISH PART – I (MODEL PAPER) III SEMESTER

TIME: 3HRS MAX. MARKS: 75

I. **Attempt any THREE of the following questions:** **3x5=15 m**

1) Explain Gandhi's feelings when he accompanied Sjt. Mazmudar to Ventnor?
2) What is the significance of technology non – adoption?
3) Why does Ms. Bell talk about the Robots in Japan?
4) Elaborate Gandhi's experiences during his last public speech?

II. **Attempt any THREE of the following questions:** **3x5=15 m**

1) How do people use language to hide their emptiness and hypocrisy?
2) Justify the title of the poem, "Digging".
3) Explain Seamus Heaney's attitude towards the people working in the fields.
4) Comment on the imagery of fangs and doors shutting in the poem "Once upon a Time".

III. **Attempt any THREE of the following questions:** **3x5=15 m**

1) Describe Mrs. Das's feelings for her husband.
2) What feeling does the child have towards her mother?
3) How does Lahiri evoke the Indian atmosphere in The Interpreter of Maladies?
4) What is the parallel fate of the narrator and her daughter? Elaborate.
5) Narrate the reactions of the two wives towards their husbands' professions in The
6) Interpreter of Maladies.

IV. **Attempt any TWO of the following questions:** **2x5=10 m**

1) Describe the condition of women in the society as portrayed in the play, "Kanyasulkam."
2) Analyse Girisam's ideas about education?
3) "Kanyasulkam" is a social document on the evils of its times. Explain.

V. Expand ONE of the following proverbs: **5x1=5 m**

1) Where there is a will, there is a way.
2) Prevention is better than cure.

VI. Rewrite the following sentences as directed **5x1=5 m**

1) If you request her, she will help you. [Into Compound sentence]
2) He is more of a poet than of a scholar. [Into Compound sentence]
3) He was too lean to lift the box. [Into Complex sentence]
4) He admitted his guilt. [Into Complex sentence]
5) When the siren sounded, all traffic came to stop. [Into Simple sentence]

VII. Make notes on the following passage: **5 m**

The test of a great book is whether we want to read it only once or more than once. Any really great book is one that we want to read the second time ever more than we wanted to read it for the first time; and every additional time that we read it, we find new meanings and new beauties in it. A book that a person of education and good taste does not care to read more than once is very probably not worth much. But we cannot consider the judgment of a single individual infallible. The opinion that makes a book great must be the opinion of the many. For even the greatest critics are apt to have certain preferences and prejudices. A man must be many-sided to utter a trustworthy estimate of many books.

VIII. Write a report for a newspaper about the N.S.S. Special Camp organized by your college unit.

(or)

Write a report for your college magazine regarding the evil effects of ragging in educational institutions.

5 m

(C. SURYANARAYANA)
CHAIRMAN, BOS-English
SV University, Tirupati

Second Language - Telugu / Hindi / Urdu / Sanskrit

(Common for All UG Programs)

II Year - III Semister - W.E.F.2016-17

తెలుగు పేపర్ - III

I. ప్రాచీన కవిత్వం

1. పోతన - వామనావతారం

ఆంధ్ర మహాభారతం - ఎనిమిదవ స్కంధం (582 - 621)

"కులమున్ రాజ్యము" నుండి "రవిబింబంబుపమింప" వరకు

2. శ్రీకృష్ణదేవరాయలు - ఆముక్త మాల్యద - ప్రథమాశ్వాసం (12 - 44)

'నీలమేఘముడాలు డీలు' నుండి

'ప్రబల రాజాధిరాజ వీరప్రతాప' వరకు

II. ఆధునిక కవిత్వం

1. పింగళి, కాటూరి - సౌందర నందము నుండి ధర్మసంవాదము

'అల్లన విల్చి....' నుండి 'అసద్రుశంమగు' వరకు

2. శ్రీ రాయప్రోలు సుబ్బారావు - 'ఆంధ్ర వైభవం'

'ఆంధ్రావళి' లో తెలుగుతల్లి, ప్రభోదం ఖండికలు

'శ్రీకాకుళస్వామి నుండి' ఉండే సీసపద్యాలు

'అమరావతి పట్టణమున' నుండి ఉండే సీసపద్యాలు

III. నాటకం

డా. కందిమళ్ళ సాంబశివరావు - 'వరుడు' - సాంఘిక నాటకం

IV. వ్యాకరణము

1. ఛందస్సు - ఉత్పలమాల, చంపకమాల, మత్తేభము, శార్దూలము, కందము, తేటగీతి, ఆటవెలది

2. అలంకారాలు - ఉపమ, రూపక, ఉత్ప్రేక్ష, స్వభావోక్తి, అతిశయోక్తి, అర్థాంతరన్యాసం, దుష్టాంతం

SRI VENKATESWARA UNIVERSITY, TIRUPATI

Model Question Paper Semester III

II B.A., / B.Com., / B.Sc., Degree Course from 2016 - 17

General Telugu

Time : 3 Hours **Max. Marks : 75**

Part - A

క్రిందివాటిలో ఏవైనా ఐదు ప్రశ్నలకు సమాధానాలు రాయండి 5×5 = 25 మార్కులు

అందులో 3, 4 ప్రశ్నలకు ఒకదానిలో ఒక్కొక్కటి చొప్పున తప్పనిసరిగా జవాబివ్వండి

1. వామనుడు విశ్వరూపమును పొందిన విధమెట్టిది?
2. రాయలవారి స్వప్న ఫలితాన్ని పండితులు ఏ విధంగా విశ్లేషించారు?
3. క్రిందివాటిలో ఒకదానికి సందర్భసహిత వ్యాఖ్యలు రాయండి

   (అ) శీఘ్రకాలంబునఁ బదభ్రష్టుండవు కమ్ము

   (ఆ) అతిపుణ్యుడుపుట్టె సజ్జనావన పరుడై
4. క్రిందివాటిలో ఒకదానికి సందర్భసహిత వ్యాఖ్యలు రాయండి

   (అ) ప్రేమమ్ము లేమికన్న నిప్పచ్చరము వేఱుకలదె?

   (ఆ) చల్లుడాంధ్ర లోకమున నక్షతలు నేడు.
5. నందుడు గౌతమునకు వివరించిన ప్రేమ సిద్ధాంతసారమును తెలపండి.
6. 'ఆంధ్రవైభవం' ఆధారంగా తెలుగు చరిత్రలో విశేషాలను వివరించండి.
7. 'వఱుడు' నాటకం ఆధారంగా చిన్నయ్య వ్యక్తిత్వాన్ని వివరించండి.
8. "ఓ కృష్ణా! నీ కీర్తి హంసవలె ఆకాశ గంగయందు మునుగుచున్నది" – ఈ వాక్యములోని అలంకారాన్ని గుర్తించి సమన్వయం చేయండి.

Part - B

1. క్రిందివానిలో ఒకదానికి సమగ్ర వ్యాఖ్య రాయండి. 1×10=10 మార్కులు

   కారే రాజులు రాజ్యముల్ గలుగవే గర్వోన్నతిం బొందరే
   వా రేరీ సిరి మూటగట్టుకొని పోవంజాలిరే భూమిపైఁ
   బే రైనం గలదే శిబిప్రముఖులం బ్రీతిన్ యశఃకాములై
   యీరే కోర్కులు వారలన్ మఱచిరే యి క్కాలమున్ భార్గవా!

   (లేదా)

కూరిమి గృష్ణరాయ నృప కుంజర చేరే గళింగ రాజ్య ల
క్ష్మీ రమణీలలామనిను మిన్నులు ముట్టిన మోహనాలతో
గారణమట్ల లక్ష్మి కసుగందని వేడుక గృష్ణరాయనిం
జేరున కాక వావిసెడ జెందునె సోదరుడైన రుద్రునిన్

2. 'వామనావతారం' ఆధారంగా బలిచక్రవర్తి దానగుణాన్ని నిరూపించండి.

(లేదా)

'శ్రీకృష్ణదేవరాయలు' పాఠ్యభాగంలో వర్ణింపబడిన రాయలవారి వంశచరిత్రను తెలపండి. 1×10=10

3. గౌతమనందుల ధర్మసంవాదాన్ని వివరించండి.

(లేదా)

రాయప్రోలువారు వర్ణించిన 'ఆంధ్రవైభవం' 1×10=10

4. 'వఱదు' నాటిక నమౌచిత్యం. 1×10=10

(లేదా)

'వఱదు' నాటకంలోని విభిన్న మనస్తత్వాలను కందిమళ్ళ సాంబశివరావుగారు ఏవిధంగా చిత్రించారు?

5. మత్తేభ పద్య లక్షణాలను సోదాహరణంగా వివరించండి.

(లేదా)

అర్థాలంకారాలంటే ఏమిటో తెలిపి, శ్లేషాలంకారాన్ని వివరించండి. 1×10=10

W.E.F. 2016-17

SECOND YEAR SYLLUBAS (For B.A., B.Sc.,B.Com)

KAVYA DEEP – BY RADHAKRISHNAN, GUNTUR

HISTORY OF HINDI LITERETURE BY Dr. GULAB RAI

Unit	III Sem
1. काव्यदीप (Ancient and Modern Poetry)	कबीरदास – साखी 1-10 सूरदास का अंश वर्णित मातृभूमि तोडती पत्थर गीत फरोश
2. हिन्दी साहित्य का इतिहास (History of Hindi Literature)	भक्तिकाल ज्ञानाश्रयी शाखा – कबीर प्रेमाश्रयी शाखा – जायसी
3. साधारण निबंध (General Essays)	समाचार पत्र बेकारी की समस्या कंप्यूटर पर्यावरण और प्रदूषण साहित्य और समाज (Changing Administrative Hindi to English to Hindi)
4. अनुवाद (Translation)	अनुवाद अभ्यास-अंग्रेजी से हिन्दी (Four or Five Lines)
5. प्रयोजन मूलक हिन्दी (Functional Hindi)	परिपत्र ज्ञापन सूचना

THIRD SEMISTER

Model Question Paper : नमूना प्रश्न पत्र

(BA., B.sc & B. Com)

Time : 3 hrs | Marks : 75

Answer any five of the following:

I) निम्नलिखित में से किन्हीं पाँच प्रश्नों के उत्तर दीजिए। 5X5=25

1. जा घट प्रेम न संचरै सो घट जान मसान।
   जैसे खाल लुहार की साँस लेत बिन प्राण॥ (सप्रसंग व्याख्या कीजिए)
2. पोथी पढि पढि जग मुआ पंडित भया न कोई।
   एकै आखर प्रेम का पढै सो पंडित होई॥ (सप्रसंग व्याख्या कीजिए)
3. सूरदास की भक्ति-भावना पर व्याख्या कीजिए।
4. सोभित कर नवनीत लिए।
   घुटुरुनि चलत रेनु-तन-मंडित, मुख दधि लेप किए॥ (सप्रसंग व्याख्या कीजिए)
5. ज्ञापन की परिभाषा लिखकर उदाहरण प्रस्तुत कीजिए।
6. प्रेमाश्रयी शाखा की पाँच विशेषताएँ बताइए।
7. कबीर के व्यक्तित्व और कृतित्व पर प्रकाश डालिए।

II) निम्नलिखित सभी प्रश्नों के उत्तर दीजिए। 5X10=50

1. 'तोडती पत्थर' कविता का सारांश लिखिए।

   या

   'मातृभूमि' कविता का सारांश लिखिए।
2. निर्गुण भक्ति धारा में प्रमुख कवि कबीर के स्थान का निर्धारण कीजिए।

   या

   प्रेमाश्रयी शाखा की प्रमुख प्रवृत्तियों पर प्रकाश डालिए।
3. गीत फरोश कविता का सारांश लिखिए।

   या

   निम्नलिखित पंक्तियों का हिंदी में अनुवाद कीजिए।

   Be grateful to your parents. The time was when you were cost wholly on their kindness; when you could neither speak nor walk when your only a burden and care to them.
4. 'बेकारी की समस्या' पर एक निबन्ध लिखिए।

   या

   भक्तिकाल हिंदी साहित्य का स्वर्ण युग है – विवेचना कीजिए।
5. सूचना का अर्थ क्या है और उदाहरण सहित लिखिए।

   या

   परिपत्र का प्रारूप तैयार कीजिए।

ಅಂತ್ಯವಾಗಿದೆ

3-03

PART – I (ii) Sanskrit
CBCS Semester wise syllabus

II year Degree – B.A., B.Sc., B.Com., BBM

III semester

Paper III Drama, Upanishad, Alankaras & History of Literature

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UNIT – I Old Drama दूतवाक्यम् (Doota Vakyam) one act play by Bhasa

UNIT – II Modern Drama अश्वनिनिरासं (Asaniniraasam) By Kavi Samrat Viswanatha Sathyanarayana, published in 1954.

UNIT – III Upanishad शिक्षानुशासनं (Sishyanusasanam –Sikshavalli of Taittireeyopanishad)

UNIT – IV Alankaras (1) उपमा Upama (2) अनन्वय (Ananvaya)
(3) उत्प्रेक्षा Utpreksha (4) दीपकं (Deepakam)
(5) अप्रस्तुतप्रशंसा (Aprastutaprasamsa) and
(6) दृष्टान्त Drushtanta

UNIT – V Selected Essays

G. Padmaja
Chairman
BOS in Sanskrit

3-08

FOUNDATION COURSE

COMMUNICATION SKILLS AND SOFT SKILLS-2 (CSS -2)

COURSE CONTENT (30 hours)

W.E.F. 2016-17

III SEMESTER

CSS 02 aims at improving the speaking skills of the learner. For many learners of English, the sound-spelling relationship of the language appearsanarchic. Another problem many Indian learners face is English word accent. Unit I and Unit II help learners overcome these problems to a great extent. The remaining units are on the two productive skills, speaking and writing. The techniques of day-to-day conversations and the important characteristics of interviews and GDs presented in this course strengthen the learner's speaking skills. The last unit presents various aspects of presentation in writing.

Unit I: Pronunciation - 1
The Sounds of English

Unit II: Pronunciation – 2
1. Word Accent
2. Intonation

Unit III: Speaking Skills -1
1. Conversation Skills
2. Interview Skills
3. Presentation Skills
4. Public Speaking

Unit IV: Speaking Skills -2
1. Role Play
2. Debate
3. Group Discussion

Unit V: Writing Skills
1. Spelling
2. Punctuation
3. Information Transfer

- Tables
- Bar Diagrams
- Line Graphs
- Pie Diagrams
- Flow Charts
- Tree Diagrams
- Pictures

SV UNIVERSITY, TIRUPATHI
THREE YEAR DEGREE EXAMINATIONS – 2016-17
COMMUNICATION SKILLS AND SOFT SKILLS
(MODEL PAPER) III SEMESTER

TIME: 2HRS MAX. MARKS: 50

PART – A

I. Attempt any five of the following questions. 3x5=15

1. What are the active articulators and passive articulators?
2. How does a debate contribute to the enrichment of skills?
3. How are consonants produced?
4. What is the difference between a pie diagramme and a line graph?
5. Pick out the silent letters in the following words.
   a. Hand kerchief b. feign c. solemn d. muscle e. bomb f. benign
6. Write a note on "syllabic structure"?
7. Write about stress in compound words?
8. Punctuate the following passage;
   Father said to his son dont waste your time
9. Why are "problem solving skills" important in group discussion?
10. What is power point presentation?

PART – B

Attempt the following questions 5x7= 35

II. Attempt a classification of Diphthongs with examples?

Or

Assess the importance of organs of speech in the process of articulation?

III. What are the various types and functions of intonation?

OR

Write an essay on Accent and Rhythm in connected speech?

IV. Analyze the salient features of a good public speaker?

OR

What are the various functions of language?

V. What are the do's and don'ts of a group discussion?

OR

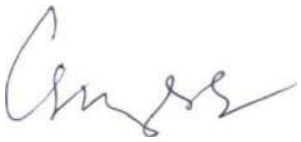
To what extent role plays enrich one's language skills?

VI. Prepare a diagram for the following text:

Personal skills are varied and they are of immense use. They are broadly classified into innate skills and key skills. Innate skills are also called personal qualities, self development, communication, interpersonal skills; problem solving skills are grouped as key skills or core skills.

OR

Prepare a flow chart showing the process of admission into a degree college.



Chairman, BOS, English
S.V. University, Tirupati

FOUNDATION COURSE

ENTREPRENEURSHIP

Syllabus, For all Degree Programmes.

III SEMESTER - W.E.F. 2016-17

(Total 30 Hrs)

Unit-I: Entrepreneurship: Entrepreneur characteristics – Classification of Entrepreneurships – Incorporation of Business – Forms of Business organizations –Role of Entrepreneurship in economic development –Start-ups.

Unit-II: Idea Generation and Opportunity Assessment: Ideas in Entrepreneurships – Sources of New Ideas – Techniques for generating ideas – Opportunity Recognition – Steps in tapping opportunities.

Unit-III: Project Formulation and Appraisal : Preparation of Project Report –Content; Guidelines for Report preparation – Project Appraisal techniques –economic – Steps Analysis; Financial Analysis; Market Analysis; Technical Feasibility.

Unit-iv: Institutions Supporting Small Business Enterprises: Central level Institutions: NABARD; SIDBI, NIC, KVIC; SIDIO; NSIC Ltd; etc. – state level Institutions –DICs- SFC- SSIDC- Other financial assistance.

Unit-V: Government Policy and Taxation Benefits: Government Policy for SSIs- tax Incentives and Concessions –Non-tax Concessions –Rehabilitation and Investment Allowances.

Reference Books:

1. Arya Kumar, Entrepreneurship, Pearson, Delhi, 2012.

2. Poornima M.CH., Entrepreneurship Development –Small Business Enterprises, Pearson, Delhi,2009

3. Michael H. Morris, ET. al., Entrepreneurship and Innovation, Cen gage Learning, New Delhi, 2011

4. KanishkaBedi, Management and Entrepreneurship, Oxford University Press, Delhi, 2009

5. Anil Kumar, S., ET.al., Entrepreneurship Development, New Age International Publishers, New Delhi, 2011

6. Khanka, SS, Entrepreneurship Development, S. Chand, New Delhi.

7. Peter F. Drucker,Innovation and Entrepreneurship.

8. A.Sahay, M. S. Chhikara, New Vistas of Entrepreneurship: Challenges &Opportunities.

Sri Venkateswara University : TIRUPATI

ENTREPRENEURSHIP

Model Question Paper 2016-17

Answer FIVE questions choosing ONE question from each unit : Marks 5 x 10 = 50

UNIT I

Q 1. Define Entrepreneurship and explain its functions

OR

Q 2. Explain the importance of women entrepreneurship

UNIT II

Q 3. What is the meaning of motivation and describe the factors of motivation towards entrepreneurship

OR

Q. 4. Explain the entrepreneurial competency in various fields

UNIT III

Q. 5. Define Micro Enterprise and explain its characteristics

OR

Q.6. Explain the importance of Small Enterprises in economic development

UNIT IV

Q. 7. Explain the need of Institutional support for the development of Micro Enterprises

OR

Q.8. Briefly explain the Institutional support provided by the government for the development of small enterprises

UNIT V

Q. 9. What are the incentive policies for the small enterprises

OR

Q. 10. Explain the Government support provided to Micro enterprises.

B. A. HISTORY

II Year B. A. Programme (UG) Courses – Under CBCS

SEMESTER – III – W.E.F. 2016-17

Paper – III (Core Paper)

LATE MEDIEVAL & COLONIAL HISTORY OF INDIA (1526 to 1857 A. D.)

(History and Culture of India (1526 – 1857))

Unit - 1	India from 1526 to 1707 A. D.: Emergence of Mughal Empire - Sources, Conditions in India on the eve of Babur's invasion, Brief Summary of Mughal Polity – Sher Shah & Sur Interregnum – Expansion & Consolidation of Mughal Empire – Rise of Marathas &Peshwas.
Unit - II	Administration, Economy, Society and Cultural Developments under the Mughals – Disintegration of Mughal Empire.
Unit - III	India under Colonial Hegemony : Beginning of European Settlements – Anglo-French Struggle – Policies of Expansion - Subsidiary Alliance & Doctrine of Lapse - Consolidation of British Empire in India up to 1857 A. D.
Unit - IV	Economic Policies of the British (1757-1857): Land Revenue Settlements – Commercialization of Agriculture – Impact of Industrial Revolution on Indian Industry ; Administration of the Company – Regulating Charter Acts; Cultural & Social Policies: Humanitarian Measures & Spread of Modern Education
Unit - V	Anti-Colonial Upsurge –Peasant & Tribal Revolts - 1857 Revolt – Causes, Nature& Consequences.

References:

1	Bipan Chandra, Modern India
2	Bipan Chandra, Rise and Growth of Economic Nationalism in India
3	C.A.Bayly, Indian Society and the Making of the British Empire
4	HarbansMukhia, The Mughals of India
5	Irfan Habib, Medieval India: The study of a Civilization
6	L.P.Sharma, The Mughal Empire
7	R.P.Dutt, India Today
8	Sathis Chandra, Essays on Medieval Indian History
9	Tripathi R.P., The Rise & Fall of the Mughal Empire

Project Work: Students should be asked to identify structures belonging to Mughal period or colonial period and present status.

Make students to create a collage or collection of images related to a topic.

Images can be hand drawn, printed, or clipped from a magazine or newspaper.

B.A. HISTORY

II Year B.A. Programme (UG) Courses – Under CBCS

Semester –III

Paper – III (Core Paper)

LATER MEDIEVAL & COLONIAL HISTORY OF INDIA (1526 to 1857 A.D.)

(History and Culture of India (1526-1857)

Time : 3hrs **Max.marks : 75**

PART – A

Answer any Five Questions choosing one question from each unit

(Marks 5X10 = 50)

1. Narrate the Administrative system of sher Shah.

   (or)

   Describe the Administration under Shivaji
2. Explain the economic and social conditions under Mughals.

   (or)

   Write the causes for the downfall of the Mughal Empire
3. Write a brief note on Carnatic wars.

   (or)

   Explain the merits and demerits of subsidiary Alliance.
4. Review the land revenue settlement under the British.

   (or)

   Write the impact of Industrial Revolution on Indian industry.
5. Explain the peasant and tribal revolts against the British.

   (or)

   Describe the causes and results of 1857 Sepoy Revolt

PART – B

Answer any five Questions

(Marks -5X5 = 25)

6. First battle of Panipat
7. Mansabdari System
8. Din-I-Ilahi
9. Architecture under Mughals
10. Balaji Baji Rao
11. Sahu
12. Nurjahan
13. Doctrine of Lapse

Chairman
BOS – HISTORY

II B.A. ECONOMICS
Semester – III – W.E.F.2016-17
Macro Economics - National Income, Employment and Money

Module - 1

Meaning, definition of Macro Economics - Importance of Macro Economics- Difference between Micro and Macro Economics - Paradox of Macro Economics - Limitations

Module - 2

National Income - Definitions, Concepts of National Income - Measurement of National Income- Circular flow of Income in Two, Three and Four Sector Economy.

Module - 3

Classical theory of Employment - Say's Law of Markets.

Module - 4

Keynesian Theory of Employment - Consumption function - Investment Function -Marginal Efficiency of Capital (MEC)- Concepts of multiplier and accelerator

Module - 5

Meaning and Functions of Money - Classification of money - Gresham's Law - RBI classification of Money. Theories of Money - Fisher's Quantity theory of Money Cambridge approach (Marshall, Pigou, Robertson & Keynes).

REFERENCES:

1. G.Ackley - "Macro Economics Theory and Policy", Collier Macmillan, 1978.
2. E.Shapiro - "Macro Economic Analysis", Galgotia Publications, 1999.
3. Central Statistical Organisations - "National Accounts Statistics".
4. R.Dornbush, s.Fisher and R.Startz - "Macro Economics", Tata Mc.Graw Hill, 9/e, 2004.
5. M.L.Seth-"Macro Economics", Lakshmi Narayana Agarwal, 2015.
6. K.P.M. Sundaram - "Money, banking & International Trade", Sultan Chand, 2010.
7. Dillard, D - "The Economics of John Maynard Keynes", Crossby Lockwood & Sons.
8. M.N.Mish ra & S.B.Mishra - "Insurance Principles & Practice" S.Chand 2012.
9. Bharati V.Pathak "The Indian Financial System Markets. Institutions & Services". Pearson 2008.
10. Telugu Academy Publication

Sri Venkateswara University - Tirupati. CBCS.

II B.A - Macro Economics - Semester - III paper - III w.e.f. 2016-17.

NATIONAL INCOME - EMPLOYMENT & MONEY.

MODEL QUESTION PAPER.

Time: 3 hours | Max. Marks: 75

PART-A.

Answer any FIVE Questions from the following: 5x5 = 25

1. Importance of Macro Economics → స్థూల అర్థశాస్త్ర ప్రాముఖ్యత
2. Gross National product - GDP → స్థూల జాతీయోత్పత్తి
3. Limitations of Macro Economics → స్థూల అర్థశాస్త్ర పరిమితులు.
4. Consumption Function ——→ వినియోగ ఫలం
5. Gresham's law ——→ గ్రేషమ్ సూత్రం
6. Accelerator ——→ వేగత్వరణం
7. Per Capita Income ——→ తలసరి ఆదాయం
8. Classification of Money → ద్రవ్యంలోని రకాలు.

PART-B

Answer any FIVE Questions from the following: 10x5 = 50

9. (a) write about the Difference between Micro & Macro Economics?
స్థూల, స్థూల అర్థశాస్త్రాల మధ్యగల భేదాలు వివరించుము?

(OR)

(b) Explain the paradoxes of Macro Economics?
స్థూల అర్థశాస్త్ర వైపరీత్యాలను గురించి వివరించండి?

10. (a) Describe the Measurements of National Income?
జాతీయ ఆదాయ మదింపు పద్ధతులను గూర్చి వివరించండి?

(OR)

(b) J.B. Says Law of Markets
J.B. సే యొక్క మార్కెట్ సూత్రం వివరించండి?

11. (a) Describe the keynesian Theory of Employment?
J.M. Keynes యొక్క ఉద్యోగిత సిద్ధాంతమును గూర్చి వివరించండి?

(OR)

P.T.O

(b) write about the Concepts of Multiplier ?
గుణకం యొక్క ప్రమేయాలను గూర్చి వివరించండి ?.

12. (a) Discuss about Marginal Efficiency of Capital (MEC) ?.
ఉపాంత మూలధన సామర్థ్యం ను గురించి వివరించండి ?.

(OR)

(b) write about the Functions of Money ?
ద్రవ్యం యొక్క విధులను గురించి వివరించండి ?

13. (a) Explain the Fisher's Quantity Theory of Money ?.
ఫిషర్ యొక్క ద్రవ్యపరిమాణ సిద్ధాంతమును గూర్చి వివరించండి ?

(OR)

(b) Discuss about the Cambridge University Economists Cash Balances Approach ?.
కేంబ్రిడ్జి ఆర్థిక వేత్తల నగదు నిల్వల సిద్ధాంతమును గూర్చి వివరించుము ?

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CHAIRMAN
Board of Studies

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B.A. POLITICAL SCIENCE
CBCS: SYLLABUS - SEMESTER WISE
SECOND YEAR; SEMESTER – III - W.E.F. 2016-17
PAPER-III (CORE): INDIAN CONSTITUTION

Unit-1: The Making of the Constitution

1. The ideological legacy of the Indian National Movement on the Constituent Assembly
2. The Nature and Composition of the Constituent Assembly

Unit-2: Philosophical Premises of the Indian Constitution

1. Preamble: The underlying values of the Indian Constitution
2. Salient features of the Constitution of India

Unit-3: Fundamental rights and Directive principles of State Policy

1. Individual and Collective Rights: Limitations on the fundamental Rights
2. Judicial Interpretation of Fundamental Rights
3. The doctrine of 'Basic Structure' of the Constitution: KesavanandaBharathi Case

Unit-4: Indian Federalism

1. Unitary and Federal features in the Indian Constitution
2. Tension Areas between the Union and State Governments
   Legislative, Administrative and Financial Spheres

Unit-5: Working of the Indian Constitution

1. The Values of the Indian Constitution and Ushering of Social Revolution in India
2. The causes for the Ascendency of the Executive over legislature and Judiciary; Major Controversies regarding the Amendments to the Constitution
3. Nature and Role of Higher Judiciary in India; Recent Debates on the mode of appointment of Judges

Reference books:

1. Granville Austin (1972) the Indian Constitution, Cornerstone of a Nation Oxford university Press, New Delhi.

2. Madhavkhosla (2012) the Indian Constitution, oxford university press, New Delhi

3. Granville Austin (1999) Working a Democratic Constitution; A History of the Indian Experience, Oxford University Press, New Delhi

4. Zoya Hasan, Sridharan E and Sudharshan R (Eds) 2002 India's living Constitution, Permanent black, New Delhi

5. BaxiUpendra (1980) the Indian Supreme Court and Politics Eastern book co, Lucknow

MODEL QUESTION PAPER.
CBCS : SEMISTER
SECOND YEAR – SEMISTER-3.
BA. POLITICAL SCIENCE
2016-2017.

TIME : 3 HOURS MAX. MARKS: 75.

PAPER 3 : INDIAN CONSTITUTION

SECTION-A.

Answer any 5 Questions (5×5 : 25 MARKS).

1. Write a brief note on Constituent Assembly.
2. What do you know about Preamble of the Indian Constitution.
3. Explain limitations on the Fundamental Rights
4. What are the Unitary features of the Indian Constitution.
5. Write short note on Kesavananda Bharati case.
6. Briefly explain the Social Revolution. In India.
7. Can you find the tension areas between Union and state governments.
8. Describe the recent Debates on the mode of appointment of Judges.

Answer any 5 of the following Questions (10×5: 50)

9. Give critical analysis on the Nature and composition of the Constituent Assembly.

(OR)

Describe the Salient features of the constitution of India

10. Write an essay on Judicial Interpretation of Fundamental Rights

(OR)

Critically examine the "Basic Structure" of the Indian constitution.

11. What are the Unitary and Federal features of the Indian constitution

(OR)

Explain the Financial Relations between centre and state.

12. Write an Essay on the Nature and Role of Higher Judiciary in India

(OR)

WHAT ARE THE CAUSES FOR THE ASCENDENCY OF THE EXECUTIVE OVER LEGISLATURE AND JUDICIARY?

13. Describe the ideological legacy of the Indian National Movement on the Constituent Assembly.

(OR)

How far the values of the Indian Constitution responsible for the Social Revolution in India.

Recommended and accepted

5/10/16.

D. DHANAPAL REDDY.
Associate Professor
Vice – Principal (RTD)
CDC (W) SRIKALAHASTI

II B.A. Special Telugu

1-3-103

బి.ఏ. డిగ్రీ ద్వితీయ సంవత్సరము పాఠ్యప్రణాళిక

స్పెషల్ తెలుగు సాహిత్య చరిత్ర - 2015 - 2016

సెమిస్టర్ - III

1.	ప్రాఙ్నన్నయ యుగం	-	సాహిత్య వికాసం
2.	శివ కవియుగం	-	నన్నయ్య - తిక్కన - ఎఱ్ఱన
3.	శ్రీనాథ కవి యుగం	-	నన్నెచోడుడు - పండితారాధ్యుడు - పాల్కురికి ద్విపదకావ్య సంప్రదాయాలు
4.	పదసాహిత్యం	-	అన్నమయ్య - క్షేత్రయ్య - త్యాగయ్య కంచర్లగోపన్న
5.	ప్రబంధయుగం	-	ప్రబంధ లక్షణాలు - పెద్దన - తిమ్మన శ్రీ కృష్ణదేవరాయులు - ధూర్జటి - రామరాజ భూషణుడు - సూరన - మొల్ల

Chairperson BOS Telugu

Telugu (Special Telugu) Paper - I
II BA Semister -III Model Paper

Time 3 hrs **Marks 75**

Part - A

ఈ క్రింది వాటిలో ఐదింటిని లఘురూప సమాధానాలు వ్రాయండి. **5 × 5 = 25**

1. పాఱ్ఱన్నయ యుగ కావ్య భాష
2. నన్నెచోడుని కవితాగుణం
3. జాను తెలుగు రచనకు ఆద్యుడు పాల్కుడికి సోమనాథుడా సమర్థించండి.
4. పండితారాధ్యుడు
5. ద్విపద సాహిత్యాన్ని పరిచయం చేయండి.
6. పోతన భక్తి తత్వం గురించి వ్రాయండి.
7. ప్రబంధ లక్షణాలను వివరించండి.
8. రాయల యుగంలో జరిగిన సాహితీ సేవ

Part - B

ఈ క్రింది వాటిలో ఐదింటికి వ్యాసరూప సమాధానాలు వ్రాయండి

1. నన్నయ కవితారీతులు వివరించండి **10 మార్కులు**

   లేదా

   తిక్కన నాటకీయతనం తెలియజేయండి.

2. ఎఱ్ఱన వర్ణనా వైచిత్రిని వివరించండి **10 మార్కులు**

   లేదా

   రెడ్డి రాజుల సాహిత్య పోషణని వివరించండి.

3. శ్రీనాథుని కావ్యాలను పరిచయం చేయండి **10 మార్కులు**

   లేదా

   గోన బుద్ధా రెడ్డి రంగనాథ రామాయాణాన్ని పరిచయం చేయండి

4. పద సాహిత్యానికి అన్నమయ్య చేసిన సేవ **10 మార్కులు**

లేదా

తెలుగు సాహిత్యానికి తాళ్ళపాక కవుల దోహదం

5. ఆముక్త మాల్యదలోని వస్తువైచిత్రిని వివరించండి **10 మార్కులు**

లేదా

నాయకరాజుల కాలంలోని వచన కావ్యాలను పరిచయం చేయండి

II B.Com/B.Com(CA)/B.A (Accountancy)

III SEMESTER

CORPORATE ACCOUNTING

Unit-I:

Accounting for Share Capital - Issue, forfeiture and reissue of forfeited shares- concept & process of book building - Issue of rights – Buy back of shares (preparation of Journal only).

Unit-II:

Issue and Redemption of Debentures – Issue and redemption of debentures – Accounting Treatment for Convertible and Non-Convertible debentures sinking fund method only (preparation of Journal and Ledger).

Unit –III:

Valuation of Goodwill: Need and methods - Normal Profit Method, Super Profits Method – Capitalization Method, annuity method (including problems).

Unit - IV

Valuation of shares: Need for Valuation - Methods of Valuation - Net assets method, Yield basis method, Fair value method (including problems).

Unit –V

Provisions of the Companies Act, 2013 : Company final accounts - Preparation of Balance Sheet and Profit and Loss Account – Schedule-III – Adjustments relating to preparation of final Accounts.

Reference Books:

1. Modern Accounting: A. Mukherjee, M. Hanife Volume-II, McGraw Hill
2. Corporate Accounting – RL Gupta & Radha swami
3. Management Accounting: Shashi K. Gupta, R.K. Sharma, Kalyani Publishers.
4. Corporate Accounting – P.C. Tulsian
5. Advanced Accountancy: Jain and Narang
6. Advanced Accountancy : R.L. Gupta and M.Radhaswamy, S Chand.
7. Advanced Accountancy : Chakraborthy
8. Accounting standards and Corporate Accounting Practices: T.P. Ghosh Taxman
9. Corporate Accounting: S.N. Maheswari, S.R. Maheswari, Vikas Publishing House.
10. Advanced Accountancy: Arutanandam, Raman, Himalaya Publishing House.
11. Advanced Accounts: M.C. Shukla, T.S. Grewal, S.C. Gupta, S. Chand & Company Ltd.,

SRI VENKATESWARA UNIVERSITY

Model Paper; DSC3B

II B.Com /B.A, Accountancy

Semester – III, Nov, 2016

Corporate Accounting (DSC 1 C)

Answer any **Five** of the following Questions **(5 x 3 = 15 Marks)**

1. (a) Share Capital
   (b) Forfeiture of Shares
   (c) Debentures
   (d) Sinking fund
   (e) Super Profits
   (f) Methods of Valuations of Shares
   (g) Need for valuation of good will
   (h) Fair value method
   (i) Profit and Loss appropriation account
   (j) Companies Act 2013

UNIT I

2. A Ltd. Invited applications for 10,000 shares of Rs.100 each at a discount of 5 per cent payable as follows:

On application Rs.25; On allotment Rs.34; On first call and final call Rs.36.

The applications received were for 9,000 shares and all of these were accepted. All moneys due were received except the first and final call on 200 shares which were forfeited. 100 Shares were reissued @ Rs.90 as fully paid.

You are required to show journal entries in the books of the company.

3. A limited company issued a prospectus inviting applications for 2,000 shares of Rs.10 each at a premium of Rs.2 per share payable as follows:

On applications Rs.2; on allotment Rs.5 (including premium); on First Call Rs.3 and on Second Call Rs.2

Applications were received for 3,000 shares and allotments made pro-rata to the applicants for 2,400 shares, the remaining applications being refused. Money overpaid on application was employed on account of sums due on allotment.

X to whom 40 shares were allotted, failed to pay the allotment money and on his subsequent failure to pay the first call, his shares were forfeited. Y, the holder of 60 shares

failed to pay the two calls, and his shares were forfeited after the second call hand been made.

Of the shares forfeited, 80 shares were sold to Z, credited as fully paid, for Rs.9 per share, the whole of X's share being included.

Show journal and Cash Book entries.

UNIT II

4. Raghavendra Co. Ltd. offered 1000, 5% debentures of Rs 100 each. Pass necessary journal entries in the following cases.

a) Issued at par and redeemable at par.

b) Issued at 10% premium and redeemable at par.

c) Issued at 6% discount and redeemable at par.

d) Issued at par and redeemable at 10% premium.

e) Issued at 6% discount and redeemable at 10% premium.

OR

5. On 1st April 2009 Anuradha company issued 4000 debentures of Rs 100 at par, redeemable at par on 31st March, 2014. A sinking Fund was established for this purpose. It was expected that investments would earn 5% interest. Sinking Fund tables show that Rs 0.180975 amounts to Rs 1 at the end of 5th year @ 5%.

On 31st March, 2014 , the investments realized Rs 2,96,000. On that date the company's bank balance stood at Rs 1,45,000. The debentures were duly redeemed.

Prepare sinking Fund Account and sinking Fund Investments Account assuming that the investments were made to the nearest Rs 10.

UNIT III

6. The following particulars are available in respect of a business firm.

i. Average capital employed Rs. 50,000.
ii. Trading results: 2005 (Profit Rs. 12,200) 2006 (Profit Rs. 15,000) , 2007 (Rs. 2,000) and 2008 (Profit Rs. 21,000)
iii. Market rate of interest on investment at 8%.
iv. Rate of risk return on capital invested at 2%.
v. Remuneration of the proprietor Rs. 3,600 pa.

You are required to compute the value of Goodwill on the basis of 3 years purchase of super profit.

7. The following particulars are available in respect:

i. Profits earned in 2000-Rs.50,000, 2001-Rs.60,000 and 2002-Rs.55,000
ii. Normal rate of return 10%
iii. Capital employed Rs. 3,00,000
iv. Present value of annuity for 5 years at 10% is Rs. 3.78 in a Rupee.
v. The profit included non-recurring profit on an average basis of Rs. 4000 out of which it was deemed that even non-recurring profits had a tendency of appearing at Rs. 1000 pa.

You are required to calculate goodwill under the following methods.

- As per five years purchase of super profit.
- As per capitalization method.
- As per annuity method.

UNIT IV

8. The following details are extracted from the records of Gopi Co. Ltd. For the year ending 31.12.2010. You are required to calculate the value of equity share.

2000, 9% preference share of Rs. 100 each Rs,. 2,00,000
50,000 equity shares of Rs. 10 each, Rs. 8 per share paid Rs. 4,00,000
Expected profits per year before tax Rs. 2,18,000 rating tax 50 percent.
Transfer to general reserve every year Rs. 20% of the profit normal rate of earnings.
Transfer to general reserve every year Rs. 20% of the profit normal rate of earnings 15 percent.

9. The following is the Balance sheet of Srinivasa co. Ltd for the year ending with 31st March, 2012

Liabilities	Amount	Assets	Amount
8% preference share capital at		Land &Buildings	2,50,000
Rs. 100 each	1,50,000	Plant & Machinery	70,000
3000 Equity shares at Rs 100	3,00,000	Furniture	18,000
Bank Overdraft	60,000	Goodwill	70,000
Sundry creditors	64,000	Cash in Hand	12,000
Profit & Loss Account	56,000	Cash at Bank	28,000
General Reserve	70,000	Sundry Debtors	90,000
		Stock in Trade	1,30,000
		Preliminary Expenses	12,000
		Discount on issue of shares	20,000
	7,00,000		7,00,000

Assets are revued as given below :

1.Land & Buildings Rs. 3,00,000, Plant & Machinery Rs.64,000 .depreciate furniture by 10%

2. Debtors are expected to realise at 80% and stock in Trade is Rs. 1,42,000

Find the value of equity share

UNIT V

10. Following is the Balance of BHANU Ltd. as on 31st March, 2013

Debit Balances	Rs	Credit Balances	Rs
Stock on 1-4-2012	75,000	Purchase returns	10,000
Purchases	2,45,000	Sales	3,40,000
Wages	30,000	Discount received	3,000
Carriage	950	Surplus A/c	15,000
Furniture	17,000	Share Capital	1,00,000
Salaries	7,500	Creditors	17,500
Rent	4,000	General reserve	15,500
Sundry Trade Expenses	16,950	Bills Payable	7,000
Debtors	27,500		
Plant and Machinery	29,000		
Cash at Bank	45,300		
Patents	4,800		
Bills receivable	5,000		
	5,08,000		5,08,000

Prepare Statement of Profit and Loss for the year ending 31st March, 2013 and a Balance Sheet on that date after considering the following adjustments:

(a) Stock on 31-3-2013 was ` 88,000.

(b) Depreciate Plant and Machinery at 15%, Furniture 10% and Patents at 5%

(c) Outstanding rent amounted to ` 800 and outstanding salaries ` 900.

(d) Provide ` 5100 for doubtful debts.

(e) The Board recommends payment of dividend @ 15% per annum.

(f) Transfer the minimum required amount to general reserve.

OR

11.Following are the balances of ABC Limited as on 31st March, 2013:

Debit	Rs	Credit	Rs
Premises	30,72,000	Equity Share Capital	40,00,000
Plant	33,00,000	12% Debentures	30,00,000
Stock	7,50,000	Surplus account	2,63,000
Debtors	8,70,000	Bills payable	3,70,000
Goodwill	2,50,000	Creditors	4,00,000
Bank	4,52,000	General Reserve	2,50,000
Cahs in Arrears	75,000	Sales	41,50,000
Interim Dividend paid	6,00,000	Bad Debts Provision	35,000
Purchases	18,50,000		
Wages	7,71,000		
General Expenses	74,000		
Salaries	2,03,000		
Bad debts	21,000		
Debenture Interest paid	1,80,000		
	1,24,68,000		1,24,68,000

Additional Information:

(1) Depreciation Plant by 10%

(2) Write off ` 5,000 from Preliminary Expenses.

(3) Half year's Debenture interest due.

(4) Create 5% provision on Debtors for doubtful debts.

(5) Provide for Income Tax @ 35%.

(6) Stock on 31st March, 2013 was ` 9,50,000.

(7) No final dividend is declared by the company.

(8) Ignore Corporate Dividend Tax.

(9) Transfer the minimum required amount to General Reserve.

SRI VENKATESWARA UNIVERSITY

II B.Com / B.A. / B.Sc (COMPUTER APPLICATIONS)

III SEMESTER – W.E.F. 2016-17

PROGRAMMING IN C

UNIT I

Introduction to Algorithms and Programming Languages: Algorithm – Key features of Algorithms – Some more Algorithms – Flow Charts – Pseudo code –Generation of Programming Languages – Structured Programming Language

Introduction to C: Introduction – Structure of C Program – Writing the first C Program – File used in C Program – Compiling and Executing C Programs – Using Comments – Keywords – Identifiers – Basic Data Types in C – Variables – Constants – I/O Statements in C- Operators in C- Programming Examples – Type Conversion and Type Casting.

UNIT II

Decision Control and Looping Statements: Introduction to Decision Control Statements – Conditional Branching Statements – Iterative Statements – Nested Loops – Break and Continue Statement – Goto Statement

Functions: Introduction – using functions – Function declaration/ prototype – Function definition – function call – return statement – Passing parameters – Scope of variables – Storage Classes – Recursive function

UNIT III

Arrays: Introduction – Declaration of Arrays – Accessing elements of the Array – Storing Values in Array – Calculating the length of the Array – Operations on Array – one dimensional array for inter-function communication – Two dimensional Arrays –Operations on Two Dimensional Arrays

Strings: Introduction String and Character functions

UNIT IV

Pointers: Understanding Computer Memory – Introduction to Pointers – declaring Pointer Variables – Pointer Expressions and Pointer Arithmetic – Null Pointers – Generic Pointers - Passing Arguments to Functions using Pointer – Pointer and Arrays – Passing Array to Function –

Structure, Union, and Enumerated Data Types: Introduction – Nested Structures – Arrays of Structures – Structures and Functions - Unions – Enumerated Data Types

UNIT V

Files: Introduction to Files – Using Files in C – Reading Data from Files – Writing Data from Files – Detecting the End-of-file –Close a file – Random Access Files – Binary Files – Command line arguments

REFERENCE BOOKS

1. Introduction to C programming by REEMA THAREJA from OXFORD UNIVERSITY PRESS
2. E Balagurusamy: ―COMPUTING FUNDAMENTALS & C PROGRAMMING – Tata McGraw-Hill, Second Reprint 2008, ISBN 978-0-07-066909-3.
3. Ashok N Kamthane: Programming with ANSI and Turbo C, Pearson Edition Publ, 2002.
4. Henry Mullish & Huubert L.Cooper: The Spirit of C An Introduction to modern Programming, Jaico Pub. House,1996.

MODEL QUESTION PAPER

B.Com. / B.A. / B.Sc. (COMPUTER APPLICATIONS): II YEAR – III SEMESTER

PROGRAMMING IN C

Time: 3 Hrs **Max. Marks: 75**

SECTION – A

1. Answer any 5 Questions : 5 x 3 =15 M

a) What are the types of Languages?

b) Define keyword.

c) Difference between Structure and Union.

d) Difference between while and do-while.

e) Explain getchar() and putchar() statements.

f) What is flowchart?

g) Explain any two bit-wise Operators.

h) File modes in 'C'.

i) Define null pointer.

j) What is C preprocessor ?

SECTION – B

Answer one question from each unit. Each carries equal marks: 5 x 12 = 60 M

UNIT- I

2. a. Explain algorithms with proper example.
   b. Define different categories of High-level Languages.

(or)

3. a. Explain the importance and uses of C-language.
   b. Expalin scanf() and printf statements.

UNIT- II

4. Define branching and iterative statements.

(or)

5. Describe recursive functions with suitable example.

UNIT- III

6. What is an array? Explain the types of arrays?

(or)

7. a. Explain any five string functions in C.
   b. Write a Program for string Palindrome.

UNIT- IV

8. What is pointer? How the pointer are illustrated in functions.

(or)

9. What is structure? How to create structure and explain with suitable example.

UNIT - V

10. Explain file management in 'C'

(or)

11. Explain the command-line arguments.

SRI VENKATESWARA UNIVERSITY : TIRUPATI

STATISTICS SYLLABUS (II YEAR)

SEMESTER – III (CBCS Non Maths Combination BA)

Paper – III : Statistical Methods

UNIT - I

Moments: Definition, Types of moments: Central and Non-central moments. Sheppard's Correction for moments. Skewness and Kurtosis : Definition, Types and its measures with simple problems

UNIT - II

Attributes: Notations, Class, Order of class frequencies, Ultimate class frequencies, Consistency of the data, Conditions for consistency of data for 2 and 3 attributes only , Independence of attributes , Association of attributes and its measures, Contingency table and its coefficients: Square contingency(χ^2), Mean square contingency(Φ^2), Coefficient of mean square contingency (C), Tschuprow's coefficient of contingency (τ^2).

UNIT – III

Curve fitting: Definition and Principals of least squares, Fitting of straight line ($y = a + b\,x$), Fitting of Second degree polynomial ($y = a + b\,x + c\,x^2$), Fitting of power curve ($y = a\,x^b$) and exponential curves of type i) $y = a\,e^{bx}$ and ii) $y = a\,b^x$ with problems.

UNIT - IV

Correlation: Definition, Types of Correlation. Measures of Correlation: Scatter diagram, Coefficient of correlation, Rank Correlation Coefficient (with and without ties). Linear Regression: Regression lines, Regression coefficients and its properties, Regressions lines for Un grouped data and simple problems(without proofs).

UNIT - V

Interpolation: Definition, Binomial expansion method and Graphic method. Methods of interpolation: Statement of Newton's forward formula, Newton's Backward formula, Lagrange's formula and simple problems on it.

Reference Books:

1. Fundamentals of mathematical statistics: S.C.Guptha and V.K. Kapoor
2. An outlines of statistics, Vol II: Goon Guptha, M.K.Guptha and Das Guptha B
3. Basic statistics By B.N Aggrawal
4. Statistical method by S.P. Gupta
5. Fundamentals of Statistics by S.C. Gupta
4. Statistical methods and inference BA/BSc II year statistics- Telugu Academy
5. Statistics Made simple Do it yourself on PC By K.V.S. Sarma
6. Applied Statistics with Microsoft Excel By Gerald Keller

30/1/2016

Practical Paper - III

1. Calculation of Central Moments
2. Calculation of Karlpearson's coefficient of skewness
3. Calculation of Bowley's Coefficient of skewness
4. Calculation of Correlation coefficient for un groped data
5. Calculation of Rank Correlation coefficient with ties for un grouped data
6. Calculation of Rank correlation coefficient without ties for un grouped data
7. Construction of two regressions lines for un grouped data
8. Fitting of straight line $y = a + b\,x$
9. Fitting of second degree polynomial or parabola $y = a + b\,x + c\,x^2$
10. Fitting of exponential curve $y = a\,e^{b\,x}$
11. Fitting of curve $y = a\,b^x$
12. Fitting of power curve $y = a\,x^b$
13. Calculation of Yule's coefficient of association and colligation
14. Calculation of Coefficient of mean square contingency (C), Tschuprow's coefficient of contingency (ι^2)**.**
15. Newton's forward formula
16. Newton's backward formula
17. Lagrange's formula

Note : The above practical are to be done using M S Excel and SPSS Package where ever it is possible

Recommended 30/1/2016

QP code: 1-3-121

THREE YEAR BA DEGREE EXIMATIONS

CBCS – THIRD SEMESTER

Part – II STATISTICS (Non - Maths)

Paper III : Random Variables and Probability Distributions

New Syllabus w.e.f.2015-16

Model Paper

Time : 3 hours **Max. Marks :75**

PART - A

Answer any FIVE questions, each question carries 5 marks **(5x5=25)**

1. Define probability density function (pdf).
2. Define the following terms
   a) Random Experiment b) Sample space c) Equally likely events.
3. Explain types of Random variable and its properties.
4. Define Mathematical Expectations and its properties
5. Define Moment generating function and its properties
6. Define poisson distribution and give its properties
7. Define Geometric distribution and also give its properties.
8. Give the applications of Normal distribution.

PART – B

Answer any ONE question from each unit, each question carries 10 Marks **(5x10=50)**

UNIT – I

9. State and prove Addition theorem on probability for two events.

(or)

10. A box contains 7 red, 3 green and 5 yellow balls, if 3 balls are drawn randomly from the box.
    Find the probability that drawn balls are of
    a) different colours b) red colour

UNIT – II

11. Explain the distribution Function and also give its properties.

(or)

12. A random variable (r.v) 'X' has the following probability function.

X:	0	1	2	3	4	5	6	7
P(X):	0	K	2k	2k	3k	K^2	$2K^2$	$7K^2+k$

a) find 'k' value and b) P(x<6)

Second 30/1/2016

UNIT – III

13. Explain MGF and CGF and also discuss the properties.

(or)

14. Find Mean 'E(X)' and Variance 'V(X)' for the following probability distribution.

X	0	1	2	3
P(X)	$\frac{1}{3}$	$\frac{1}{2}$	$\frac{1}{24}$	$\frac{1}{8}$

UNIT – IV

15. Define Binomial distribution and deduce Mean and Variance.

(or)

16. Define Poisson distribution and give its properties, applications

UNIT – V

17. Define Exponential distribution and derive its Mean and Variance.

(or)

18. Define Normal distribution and also give its properties, applications

Recd 30/1/2016

S.V. UNIVERSITY; TIRUPATI

B.Com (GENERAL) COURSE STRUCTURE

B.Com- SEMESTER – III – W.E.F. 2016-17

Sl. No.	Course	Name of the subject	Total Marks	Mid. Sem. Exam	Sem. End Exam	Teaching Hours	Credits
1.	First Language	English	100	25	75	4	3
2.	Second Language	(Tel / Hindi / Urdu / Sans)	100	25	75	4	3
3.	Foundation Course- 5	Entrepreneurship	50	---	50	2	2
4.	Foundation Course- 6	Communication & Soft Skills-2	50	---	50	2	2
5.	DSC 1C	Corporate Accounting	100	25	75	6	4
6.	DSC 2C	Business Statistics	100	25	75	6	4
7.	DSC 3C	Banking Theory and Practice	100	25	75	6	4
Total			**600**	**125**	**475**	**30**	**22**

II B.Com/B.Com(CA)/B.A (Accountancy)

1-3-101

DSC 1 C - CORPORATE ACCOUNTING

Unit-I:

Accounting for Share Capital - Issue, forfeiture and reissue of forfeited shares- concept & process of book building - Issue of rights – Buy back of shares (preparation of Journal only).

Unit-II:

Issue and Redemption of Debentures – Issue and redemption of debentures – Accounting Treatment for Convertible and Non-Convertible debentures sinking fund method only (preparation of Journal and Ledger).

Unit –III:

Valuation of Goodwill: Need and methods - Normal Profit Method, Super Profits Method – Capitalization Method, annuity method (including problems).

Unit - IV

Valuation of shares: Need for Valuation - Methods of Valuation - Net assets method, Yield basis method, Fair value method (including problems).

Unit –V

Provisions of the Companies Act, 2013 : Company final accounts - Preparation of Balance Sheet and Profit and Loss Account – Schedule-III – Adjustments relating to preparation of final Accounts.

Reference Books:

1. Modern Accounting: A. Mukherjee, M. Hanife Volume-II, McGraw Hill
2. Corporate Accounting – RL Gupta & Radha swami
3. Management Accounting: Shashi K. Gupta, R.K. Sharma, Kalyani Publishers.
4. Corporate Accounting – P.C. Tulsian
5. Advanced Accountancy: Jain and Narang
6. Advanced Accountancy : R.L. Gupta and M.Radhaswamy, S Chand.
7. Advanced Accountancy : Chakraborthy
8. Accounting standards and Corporate Accounting Practices: T.P. Ghosh Taxman
9. Corporate Accounting: S.N. Maheswari, S.R. Maheswari, Vikas Publishing House.
10. Advanced Accountancy: Arutanandam, Raman, Himalaya Publishing House.
11. Advanced Accounts: M.C. Shukla, T.S. Grewal, S.C. Gupta, S. Chand & Company Ltd.,

Sri Venkateswara University
Model Paper; DSC3B
II B.Com / B.A, Accountancy
Semester – III
CORPORATE ACCOUNTING

Answer any **Five** of the following Questions **(5 x 3 = 15 Marks)**

1. (a) Share Capital
   (b) Forfeiture of Shares
   (c) Debentures
   (d) Sinking fund
   (e) Super Profits
   (f) Methods of Valuations of Shares
   (g) Need for valuation of good will
   (h) Fair value method
   (i) Profit and Loss appropriation account
   (j) Companies Act 2013

UNIT I

2. A Ltd. Invited applications for 10,000 shares of Rs.100 each at a discount of 5 per cent payable as follows:

On application Rs.25; On allotment Rs.34; On first call and final call Rs.36.

The applications received were for 9,000 shares and all of these were accepted. All moneys due were received except the first and final call on 200 shares which were forfeited. 100 Shares were reissued @ Rs.90 as fully paid.

You are required to show journal entries in the books of the company.

3. A limited company issued a prospectus inviting applications for 2,000 shares of Rs.10 each at a premium of Rs.2 per share payable as follows:

On applications Rs.2; on allotment Rs.5 (including premium); on First Call Rs.3 and on Second Call Rs.2

Applications were received for 3,000 shares and allotments made pro-rata to the applicants for 2,400 shares, the remaining applications being refused. Money overpaid on application was employed on account of sums due on allotment.

X to whom 40 shares were allotted, failed to pay the allotment money and on his subsequent failure to pay the first call, his shares were forfeited. Y, the holder of 60 shares

failed to pay the two calls, and his shares were forfeited after the second call hand been made.

Of the shares forfeited, 80 shares were sold to Z, credited as fully paid, for Rs.9 per share, the whole of X's share being included.

Show journal and Cash Book entries.

UNIT II

4. Raghavendra Co. Ltd. offered 1000, 5% debentures of Rs 100 each. Pass necessary journal entries in the following cases.

a) Issued at par and redeemable at par.

b) Issued at 10% premium and redeemable at par.

c) Issued at 6% discount and redeemable at par.

d) Issued at par and redeemable at 10% premium.

e) Issued at 6% discount and redeemable at 10% premium.

OR

5. On 1st April 2009 Anuradha company issued 4000 debentures of Rs 100 at par, redeemable at par on 31st March, 2014. A sinking Fund was established for this purpose. It was expected that investments would earn 5% interest. Sinking Fund tables show that Rs 0.180975 amounts to Rs 1 at the end of 5th year @ 5%.

On 31st March, 2014 , the investments realized Rs 2,96,000. On that date the company's bank balance stood at Rs 1,45,000. The debentures were duly redeemed.

Prepare sinking Fund Account and sinking Fund Investments Account assuming that the investments were made to the nearest Rs 10.

UNIT III

6. The following particulars are available in respect of a business firm.

i. Average capital employed Rs. 50,000.
ii. Trading results: 2005 (Profit Rs. 12,200) 2006 (Profit Rs. 15,000) , 2007 (Rs. 2,000) and 2008 (Profit Rs. 21,000)
iii. Market rate of interest on investment at 8%.
iv. Rate of risk return on capital invested at 2%.
v. Remuneration of the proprietor Rs. 3,600 pa.

You are required to compute the value of Goodwill on the basis of 3 years purchase of super profit.

7. The following particulars are available in respect:

i. Profits earned in 2000-Rs.50,000, 2001-Rs.60,000 and 2002-Rs.55,000
ii. Normal rate of return 10%
iii. Capital employed Rs. 3,00,000
iv. Present value of annuity for 5 years at 10% is Rs. 3.78 in a Rupee.
v. The profit included non-recurring profit on an average basis of Rs. 4000 out of which it was deemed that even non-recurring profits had a tendency of appearing at Rs. 1000 pa.

You are required to calculate goodwill under the following methods.

- As per five years purchase of super profit.
- As per capitalization method.
- As per annuity method.

UNIT IV

8. The following details are extracted from the records of Gopi Co. Ltd. For the year ending 31.12.2010. You are required to calculate the value of equity share.

2000, 9% preference share of Rs. 100 each Rs,. 2,00,000
50,000 equity shares of Rs. 10 each, Rs. 8 per share paid Rs. 4,00,000
Expected profits per year before tax Rs. 2,18,000 rating tax 50 percent.
Transfer to general reserve every year Rs. 20% of the profit normal rate of earnings. Transfer to general reserve every year Rs. 20% of the profit normal rate of earnings 15 percent.

9. The following is the Balance sheet of Srinivasa co. Ltd for the year ending with 31st March, 2012

Liabilities	Amount	Assets	Amount
8% preference share capital at		Land &Buildings	2,50,000
Rs. 100 each	1,50,000	Plant & Machinery	70,000
3000 Equity shares at Rs 100	3,00,000	Furniture	18,000
Bank Overdraft	60,000	Goodwill	70,000
Sundry creditors	64,000	Cash in Hand	12,000
Profit & Loss Account	56,000	Cash at Bank	28,000
General Reserve	70,000	Sundry Debtors	90,000
		Stock in Trade	1,30,000
		Preliminary Expenses	12,000
		Discount on issue of shares	20,000
	7,00,000		7,00,000
	---		---

Assets are revued as given below :

1.Land & Buildings Rs. 3,00,000, Plant & Machinery Rs.64,000 .depreciate furniture by 10%

2. Debtors are expected to realise at 80% and stock in Trade is Rs. 1,42,000

Find the value of equity share

UNIT V

10. Following is the Balance of BHANU Ltd. as on 31st March, 2013

Debit Balances	Rs	Credit Balances	Rs
Stock on 1-4-2012	75,000	Purchase returns	10,000
Purchases	2,45,000	Sales	3,40,000
Wages	30,000	Discount received	3,000
Carriage	950	Surplus A/c	15,000
Furniture	17,000	Share Capital	1,00,000
Salaries	7,500	Creditors	17,500
Rent	4,000	General reserve	15,500
Sundry Trade Expenses	16,950	Bills Payable	7,000
Debtors	27,500		
Plant and Machinery	29,000		
Cash at Bank	45,300		
Patents	4,800		
Bills receivable	5,000		
	5,08,000		5,08,000

Prepare Statement of Profit and Loss for the year ending 31st March, 2013 and a Balance Sheet on that date after considering the following adjustments:

(a) Stock on 31-3-2013 was ` 88,000.

(b) Depreciate Plant and Machinery at 15%, Furniture 10% and Patents at 5%

(c) Outstanding rent amounted to ` 800 and outstanding salaries ` 900.

(d) Provide ` 5100 for doubtful debts.

(e) The Board recommends payment of dividend @ 15% per annum.

(f) Transfer the minimum required amount to general reserve.

OR

11.Following are the balances of ABC Limited as on 31st March, 2013:

Debit	Rs	Credit	Rs
Premises	30,72,000	Equity Share Capital	40,00,000
Plant	33,00,000	12% Debentures	30,00,000
Stock	7,50,000	Surplus account	2,63,000
Debtors	8,70,000	Bills payable	3,70,000
Goodwill	2,50,000	Creditors	4,00,000
Bank	4,52,000	General Reserve	2,50,000
Cahs in Arrears	75,000	Sales	41,50,000
Interim Dividend paid	6,00,000	Bad Debts Provision	35,000
Purchases	18,50,000		
Wages	7,71,000		
General Expenses	74,000		
Salaries	2,03,000		
Bad debts	21,000		
Debenture Interest paid	1,80,000		
	1,24,68,000		1,24,68,000

Additional Information:

(1) Depreciation Plant by 10%

(2) Write off ` 5,000 from Preliminary Expenses.

(3) Half year's Debenture interest due.

(4) Create 5% provision on Debtors for doubtful debts.

(5) Provide for Income Tax @ 35%.

(6) Stock on 31st March, 2013 was ` 9,50,000.

(7) No final dividend is declared by the company.

(8) Ignore Corporate Dividend Tax.

(9) Transfer the minimum required amount to General Reserve.

DSC 2C - BUSINESS STATISTICS

Unit I:

Introduction to Statistics: Definition, importance and limitations of statistics - Collection of data - Frequency distribution -Diagrammatic and graphic presentation of data. Graphic presentation using Computers (Excel).

Unit II:

Measures of Central Tendency: Characteristics of measures of Central Tendency-Types of Averages – Arithmetic Mean, Geometric Mean, Harmonic Mean, Median, Mode, Deciles, Percentiles, Properties of averages and their applications.

Unit III:

Measures of dispersion: Properties of dispersion-Range-Quartile Deviation –Mean Deviation-Standard Deviation- Coefficient of Variation.

Unit IV:

Measuring of Relation Meaning and use of correlation – Types of correlation- Karlpearson's correlation coefficient – Spearman's Rank correlation-probable error-Calculation of Correlation by Using Computers. Regression analysis comparison between correlation and Regression – Regression Equations-Interpretation of Regression Co-efficient.

Unit V:

Index Numbers: Index Numbers-Methods of Construction of Index Numbers – Price Index Numbers – Quantity Index Numbers –Tests of Adequacy of Index Numbers – Cost of Index Numbers-Limitations of Index Numbers – Use of Computer Software.

Suggested Readings:

1. Business Statistics — K.Alagar; McGraw Hill
2. Business Statistics — Reddy, C.R Deep Publications.
3. Statistics-Problems and Solutions — Kapoor V.K.
4. Fundamentals of Statistics — Elhance.D.N
5. Statistical Methods — Gupta S.P
6. Statistics — Gupta B.N.
7. Fundamentals of Statistics — Gupta S.C
8. Statistics-Theory, Methods and Applications — Sancheti,D.C. &Kapoor V.K
9. Business Statistics — J.K.Sharma
10. Business Statistics — Bharat Jhunjhunwala
11. Business Statistics — R.S.Bharadwaj

SRI VENKATESWARA UNIVERSITY
Model Paper
II B.Com - Semester – III
BUSINESS STATISTICS

Time : 3 Hours Max. Marks : 75

Section A

Answer any **Five** of the following Questions **(5 x 3 = 15 Marks)**

1. (a) Meaning of statistics.
(b) Primary data.
(c) Frequency distribution.
(d) Compute Harmonic Mean
X: 35,45,89,76,87,52,60
(e) Qualities of good average
(e) Correlation co-efficient
(f) Range
(g) Methods of measuring Dispersion
(h) Index Numbers.
(i) X = 100, Median = 100, Find Z.

Section - B

Answer any ONE Question from each unit. **(5 X12 = 60 Marks)**

UNIT I

2. Prepare frequency distribution table with the starting class 5-10 and all classes with the same width 5. The values are

.

12	19	26	36	27	37	40	15	6	16
21	5	10	33	20	10	45	30	19	7
37	20	19	17	28	20	11	30	26	20

3. Draw Histogram and find mode.

Class	0-10	10-20	20-30	30-40	40-50	50-60	60-70
F	4	5	10	20	9	6	6

UNIT – II

4. Calculate Mean, Median for the following data

C.I	10-20	20-30	30-40	40-50	50-60	60-70	70-80
Frequency	12	30	34	65	45	25	18

OR

5. Calculate Mode for the data given below

X	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80
F	8	10	20	29	37	18	9	6

UNIT – III

6. Calculate Mean Deviation from median for the following data

C.I	50-100	100-150	150-200	200-250	250-300	300-350	350-400
F	5	5	8	2	10	7	2

OR

7. Calculate Quartile Deviation for the following data

X	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45
Y	5	5	8	2	10	7	2	1

UNIT – IV

8. Calculate Karl Pearsons Correlation co-efficient and probable error for the following data

X	9	8	7	6	5	4	3
Y	15	16	14	13	11	12	10

OR

9. Find the Rank Correlation co-efficient for the following data

x	48	60	72	62	56	40	39
Y	62	78	65	70	38	54	60

UNIT – V

10. From the fixed base index numbers given below, construct chain base index number:

Year	2008	2009	2010	2011	2012	2013
Items	52	70	65	80	86	90

OR

11. From the following data construct Fishers Ideal Index Number

Items	Base		Current	
	Price	Value	Price	Value
P	4	80	10	150
Q	8	32	16	80
R	2	20	4	48
S	10	50	20	120

2-3-103

DSC 3C - BANKING THEORY & PRACTICE

Unit-I: Introduction

Meaning & Definition of Bank – Functions of Commercial Banks – Kinds of Banks - Central Banking Vs. Commercial Banking.

Unit-II: Banking Systems

Unit Banking , Branch Banking, Investment Banking- Innovations in banking – E banking - Online and Offshore Banking, Internet Banking - Anywhere Banking - ATMs - RTGS.

Unit-III: Banking Development

Indigenous Banking - Cooperative Banks, Regional Rural banks, SIDBI, NABARD - EXIM Bank.

Unit-IV: Banker and Customer

Meaning and Definition of Banker and customer – Types of Customers - General Relationship and Special Relationship between Banker and Customer - KYC Norms.

Unit-V: Collecting Banker and Paying Banker

Concepts - Duties & Responsibilities of Collecting Banker – Holder for Value – Holder in Due Course – Statutory Protection to Collecting Banker - Responsibilities of Paying Banker - Payment Gateways.

Books for Reference

1. Banking Theory: Law & Practice : Dr. Guruswami; McGraw Hill Company Ltd.
2. Banking Theory: Law & Practice :K P M Sundram and V L Varsheney
2. Banking Theory, Law and Practice : B. Santhanam; Margam Publications
3. Banking and Financial Systems : Aryasri
4. .Introduction to Banking : Vijaya Raghavan
5. Indian Financial System : M.Y.Khan
6. Indian Financial System : Murthy & Venugopal

Sri Venkateswara University
MODEL PAPER
II B.Com - Semester – III
BANKING THEORY & PRACTICE

Time : 3 Hours Max. Marks : 75

Section A

Answer any **Five** of the following Questions **(5 x 3 = 15 Marks)**

1. (a) Features of Bank
   (b) Kinds of Banks
   (c) Types of Deposits
   (d) Internet Banking
   (e) Investment Banking
   (f) ATM
   (g) Co-operative Banks
   (h) EXIM Bank
   (i) Types of Customers
   (j) Holder in due course

Section - B

Answer any ONE Question from each unit. (5 ×12 = 60 Marks)

UNIT I

2. What are the various functions of Commercial Banks?
3. Distinguish between Commercial Bank and Central Bank?

UNIT – II

4. What are advantages and disadvantages of Unit and Branch Banking?
5. Explain the main role of e-banking.

UNIT – III

6. What are the functions of Indigenous Banking?
7. What are the functions of Regional Rural Bank?

UNIT – IV

8. Define banker and customer. Explain the different types of customers.
9. Explain the general and special relationship of banker and customer.

UNIT – V

10. What are the duties and responsibilities of Collecting Banker?
11. What are the duties and responsibilities of Paying Banker?

S.V. UNIVERSITY; TIRUPATI

B.Com (CA)- SEMESTER – III- W.E.F. 2016-17

Sl. No.	Course	Name of the subject	Total Marks	Mid. Sem. Exam	Sem. End Exam	Teaching Hours**	Credits
1.	First Language	English	100	25	75	4	3
2.	Second Language	(Tel/Hindi/Urdu/Sans)	100	25	75	4	3
3.	Foundation Course- 5	Entrepreneurship	50	---	50	2	2
4.	Foundation Course- 6	Communication & Soft Skills-2	50	---	50	2	2
5.	DSC 1 C	Corporate Accounting	100	25	75	6	4
6.	DSC 2 C	Business Statistics	100	25	75	6	4
7.	DSC 3 C	Programing in C	100	25	75	4	4
		Practical's	50		50	2	2
Total			**650**	**125**	**525**	**30**	**24**

1-3-101

DSC 1 C - CORPORATE ACCOUNTING

Unit-I:

Accounting for Share Capital - Issue, forfeiture and reissue of forfeited shares- concept & process of book building - Issue of rights – Buy back of shares (preparation of Journal only).

Unit-II:

Issue and Redemption of Debentures – Issue and redemption of debentures – Accounting Treatment for Convertible and Non-Convertible debentures sinking fund method only (preparation of Journal and Ledger).

Unit –III:

Valuation of Goodwill: Need and methods - Normal Profit Method, Super Profits Method – Capitalization Method, annuity method (including problems).

Unit - IV

Valuation of shares: Need for Valuation - Methods of Valuation - Net assets method, Yield basis method, Fair value method (including problems).

Unit –V

Provisions of the Companies Act, 2013 : Company final accounts - Preparation of Balance Sheet and Profit and Loss Account – Schedule-III – Adjustments relating to preparation of final Accounts.

Reference Books:

1. Modern Accounting: A. Mukherjee, M. Hanife Volume-II, McGraw Hill
2. Corporate Accounting – RL Gupta & Radha swami
3. Management Accounting: Shashi K. Gupta, R.K. Sharma, Kalyani Publishers.
4. Corporate Accounting – P.C. Tulsian
5. Advanced Accountancy: Jain and Narang
6. Advanced Accountancy : R.L. Gupta and M.Radhaswamy, S Chand.
7. Advanced Accountancy : Chakraborthy
8. Accounting standards and Corporate Accounting Practices: T.P. Ghosh Taxman
9. Corporate Accounting: S.N. Maheswari, S.R. Maheswari, Vikas Publishing House.
10. Advanced Accountancy: Arutanandam, Raman, Himalaya Publishing House.
11. Advanced Accounts: M.C. Shukla, T.S. Grewal, S.C. Gupta, S. Chand & Company Ltd.,

SRI VENKATESWARA UNIVERSITY
MODEL PAPER
II B.Com; B.Com (CA) / B.A, Accountancy
Semester – III,
CORPORATE ACCOUNTING

Answer any **Five** of the following Questions **(5 x 3 = 15 Marks)**

1. (a) Share Capital
   (b) Forfeiture of Shares
   (c) Debentures
   (d) Sinking fund
   (e) Super Profits
   (f) Methods of Valuations of Shares
   (g) Need for valuation of good will
   (h) Fair value method
   (i) Profit and Loss appropriation account
   (j) Companies Act 2013

UNIT I

2. A Ltd. Invited applications for 10,000 shares of Rs.100 each at a discount of 5 per cent payable as follows:

On application Rs.25; On allotment Rs.34; On first call and final call Rs.36.

The applications received were for 9,000 shares and all of these were accepted. All moneys due were received except the first and final call on 200 shares which were forfeited. 100 Shares were reissued @ Rs.90 as fully paid.

You are required to show journal entries in the books of the company.

3. A limited company issued a prospectus inviting applications for 2,000 shares of Rs.10 each at a premium of Rs.2 per share payable as follows:

On applications Rs.2; on allotment Rs.5 (including premium); on First Call Rs.3 and on Second Call Rs.2

Applications were received for 3,000 shares and allotments made pro-rata to the applicants for 2,400 shares, the remaining applications being refused. Money overpaid on application was employed on account of sums due on allotment.

X to whom 40 shares were allotted, failed to pay the allotment money and on his subsequent failure to pay the first call, his shares were forfeited. Y, the holder of 60 shares failed to pay the two calls, and his shares were forfeited after the second call hand been made.

Of the shares forfeited, 80 shares were sold to Z, credited as fully paid, for Rs.9 per share, the whole of X's share being included.

Show journal and Cash Book entries.

UNIT II

4. Raghavendra Co. Ltd. offered 1000, 5% debentures of Rs 100 each. Pass necessary journal entries in the following cases.

a) Issued at par and redeemable at par.

b) Issued at 10% premium and redeemable at par.

c) Issued at 6% discount and redeemable at par.

d) Issued at par and redeemable at 10% premium.

e) Issued at 6% discount and redeemable at 10% premium.

OR

5. On 1st April 2009 Anuradha company issued 4000 debentures of Rs 100 at par, redeemable at par on 31st March, 2014. A sinking Fund was established for this purpose. It was expected that investments would earn 5% interest. Sinking Fund tables show that Rs 0.180975 amounts to Rs 1 at the end of 5th year @ 5%.

On 31st March, 2014 , the investments realized Rs 2,96,000. On that date the company's bank balance stood at Rs 1,45,000. The debentures were duly redeemed.

Prepare sinking Fund Account and sinking Fund Investments Account assuming that the investments were made to the nearest Rs 10.

UNIT III

6. The following particulars are available in respect of a business firm.

i. Average capital employed Rs. 50,000.
ii. Trading results: 2005 (Profit Rs. 12,200) 2006 (Profit Rs. 15,000) , 2007 (Rs. 2,000) and 2008 (Profit Rs. 21,000)
iii. Market rate of interest on investment at 8%.
iv. Rate of risk return on capital invested at 2%.
v. Remuneration of the proprietor Rs. 3,600 pa.

You are required to compute the value of Goodwill on the basis of 3 years purchase of super profit.

7. The following particulars are available in respect:

i. Profits earned in 2000-Rs.50,000, 2001-Rs.60,000 and 2002-Rs.55,000

ii. Normal rate of return 10%
iii. Capital employed Rs. 3,00,000
iv. Present value of annuity for 5 years at 10% is Rs. 3.78 in a Rupee.
v. The profit included non-recurring profit on an average basis of Rs. 4000 out of which it was deemed that even non-recurring profits had a tendency of appearing at Rs. 1000 pa.

You are required to calculate goodwill under the following methods.

- As per five years purchase of super profit.
- As per capitalization method.
- As per annuity method.

UNIT IV

8. The following details are extracted from the records of Gopi Co. Ltd. For the year ending 31.12.2010. You are required to calculate the value of equity share.

2000, 9% preference share of Rs. 100 each Rs,. 2,00,000
50,000 equity shares of Rs. 10 each, Rs. 8 per share paid Rs. 4,00,000
Expected profits per year before tax Rs. 2,18,000 rating tax 50 percent.
Transfer to general reserve every year Rs. 20% of the profit normal rate of earnings.
Transfer to general reserve every year Rs. 20% of the profit normal rate of earnings 15 percent.

9. The following is the Balance sheet of Srinivasa co. Ltd for the year ending with 31st March, 2012

Liabilities	Amount	Assets	Amount
8% preference share capital		Land &Buildings	2,50,000
at Rs. 100 each	1,50,000	Plant & Machinery	70,000
3000 Equity shares at Rs	3,00,000	Furniture	18,000
100	60,000	Goodwill	70,000
Bank Overdraft	64,000	Cash in Hand	12,000
Sundry creditors	56,000	Cash at Bank	28,000
Profit & Loss Account	70,000	Sundry Debtors	90,000
General Reserve		Stock in Trade	1,30,000
		Preliminary Expenses	12,000
		Discount on issue of	20,000
	7,00,000	shares	7,00,000
	---		---

Assets are revued as given below :

1.Land & Buildings Rs. 3,00,000, Plant & Machinery Rs.64,000 .depreciate furniture by 10%

2. Debtors are expected to realise at 80% and stock in Trade is Rs. 1,42,000

Find the value of equity share

UNIT V

10. Following is the Balance of BHANU Ltd. as on 31st March, 2013

Debit Balances	Rs	Credit Balances	Rs
Stock on 1-4-2012	75,000	Purchase returns	10,000
Purchases	2,45,000	Sales	3,40,000
Wages	30,000	Discount received	3,000
Carriage	950	Surplus A/c	15,000
Furniture	17,000	Share Capital	1,00,000
Salaries	7,500	Creditors	17,500
Rent	4,000	General reserve	15,500
Sundry Trade Expenses	16,950	Bills Payable	7,000
Debtors	27,500		
Plant and Machinery	29,000		
Cash at Bank	45,300		
Patents	4,800		
Bills receivable	5,000		
	5,08,000		5,08,000

Prepare Statement of Profit and Loss for the year ending 31st March, 2013 and a Balance Sheet on that date after considering the following adjustments:

(a) Stock on 31-3-2013 was ` 88,000.
(b) Depreciate Plant and Machinery at 15%, Furniture 10% and Patents at 5%
(c) Outstanding rent amounted to ` 800 and outstanding salaries ` 900.
(d) Provide ` 5100 for doubtful debts.
(e) The Board recommends payment of dividend @ 15% per annum.
(f) Transfer the minimum required amount to general reserve.

OR

11.Following are the balances of ABC Limited as on 31st March, 2013:

Debit	Rs	Credit	Rs
Premises	30,72,000	Equity Share Capital	40,00,000
Plant	33,00,000	12% Debentures	30,00,000
Stock	7,50,000	Surplus account	2,63,000
Debtors	8,70,000	Bills payable	3,70,000
Goodwill	2,50,000	Creditors	4,00,000
Bank	4,52,000	General Reserve	2,50,000
Cahs in Arrears	75,000	Sales	41,50,000
Interim Dividend paid	6,00,000	Bad Debts Provision	35,000
Purchases	18,50,000		
Wages	7,71,000		
General Expenses	74,000		
Salaries	2,03,000		
Bad debts	21,000		
Debenture Interest paid	1,80,000		
	1,24,68,000		1,24,68,000

Additional Information:

(1) Depreciation Plant by 10%
(2) Write off ` 5,000 from Preliminary Expenses.
(3) Half year's Debenture interest due.

(4) Create 5% provision on Debtors for doubtful debts.
(5) Provide for Income Tax @ 35%.
(6) Stock on 31st March, 2013 was ` 9,50,000.
(7) No final dividend is declared by the company.
(8) Ignore Corporate Dividend Tax.
(9) Transfer the minimum required amount to General Reserve.

II B.Com/B.Com(CA)

2-3-101

DSC 2C - BUSINESS STATISTICS

Unit I:

Introduction to Statistics: Definition, importance and limitations of statistics - Collection of data - Frequency distribution -Diagrammatic and graphic presentation of data. Graphic presentation using Computers (Excel).

Unit II:

Measures of Central Tendency: Characteristics of measures of Central Tendency-Types of Averages – Arithmetic Mean, Geometric Mean, Harmonic Mean, Median, Mode, Deciles, Percentiles, Properties of averages and their applications.

Unit III:

Measures of dispersion: Properties of dispersion-Range-Quartile Deviation –Mean Deviation-Standard Deviation- Coefficient of Variation.

Unit IV:

Measuring of Relation Meaning and use of correlation – Types of correlation- Karlpearson's correlation coefficient – Spearman's Rank correlation-probable error-Calculation of Correlation by Using Computers. Regression analysis comparison between correlation and Regression – Regression Equations-Interpretation of Regression Co-efficient.

Unit V:

Index Numbers: Index Numbers-Methods of Construction of Index Numbers – Price Index Numbers – Quantity Index Numbers –Tests of Adequacy of Index Numbers – Cost of Index Numbers-Limitations of Index Numbers – Use of Computer Software.

Suggested Readings:

1. Business Statistics — K.Alagar; McGraw Hill
2. Business Statistics — Reddy, C.R Deep Publications.
3. Statistics-Problems and Solutions — Kapoor V.K.
4. Fundamentals of Statistics — Elhance.D.N
5. Statistical Methods — Gupta S.P
6. Statistics — Gupta B.N.
7. Fundamentals of Statistics — Gupta S.C
8. Statistics-Theory, Methods and Applications — Sancheti,D.C. &Kapoor V.K
9. Business Statistics — J.K.Sharma
10. Business Statistics — Bharat Jhunjhunwala
11. Business Statistics — R.S.Bharadwaj

SRI VENKATESWARA UNIVERSITY
MODEL PAPER
II B.Com; B.Com (CA)- Semester – III
BUSINESS STATISTICS

Time : 3 Hours Max. Marks : 75

Section-A

Answer any **Five** of the following Questions **(5 x 3 = 15 Marks)**

1. (a) Meaning of statistics.
(b) Primary data.
(c) Frequency distribution.
(d) Compute Harmonic Mean
X: 35,45,89,76,87,52,60
(e) Qualities of good average
(e) Correlation co-efficient
(f) Range
(g) Methods of measuring Dispersion
(h) Index Numbers.
(i) X = 100, Median = 100, Find Z.

Section - B

Answer any ONE Question from each unit. (5 X12 = 60 Marks)

UNIT I

2. Prepare frequency distribution table with the starting class 5-10 and all classes with the same width 5. The values are

.

12	19	26	36	27	37	40	15	6	16
21	5	10	33	20	10	45	30	19	7
37	20	19	17	28	20	11	30	26	20

3. Draw Histogram and find mode.

Class	0-10		10-20	20-30	30-40	40-50	50-60	60-70
F	4	5	10	20	9	6	6	

UNIT – II

4. Calculate Mean, Median for the following data

C.I	10-20	20-30	30-40	40-50	50-60	60-70	70-80
Frequency	12	30	34	65	45	25	18

OR

5. Calculate Mode for the data given below

X	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80
F	8	10	20	29	37	18	9	6

UNIT – III

6. Calculate Mean Deviation from median for the following data

C.I	50-100	100-150	150-200	200-250	250-300	300-350	350-400
F	5	5	8	2	10	7	2

OR

7. Calculate Quartile Deviation for the following data

X	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45
Y	5	5	8	2	10	7	2	1

UNIT – IV

8. Calculate Karl Pearsons Correlation co-efficient and probable error for the following data

X	9	8	7	6	5	4	3
Y	15	16	14	13	11	12	10

OR

9. Find the Rank Correlation co-efficient for the following data

x	48	60	72	62	56	40	39
Y	62	78	65	70	38	54	60

UNIT – V

10. From the fixed base index numbers given below, construct chain base index number:

Year	2008	2009	2010	2011	2012	2013
Items	52	70	65	80	86	90

OR

11. From the following data construct Fishers Ideal Index Number

Items	Base		Current	
	Price	Value	Price	Value
P	4	80	10	150
Q	8	32	16	80
R	2	20	4	48
S	10	50	20	120

1-3-106

DSC3C: PROGRAMMING IN C

UNIT I

Introduction to Algorithms and Programming Languages: Algorithm – Key features of Algorithms – Some more Algorithms – Flow Charts – Pseudo code –Generation of Programming Languages – Structured Programming Language

Introduction to C: Introduction – Structure of C Program – Writing the first C Program – File used in C Program – Compiling and Executing C Programs – Using Comments – Keywords – Identifiers – Basic Data Types in C – Variables – Constants – I/O Statements in C- Operators in C- Programming Examples – Type Conversion and Type Casting.

UNIT II

Decision Control and Looping Statements: Introduction to Decision Control Statements – Conditional Branching Statements – Iterative Statements – Nested Loops – Break and Continue Statement – Goto Statement

Functions: Introduction – using functions – Function declaration/ prototype – Function definition – function call – return statement – Passing parameters – Scope of variables – Storage Classes – Recursive function

UNIT III

Arrays: Introduction – Declaration of Arrays – Accessing elements of the Array – Storing Values in Array – Calculating the length of the Array – Operations on Array – one dimensional array for inter-function communication – Two dimensional Arrays –Operations on Two Dimensional Arrays

Strings: Introduction String and Character functions

UNIT IV

Pointers: Understanding Computer Memory – Introduction to Pointers – declaring Pointer Variables – Pointer Expressions and Pointer Arithmetic – Null Pointers – Generic Pointers - Passing Arguments to Functions using Pointer – Pointer and Arrays – Passing Array to Function –

Structure, Union, and Enumerated Data Types: Introduction – Nested Structures – Arrays of Structures – Structures and Functions - Unions – Enumerated Data Types

UNIT V

Files: Introduction to Files – Using Files in C – Reading Data from Files – Writing Data from Files – Detecting the End-of-file –Close a file – Random Access Files – Binary Files – Command line arguments

REFERENCE BOOKS

1. Introduction to C programming by REEMA THAREJA from OXFORD UNIVERSITY PRESS
2. E Balagurusamy: ―COMPUTING FUNDAMENTALS & C PROGRAMMING – Tata McGraw-Hill, Second Reprint 2008, ISBN 978-0-07-066909-3.
3. Ashok N Kamthane: Programming with ANSI and Turbo C, Pearson Edition Publ, 2002.
4. Henry Mullish & Huubert L.Cooper: The Spirit of C An Introduction to modern Programming, Jaico Pub. House,1996.

MODEL QUESTION PAPER

B.COM.(COMPUTER APPLICATIONS): II YEAR – III SEMESTER

DSC3C: PROGRAMMING IN C

Time: 3 Hrs **Max. Marks: 75**

SECTION – A

1. Answer any 5 Questions : **5 x 3 =15 M**

a) What are the types of Languages?

b) Define keyword.

c) Difference between Structure and Union.

d) Difference between while and do-while.

e) Explain getchar() and putchar() statements.

f) What is flowchart?

g) Explain any two bit-wise Operators.

h) File modes in 'C'.

i) Define null pointer.

j) What is C preprocessor ?

SECTION – B

Answer one question from each unit. Each carries equal marks: **5 x 12 = 60 M**

UNIT- I

2. a. Explain algorithms with proper example.
   b. Define different categories of High-level Languages.

(or)

3. a. Explain the importance and uses of C-language.
   b. Expalin scanf() and printf statements.

UNIT- II

4. Define branching and iterative statements.

(or)

5. Describe recursive functions with suitable example.

UNIT- III

6. What is an array? Explain the types of arrays?

(or)

7. a. Explain any five string functions in C.
   b. Write a Program for string Palindrome.

UNIT- IV

8. What is pointer? How the pointer are illustrated in functions.

(or)

9. What is structure? How to create structure and explain with suitable example.

UNIT - V

10. Explain file management in 'C'

(or)

11. Explain the command-line arguments.

BSC II SEMESTER III

BIOTECHNOLOGY – W.E.F.2016-17

BT 301: BIOPHYSICAL TECHNIQUES

UNIT – I:

Spectrophotometry: Concept of electromagnetic radiation, spectrum of light, absorption of electromagnetic radiations, Concept of chromophores and auxochromes, involvement of orbitals in absorption of electromagnetic radiations, Absorption spectrum and its uses, Beer's law - derivation and deviations, extinction coefficient. Difference between spectrophotometer and colorimeter. Instrumentation of UV and visible spectrophotometry Double beam spectrometer; dual-wavelength spectrometer

a) Applications of UV and visible spectrophotometry.
b) Spectrofluorometry: principle, instrumentation and applications. Absorption & emission flame photometry: principle, instrumentation and application.
c) Principles of IR and Mass spectrometry

UNIT II:

Chromatography: Partition principle, partition coefficient, nature of partition forces, brief account of paper chromatography.

Thin layer chromatography and column chromatography.

Gel filtration: Concept of distribution coefficient, types of gels and glass beads, applications.

Ion-exchange chromatography: Principle, types of resins, choice of buffers, applications including amino acid analyzer.

Affinity chromatography: Principle, selection of ligand, brief idea of ligand attachment, specific and non-specific elution, applications.

Elements of high pressure liquid chromatography.

UNIT III

a) Migration of ions in electric field, Factors affecting electrophoretic mobility.
b) Paper electrophoresis: - Electrophoretic run, Detection techniques, Cellulose acetate electrophoresis, High voltage electrophoresis.
c) Gel electrophoresis: - Types of gels, Solubilizers, Procedure, Column & slab gels, Detection, Recovery & Estimation of macromolecules.

d) SDS-PAGE Electrophoresis: - applications (determination of molecular weight of proteins, determination of subunit stoichiometry, molecular biology applications).

e) Isoelectric focussing, Principle, Establishing pH amd density gradients, Procedures & applications. f) Pulsed-field gel electrophoresis.

UNIT – IV:

Isotopic tracer technique: -

a) Radioactive & stable isotopes, rate of radioactive decay. Units of radioactivity.

b) Measurement of radioactivity: - Ionization chambers, proportional counters, Geiger- Muller counter, Solid and liquid scintillation counters (basic principle, instrumentation and technique), Cerenkov radiation.

c) Principles of tracer technique, advantages and limitations, applications of isotopes in biotechnology istribution studies, metabolic studies, isotope dilution technique, metabolic studies, clinical applications, autoradiography.

UNIT V

Centrifugati

on:

a) Basic principles, concept of RCF, types of centrifuges (clinical, high speed and ultracentrifuges).

b) Preparative centrifugation: Differential and density gradient centrifugation, applications (Isolation of cell components).

c) Analytical centrifugation: Sedimentation coefficient, determination of molecular weight by sedimentation velocity and sedimentation equilibrium methods.

Biostatistics

Basic concepts of mean, median, mode, Standard deviation and Standard error

B.Sc. II SEMESTER III PRACTICALS

BIOTECHNOLOGY

BT302: BIOCHEMISTRY & BIOPHYSICAL TECHNIQUES

1. Spectrophotometric analysis of DNA denaturation.

2. Determination of absorption spectrum of oxy- and deoxyhemoglobin and methemoglobin. 3. Protein estimation by E280/E260 method.

4. Paper chromatography of amino acids/sugars. 5. TLC of sugars/amino acids.

6. Cellular fractionation and separation of cell organelles using centrifuge. 7. Isolation of mitochondria and assay of marker enzyme.

8. Estimation of Urea by diacetyle monoxime method 9. Estimation of Sugars by Folin Wu method

10. Validity of Beer's law for colorimetric estimation of creatinine. 11. Absorption spectrum of NAD & NADH

12. Preparation of standard buffers and determination of pH of a solution 13. Titration of a mixture of strong & weak acid

14. Paper electrophoresis of proteins

15. Gel electrophoresis of proteins.

16. SDS-PAGE of an oligomeric protein.

17. Calculation of mean, median, and mode (manual/computer aided).

18. Calculation of standard deviation and standard error (manual/computer aided). 19. Biostatistical problem based on standard deviation.

Note: - Mandatory to perform atleast 10 practicals

BSc II BIOTECHNOLOGY
SEMESTER III
MODEL QUESTION PAPER
COURSE CODE: BT 301
COURSE NAME: Biophysical techniques

Time 3 Hrs Marks 75

Attempt any *five* questions from Part A and *all* questions from Part B

PART A (5x3=15 Marks)

Note: At least one question must be set from each UNIT

1. Define Beer's law
2. Partition coefficient
3. Nature of resin
4. Principle of pressure pump
5. Concept of RCF
6. Half life
7. Tracer technique advantages
8. Svedberg unit

PART B (5x12=60 Marks)

Answer the following

9 (a) Describe the layout, principle and applications of Mass spectrophotometer.

Or

(b). Describe the layout, principle and applications of UV/VIS spectrophotometer

10 (a) Discuss the principle of gel permeation and add note on its advantages.

Or

(b) Explain the principle of thin layer chromatography and add note on Rf values.

11 (a) Define electrophoresis. Add note on paper electrophoresis and its applications.

Or

(b) What are the methods used to determine the pI values. Explain the techniques related to it.

12 (a) What are the precautions one has to take in while he is in Radioactive laboratory.

Or

(b) Discuss in detail on the principles and functioning of LSC.

13 (a) What is meant by centrifugation? Explain the mechanics involved in preparative centrifugation.

Or

(b) What are methods used to determine the molecular weight of proteins? Discuss any one method.

3-3-103

BOTANY

II B. Sc - SEMESTER –III – W.E.F.2016-17

(Paper-DSC IIA : Plant Taxonomy and Embryology)
Total hours of teaching 60hrs @ 4 hrs per week

UNIT – I: INTRODUCTION TO PLANT TAXONOMY (12hrs)

1.Fundamental components of taxonomy (identification, nomenclature, classification)

2. Taxonomic resources: Herbarium- functions& important herbaria, Botanical gardens, Flora, Keys- single access and multi-access.

3. Botanical Nomenclature- Principles and rules of ICBN (ranks and names; principle of priority, binomial system; type method, author citation, valid-publication).

UNIT – II: CLASSIFICATION (12 hrs)

1. Types of classification- Artificial, Natural and Phylogenetic.
2. Bentham & Hooker's system of classification- merits and demerits.
3. Engler & Prantle's system of classification- merits and demerits
4. Phylogeny – origin and evolution of Angiosperms

UNIT –III: SYSTEMATIC TAXONOMY-I (12hrs)

1. Systematic study and economic importance of the following families: Annonaceae, Brassicaceae, Rutaceae, Curcurbitaceae, and Apiaceae.

UNIT –IV: SYSTEMATIC TAXONOMY-II (12hrs)

1. Systematic study and economic importance of plants belonging to the following families: Asteraceae, Asclepiadaceae, Lamiaceae, Ephorbiaceae,Arecaceae,and Poaceae.

UNIT – V: EMBRYOLOGY (12hrs)

1. Anther structure, microsporogenesis and development of male gametophyte.
2. Ovule structure and types; Megasporogenesis, development of Monosporic, Bisporic and Tetrasporic types (*Peperomia ,Drusa, Adoxa*) of embryo sacs.
3. Pollination and Fertilization (out lines) Endosperm development and types.
4. Development of Dicot and Monocot embryos, Polyembryony.

Suggested activity: Collection of locally available plants of medicinal importance, observing pollen grains in honey, Aero palynology-collection of pollen from air using glycerin strips in different seasons.

Books for Reference:

1. Porter, C.L. ( ): Taxonomy of flowering Plants, Eurasia Publishing House, New Delhi.
2. Lawrence, G.H.M. (1953): Taxonomy of Vascular Plants, Oxford & IBH Publishers, New Delhi, Calcutta.
3. Jefferey, C.(1968) : An Introduction to Plant Taxonomy J.A. Churchill, London.
4. Mathur, R.C.(1970) : Systematic Botany (Angiosperms) Agra Book Stores- Lucknow, Ajmer, Allahabad, Delhi.
5. Maheswari,P(1963) :Recent Advances in the Embryology of Angiosperms(Ed.,) International Society of Plant Morphologists- University of Delhi.
6. Swamy. B.G.L. & Krishnamoorthy. K.V.(1980):From flower to fruit Tata McGraw Hill Publishing Co., Ltd., New Delhi.
1. Maheswari, P.(1985):An Introduction to the Embryology of Angiosperms Tata McGraw Hill Publishing Co.,Ltd., New Delhi.
8. Bhojwani, S.S. & Bhatnagar, S.P. (2000) : The Embryology of Angiosperms (4th Edition) Vikas Publishing House(P)Ltd., UBS Publisher's Distributors, New Delhi.

II B.Sc - SEMESTER-III
BOTANY PRACTICAL – DSC IIA
Plant Taxonomy and Embryology
Total hours of laboratory Exercises 30hrs @ 2 per week

Suggested Laboratory Exercises:

1. Systematic study of locally available plants belonging to the families prescribed in theory syllabus.
2. Demonstration of herbarium techniques.
3. Structure of pollen grains using whole mounts (*Catharanthus, Hibiscus, Acacia*, Grass).
4. Demonstration of Pollen viability test using *in- vitro* germination (*Catharanthus*).
5. Study of ovule types and developmental stages of embryo sac using permanent slides /Photographs.
6. Structure of endosperm (nuclear and cellular); Developmental stages of dicot and monocot Embryos using permanent slides / Photographs
7. Isolation and mounting of embryo (using *Symopsis / Senna* / *Crotalaria*)
8. Field visits .
9. Study of local flora and submission of Field Note Book.

II B.Sc., BOTANY- SEMESTER -III
PRACTICAL MODEL PAPER III Plant Taxonomy and Embryology

1. Describe the given Plant specimens (A & B) in technical terms. Draw neat labeled diagrams of twig with inflorescence, L.S. of Flower, T.s. of Ovary and floral Diagram. Give floral formula. Identify the family.

   2x 10 = 20 Marks

   (Description- vegetative - 2 marks, floral – 4 marks; diagrams-3 marks, Identification-1 marks)

2. Derive the plant specimens C & D to their respective families- 2x4 = 08 marks

3. Identification of spotters -D, E ,and F (Embryology) 3x4 =12 marks

4. Record & Herbarium (submission compulsory) 10 marks

Total : 50 Marks

II B.Sc., Botany
Paper - III, Semester - III
Theory Model Question Paper
Paper - III, Plant Taxonomy and Embryology

Time : 3 hrs **Max. Marks:75**

SECTION -A

సెక్షన్ - ఎ

(Short Answer type questions)

Answer any **FIVE** of the following questions.

ఏవైనా **ఐదు** ప్రశ్నలకు సమాధానములు వ్రాయుము

Draw neat and labelled diagrams where ever necessary.

అవసరమైన చోట పటములు గీసి భాగములను గుర్తించుము

1. Nomenclature - నామీకరణ 5X5=25M
2. Artificial systems of classification - కృతక వర్గీకరణ విధానాలు
3. Androecium of cucurbitaceae - కుకుర్బిటేసిలో కేసరావళి
4. Inflorescence in Asteraceae - ఆస్టరేసిలో పుష్పవిన్యాసం
5. Types of ovules - అండాలు రకాలు
6. Economic importacne of Annonaceae - అనోనేసి ఆర్థిక ప్రాముఖ్యత
7. Lever mechanism in Lamiaceae - లామియేసిలో లీవర్ యాంత్రికం
8. Polyembryony - బహు పిండత

SECTION -B

సెక్షన్ - బి

(Essay type questions)

Answer **ALL** questions.

ఈ క్రిందివానిలో **అన్ని** ప్రశ్నలకు సమాధానములు వ్రాయుము.

9. a) Write an essay on Herbarium and its functions 5X10=50M

హెర్బేరియం గూర్చి వ్యాసము వ్రాయుము మరియు ముఖ్య విధులను గూర్చి వివరించండి

(or)

b) Discuss about the principles and rules of **ICBN**

ICBN సూత్రాలు మరియు నియమాలు గూర్చి వివరించుము

10 a) Give an account of Bentham and Hooker's system of classification

బెంథామ్ – హుకర్‌ల వర్గీకరణ విధానమును గూర్చి వ్రాయుము.

(or)

b) Give an account of Engler and Prantl system of classification

ఎంగ్లర్ మరియు ప్రాంటల్ వర్గీకరణ విధానమును గూర్చి వివరించండి.

11. a) Describe in detail the family Rutaceae and add a note on its Economic importance

రూటేసి కుటుంబమును వివరంగా వర్ణించుము మరియు ఆ కుటుంబ ఆర్థిక ప్రాముఖ్యతను తెలుపుము.

(or)

b) Describe the characters of the family Apiaceae and write its Economic importance

ఏపియేసి కుటుంబపు లక్షణాలను వివరించుము మరియు దాని ఆర్థిక ప్రాముఖ్యతను గూర్చి వ్రాయుము.

12 a) Describe the salient features of family Asclepiadaceae and add a note on its Economic importance

ఆస్క్లిపియడేసి కుటుంబ ముఖ్య లక్షణాలను గూర్చి వివరించుము మరియు ఆ కుటుంబ ఆర్థిక ప్రాముఖ్యతను గూర్చి వ్రాయుము.

(or)

b) Describe the characters of the family Poaceae and Mention its Economic importance.

పోయేసి కుటుంబ ముఖ్య లక్షణాలను వివరించుము మరియు ఆ కుటుంబ ఆర్థిక ప్రాముఖ్యతను గూర్చి వ్రాయుము.

13 a) Describe the development of Tetrasporic types of Embryosacs.

చతుస్సిద్ధబీజ రకాల పిండకోశాల అభివృద్ధిని గూర్చి వివరించండి.

(or)

b) Describe the types and Development of Endosperm

అంకురచ్ఛదము రకాలు మరియు అభివృద్ధిని గూర్చి వివరించండి.

K. Sujatha
B.O.S. Member
Botany

B.SC. CHEMISTRY SYLLABUS UNDER CBCS
SEMESTER – III – W.E.F. 2016-17

Paper III (INORGANIC & ORGANIC CHEMISTRY)

INORGANIC CHEMISTRY

UNIT –I

1. Chemistry of d-block elements: 9h

Characteristics of d-block elements with special reference to electronic configuration, variable valence, magnetic properties, catalytic properties and ability to form complexes. Stability of various oxidation states

2. Theories of bonding in metals: 6h

Metallic properties and its limitations, Valence bond theory, Free electron theory, Explanation of thermal and electrical conductivity of metals, limitations, Band theory, formation of bands, explanation of conductors, semiconductors and insulators.

UNIT – II

3.Metal carbonyls : 7h

EAN rule, classification of metal carbonyls, structures and shapes of metal carbonyls of V, Cr, Mn, Fe, Co and Ni.

4. Chemistry of f-block elements: 8h

Chemistry of lanthanides - electronic structure, oxidation states, lanthanide contraction, consequences of lanthanide contraction, magnetic properties. Chemistry of actinides - electronic configuration, oxidation states, actinide contraction, comparison of lanthanides and actinides.

ORGANIC CHEMISTRY 30 h (2h/w)

UNIT – III

1. Halogen compounds 5 h

Nomenclature and classification of alkyl (into primary, secondary, tertiary), aryl, aryl alkyl, allyl, vinyl, benzyl halides.

Nucleophilic aliphatic substitution reaction- classification into SN^1 and SN^2 – reaction mechanism with examples – Ethyl chloride, t-butyl chloride and optically active alkyl halide 2-bromobutane.

2. Hydroxy compounds 5 h

Nomenclature and classification of hydroxy compounds.

Alcohols: Preparation with hydroboration reaction, Grignard synthesis of alcohols. Phenols: Preparation i) from diazonium salt, ii) from aryl sulphonates, iii) from cumene. Physical properties- Hydrogen bonding (intermolecular and intramolecular). Effect of hydrogen bonding on boiling point and solubility in water.

Identification of alcohols by oxidation with $KMnO_4$, Ceric ammonium nitrate, Luca's reagent and phenols by reaction with $FeCl_3$.

Chemical properties:

a) Dehydration of alcohols.
b) Oxidation of alcohols by CrO_3, $KMnO_4$.
c) Special reaction of phenols: Bromination, Kolbe-Schmidt reaction, Riemer-Tiemann reaction, Fries rearrangement, azocoupling, Pinacol-Pinacolone rearrangement.

UNIT-IV

Carbonyl compounds 10 h

Nomenclature of aliphatic and aromatic carbonyl compounds, structure of the carbonyl group. Synthesis of aldehydes from acid chlorides, synthesis of aldehydes and ketones using 1,3-dithianes, synthesis of ketones from nitriles and from carboxylic acids. Physical properties: Reactivity of carbonyl group in aldehydes and ketones.

Nucleophilic addition reaction with a) $NaHSO_3$, b) HCN, c) RMgX, d) NH_2OH, e)$PhNHNH_2$, f) 2,4 DNPH, g) Alcohols-formation of hemiacetal and acetal. Base catalysed reactions: a) Aldol, b) Cannizzaro's reaction, c) Perkin reaction, d) Benzoin condensation, e) Haloform reaction, f) Knoevenagel reaction. Oxidation of aldehydes- Baeyer-Villiger oxidation of ketones.Reduction: Clemmensen reduction, Wolf-Kishner reduction, MPV reduction, reduction with $LiAlH_4$ and $NaBH_4$. Analysis of aldehydes and ketones with a) 2,4-DNPH test, b) Tollen's test, c) Fehling test, d) Schiff's test e) Haloform test (with equation)

UNIT-V

1. Carboxylic acids and derivatives 6 h

Nomenclature, classification and structure of carboxylic acids. Methods of preparation by a) Hydrolysis of nitriles, amides b) Hydrolysis of esters by acids and bases with mechanism c) Carbonation of Grignard reagents. Special methods of preparation of aromatic acids by a) Oxidation of side chain. b) Hydrolysis by benzotrichlorides. c) Kolbe reaction. **Physical properties**: Hydrogen bonding, dimeric association, acidity- strength of acids with examples of trimethyl acetic acid and trichloroacetic acid. Relative differences in the acidities of aromatic and aliphatic acids. **Chemical properties**: Reactions involving H, OH and COOH groups- salt formation, anhydride formation, acid chloride formation, amide formation and esterification (mechanism). Degradation of carboxylic acids by Huns-Diecker reaction, decarboxylation by Schimdt reaction, Arndt-Eistert synthesis, halogenation by Hell- Volhard- Zelinsky reaction.

2. Active methylene compounds **4 h**

Acetoacetic ester: keto-enol tautomerism, preparation by Claisen condensation, Acid hydrolysis and ketonic hydrolysis. Preparation of a) monocarboxylic acids. b) Dicarboxylic acids. c) Reaction with urea

Malonic ester: preparation from acetic acid. **Synthetic applications**: Preparation of a) monocarboxylic acids (propionic acid and n-butyric acid). b) Dicarboxylic acids (succinic acid and adipic acid) c) α,β-unsaturated carboxylic acids (crotonic acid).
d) Reaction with urea.

List of Reference Books

1. Selected topics in inorganic chemistry by W.D.Malik, G..D.Tuli,R.D.Madan
2. Inorganic Chemistry J E Huheey, E A Keiter and R L Keiter
3. A Text Book of Organic Chemistry by Bahl and Arun bahl
4. A Text Book of Organic chemistry by I L Finar Vol I
5. Organic chemistry by Bruice
6. Organic chemistry by Clayden
7. Advanced Inorganic chemistry by Gurudeep Raj
8. Basic Inorganic Chemistry by Cotton and Wilkinson
9. Concise Inorganic Chemistry by J.D.Lee

LABORATORY COURSE -III 30 hrs. (2 h / w)

Practical Paper-III Titrimetric analysis and **Organic Functional Group Reactions** (At the end of Semester-III)

Record-10, Experiment-40=Total 50

Titrimetric analysis: 20M

1. Determination of Fe (II) using $KMnO_4$ with oxalic acid as primary standard.
2. Determination of Cu(II) using $Na_2S_2O_3$ with $K_2Cr_2O_7$ as primary standard.

Organic Functional Group Reactions 20M

3. Reactions of the following functional groups present in organic compounds (at least four) Alcohols, Phenols, Aldehydes, Ketones, Carboxylic acids and Amides

VERIFIED AND FINALISED
BY BOS CHAIR PERSON
A.VENKATA RAJU

SRI VENKATESWARA UNIVERSITY

Model Question paper for **CHEMISTRY 3rd Semester** of **B.Sc** degree course from the academic year **2016-17** **Max.Marks:75**

Section – I

Answer any **Five** of the following:

5x5=25

1. Write notes on catalytic properties of d-block elements.
2. Write a note on semi conductors
3. State and explain EAN rule.
4. Compare lanthanides and actinides.
5. Alkyl halides are more reactive than Vinyl halides. Explain
6. Explain Pinacol-Pinacolone rearrangement
7. Explain Perkin reaction
8. How acetoacetic ester is prepared?

Section - II

Answer **All** the Questions

5X10=50

9. a) Explain the stability of variable oxidation states and complex formation of transition on elements

(OR)

b) Explain Valence bond theory of metals. How does it explains the metallic properties

10. a) What are metal Carbonyls? Explain the structures of $Ni(CO)_4$ and $Fe(CO)_5$

(OR)

b) Explain the causes and consequences of lanthanide contraction.

11. a) Explain the mechanism of S_N1 and S_N2 reactions in alkyl halides

(OR)

b) Write any three methods of preparation of phenols. Explain the acidic nature of phenols.

12. a) Explain the following reactions with mechanism
i) Benzoin Condensation. ii) Clemensen reduction

(OR)

b) Write any three methods of preparation of aldehydes and Ketones. How aldehydes and Ketones are distinguished?

13. a) Write any two methods of preparation of carboxylic acids.
ii) Why chloro acetic acid is stronger than acetic acid

(OR)

b) Explain the synthesis of following compounds from malonic ester
i) Propionic acid. ii) Succinic acid. ii) Crotonic acid.

B.Sc., COMPUTER SCIENCE

II YEAR III SEMESTER - W.E.F.2016-17

OBJECT ORIENTED PROGRAMMING USING JAVA

Course Objectives

As the business environment becomes more sophisticated, the software development (software engineering is about managing complexity) is becoming increasingly complex. As of the best programming paradigm which helps to eliminate complexity of large projects, Object Oriented Programming (OOP) has become the predominant technique for writing software in the past decade. Many other important software development techniques are based upon the fundamental ideas captured by object-oriented programming.

Course Outcomes

At the end of this course student will:

1. Understand the concept and underlying principles of Object-Oriented Programming
2. Understand how object-oriented concepts are incorporated into the Java programming language
3. Develop problem-solving and programming skills using OOP concept
4. Understand the benefits of a well structured program
5. Develop the ability to solve real-world problems through software development in high-level programming language like Java
6. Develop efficient Java applets and applications using OOP concept
7. Become familiar with the fundamentals and acquire programming skills in the Java language.

UNIT-1

FUNDAMENTALS OF OBJECT – ORIENTED PROGRAMMING : Introduction, Object Oriented paradigm, Basic Concepts of OOP, Benefits of OOP, Applications of OOP, Java features: **OVERVIEW OF JAVA LANGUAGE**: Introduction, Simple Java program structure, Java tokens, Java Statements, Implementing a Java Program, Java Virtual Machine, Command line arguments. **CONSTANTS, VARIABLES & DATA TYPES:** Introduction, Constants, Variables, Data Types, Declaration of Variables, Giving Value to Variables, Scope of variables, Symbolic Constants, Type casting, Getting Value of Variables, Standard Default values; **OPERATORS & EXPRESSIONS**.

UNIT-II

DECISION MAKING & BRANCHING: Introduction, Decision making with if statement, Simple if statement, if. Else statement, Nesting of if. else statements, the else if ladder, the switch statement, the conditional operator. **LOOPING**: Introduction, The While statement, the do-while statement, the for statement, Jumps in loops.

CLASSES, OBJECTS & METHODS: Introduction, Defining a class, Adding variables, Adding methods, Creating objects, Accessing class members, Constructors, Method overloading, Static members, Nesting of methods;

UNIT-III

INHERITANCE: Extending a class, Overloading methods, Final variables and methods, Final classes, Abstract methods and classes;

ARRAYS, STRINGS AND VECTORS: Arrays, One-dimensional arrays, Creating an array, Two – dimensional arrays, Strings, Vectors, Wrapper classes;

INTERFACES: MULTIPLE INHERITANCE: Introduction, Defining interfaces, Extending interfaces, Implementing interfaces, Assessing interface variables;

UNIT-IV

MULTITHREADED PROGRAMMING: Introduction, Creating Threads, Extending the Threads, Stopping and Blocking a Thread, Lifecycle of a Thread, Using Thread Methods, Thread Exceptions, Thread Priority, Synchronization, Implementing the 'Runnable' Interface.

MANAGING ERRORS AND EXCEPTIONS: Types of errors : Compile-time errors, Run-time errors, Exceptions, Exception handling, Multiple Catch Statements, Using finally statement,

UNIT-V

APPLET PROGRAMMING: local and remote applets, Applets and Applications, Building Applet code, Applet Life cycle: Initialization state, Running state, Idle or stopped state, Dead state, Display state.

PACKAGES: Introduction, Java API Packages, Using System Packages, Naming conventions, Creating Packages, Accessing a Package, using a Package.

MANAGING INPUT/OUTPUT FILES IN JAVA: Introduction, Concept of Streams, Stream classes, Byte Stream Classes, Input Stream Classes, Output Stream Classes, Character Stream classes: Reader stream classes, Writer Stream classes, Using Streams, Reading and writing files.

REFERENCE BOOKS:

1. E.Balaguruswamy, Programming with JAVA, A primer, 3e, TATA McGraw-Hill Company.
2. John R. Hubbard, Programming with Java, Second Edition, Schaum's outline Series, TATA McGraw-Hill Company.
3. Deitel &Deitel. Java TM: How to Program, PHI (2007)
4. Java Programming: From Problem Analysis to Program Design- D.S Mallik
5. Object Oriented Programming Through Java by P. Radha Krishna, Universities Press (2008)

Student Activity:

1. Create a front end using JAVA for the student database created

2. Learn the difference between ODBC and JDBC

OBJECT ORIENTED PROGRAMMING USING JAVA LAB

1. Write a program to perform various String Operations
2. Write a program on class and object in java
3. Write a program to illustrate Function Overloading & Function Overriding methods in Java
4. Write a program to illustrate the implementation of abstract class
5. Write a program to implement Exception handling
6. Write a program to create packages in Java
7. Write a program on interface in java
8. Write a program to Create Multiple Threads in Java
9. Write a program to Write Applets to draw the various polygons
10. Write a program which illustrates the implementation of multiple Inheritance using interfaces in Java
11. Write a program to assign priorities to threads in java

Code No:

SRI VENKATESWARA UNIVERSITY: TIRUPATI

B.Sc(CBCS)

III SEMESTER EXAMINATIONS

OBJECT ORIENTED PROGRAMMING USING JAVA

Time: 3 Hours **Max. Marks: 75**

Note: This question paper contains two parts A and B.
Part A is compulsory which carries 25 marks. Answer any five of the following questions in Part A.
Part B consists of 5 Units. Answer any one full question from each unit.
Each question carries 10 marks

PART - A

Answer any Five of the following. All questions carry equal marks

5 x 5 = 25 Marks

1. Write about object oriented paradigm.
2. Give a note on data types in java language
3. Describe the conditional operator with example?
4. Write about the method of accessing class members?
5. Write about Final classes in inheritance.
6. What is the concept of wrapper classes?
7. Describe the process of creating threads?
8. Write about the process of creating packages

PART - B

Answer one question from each Unit. All questions carry equal marks

5 x 10 = 50 Marks

UNIT – I

9. Explain the basic concepts of OOP with Benefits and Applications of OOP?

OR

10 (a) Write about command line arguments
(b) Write about Scope of variables and Type casting in Java.

UNIT-II

11. Explain the Decision Making statement & write a program which will display message “Success” if a particular value is greater than 5. It then displays a message “Executed successfully” and complete its execution.

OR

12. Explain the process of Method overloading with example?

UNIT-III

13. What is an Array? Explain in detail about one dimensional and two dimensional arrays with an example?

OR

14. Explain the concept of multiple inheritance with an illustration

UNIT-IV

15. (a) Explain the Lifecycle of a Thread?

    (b) Explain the types of errors with example.

OR

16. Write about Multiple catch block program?

UNIT - V

17. Explain in detail about Applet life cycle and its applications?

OR

18. Explain the Concept of streams with detail example?

CATERING, TOURISM & HOTEL MANAGEMENT

SEMESTER III - W.E.F. 2016-17

Semester	Part	Paper Code	Title of the Paper	No. of Hours		Credits	IA	ES	Total Marks (100)
				T	P				
Semester III	Part 1		Language 1	4	0	4	25	75	100
			Language 2	4	0	4	25	75	100
	SK/FC		Entrepreneurship	2	0	2	-	50	50
			Communication and soft skills (CSS)-2	2	0	2	-	50	50
	Part 2	CTHM 301	Pilgrimage Tourism and Hospitality Management - II	4	-	4	25	75	100
			Practicals	-	3	2	-	50	50
		CTHM 302	Food production -II	4	-	4	25	75	100
			Practicals	-	3	2	-	50	50
		CTHM 303	Food Beverage Service - II	4	-	4	25	75	100
			Practicals	-	3	2	-	50	50
			Total Marks	**24**	**09**	**30**			**750**

3-3-119

SECOND YEAR - III SEMESTER

CT&HM -301 PILGRIMAGE TOURISM AND HOSPITALITY MANAGEMENT – II

Theory: 4 hrs/week
Practicals : 3 hrs/week

THEORY:

Unit-I

India, its culture, demography, geography – its soil and rich history of Andhra Pradesh – and Role of Hospitality Management in Tourism.

Unit – II

Pilgrimage Tourism and Hospitality Management Pilgrim Tourism – Definition and Importance - Historical study of select Pilgrimage centres Tirumala and Tirupati – Sri Kalahasti – Srisailam – Simhachalam – Ahobalam – Vijayawada – Alampur – Pushpagir – Sriangam – HampiBadomi – Pabladakal – Tiruvanantapuram – Varanasi – Allahabad (Praying).

Unit – III

Historial study of select Buddhist and Jain Pilgraimage centres – Sarnath, Sanchi, Nagarjunakonda- Amaravathi, Sravanbelagola – Kolanupaka, Danavulapadu.

Unit – IV

Travel Agency – History and development of the concept of Travel Agency in India – role of Travel Agencies and Tourist Guides in promoting tourism in India – Tour operator and Partners of Tour Operators.

Unit – V

Tourist Accommodation – Various Categories – Hotels – Star Hotels – Heritage hotels – resorts – Private accommodation – Accommodation provided by religious institutions – paying guest – concept – Food and Beverages – Role of Hospitality and various Hotels.

PRACTICALS:

1. Tour to Pilgrimage centre – Map pointing.
2. Historical aspects of Tourism
3. Visit to Travel agency
4. Travel Agent in Tirupati
5. Case Study – 2 Nos. Observation

REFERENCES:

1. Tourism and cultural heritage of India – Achary Rao – Rose Publications.
2. The National Cultural of India – National Book Trust – Delhi 1959 – Hussain, A.A.
3. The wonder that was India – Basham A.L., Rope & Company (Publication) Delhi – 1985.
4. The culture and Art of India – MukharjeeR.K, Londaon – 1959.
5. Travel Agencies and Management communication India – 1963 – Agarwal – Surinvdra.

B.Sc. (CT & HM)
SECOND YEAR : III-SEMESTER
CT&HM -301 PILGRIMAGE TOURISM AND HOSPITALITY MANAGEMENT - II
MODEL QUESTION PAPER

Time : 3 Hrs **Marks : 75**

Section-A

Answer any Five Questions
Each question carries 5 marks **5 × 5 = 25 M**

1. Write in detail about hotel categorization.
2. Write about Saranatha?
3. Give a brief note on heritage hotels?
4. Write a brief note on the history of Travel agency in India?
5. Write a detailed note on Srisailam?
6. Describe the greatness of Hampi?
7. What do you know about sravanabelogola?
8. Describe the accommodation provided by private agencies.

Section-B

Answer ALL Questions
Each question carries 10 marks **5 × 10 = 50 M**

9. a) Assess the role of tourist guide in promoting tourism in India?
   (or)
   b) Explain the Kolanupaka and Danavulapadu as Jain Pilgrim Centres?

10. a) Explain the contribution of Tourism for Andhra Pradesh Staet?
   (or)
   b) What is meant by pilgrimage Tourism? Analyze its importance?

11. a) Write down the concept and functions of Travel agency?
   (or)
   b) Describe various categories of Tourist accommodation?

12. a) Explain the importance of Varanasi and Allahabad?
   (or)
   b) Name the major Buddhist circuits in the state of A.P.?

13. a) Explain the concept and functions of travel agency?
   (or)
   b) Write detail about historical and religious aspects of Tirumala TirupatiDevasthanams.

SECOND YEAR: III SEMESTER
CT&HM-302 FOOD PRODUCTION – II

Theory: 4 hrs/week
Practicals : 3 hrs/week

THEORY:

Unit-I

Quantity food production – Principles of quantity cooking, equipment, menu planning, volume indenting, costing, problems and adjustment in terms of cooking time and temperatures.

Unit – II

Indian Regional Cooking styles (1)

Northern Indian cuisine – Moghlai, Avadh, (Dumpuet), Punjabi, Kashmiri, History, Methodology, Equipment, Culinary terms – Tandar – Make, Size of Tandoor fixing, Seasoning, Prepavive of Indian Breads.

Unit – III

South Indian Cuisine – Hyderabadi, Kerala, Andhra, Tamil Nadu, Chettinad – History, Methodology, Equipment and Culinary Term.

Unit – IV

Indian Regional Cooking styles (2)

Eastern Indian Cuisine and North Eastern Cusine, Bengal, Assam, Nagaland, Mizoram, Arunachal Pradesh – History, Methodology, Equipment, Culinary Terms. Western cuisine – Gujrathi, Rajasthani, Goan, Maharastra – History, Methodology, Equipment Culinary terms.

Unit – V

Quantity cooking purchase and strategies – Purchase methods – Techniques – Storage techniques / Receiving techniques.

PRACTICALS:

1. Northern Indian Cuisine
2. Southern Indian Cuisine
3. Eastern Indian Cuisine
4. Western Indian Cuisine
5. Inventory Control

REFERENCES:

1. Theory of cooking – K. Arona
2. Mohimsethi&SurjeeMalhan – Catering Management. An integrated Approach second edition – Wiley Eastern Ltd. (Publisher)
3. Cooking with Indian Masters - Prasad
4. Modern cooking (Vol-I). Thangau E. Phillip 5th Edition, 2003.
5. Modern cookery by Chef ArrindSaraswat.

B.Sc. (CT & HM)
Second Year : III-Semester
CT&HM- 302 FOOD PRODUCTION-II
MODEL QUESTION PAPER

Time : 3 Hrs **Marks : 75**

Section-A

Answer any Five Questions
Each question carries 5 marks **5 × 5 = 25 M**

1. Write in detail about kitchen hygiene?
2. Explain the dry methods of cooking?
3. Write the cooking styles explain in detail?
4. State the Principles of cooking and explain?
5. Describe the equipment used in different cuisine?
6. Write in detail about Two states cuisines?
7. What is costing and explain detail?
8. What is grill room?

Section-B

Answer ALL Questions
Each question carries 10 marks **5 × 10 = 50 M**

9. a) What are the differences between perishable and non-perishable foods?
   (or)
   b) What is quantity cooking? Explain about different cooking methods.

10. a) Discuss the Principles of menu planning?
    (or)
    b) Enlist the equipment used in different cuisines?

11. a) What is food cost? Write the different control methods adopted for cost control?
    (or)
    b) What is menu Planning? Prepare a 7 Course menu in marriage party?

12. a) Write the difference between Palao and Biryani? Give recipes for each?
    (or)
    b) What are the principles of cooking write the importance of hygiene.

13. a) Explain the purchases methods following in Five Star Hotels
    (or)
    b) Any two recipes in Eastern Cuisine?

3-3-105

SECOND YEAR - III SEMESTER

CT&HM -303 FOOD AND BEVERAGE SERVICE – II

Theory: 4 hrs/week
Practicals : 3 hrs/week

THEORY:

Unit-I

Classification of Beverages into Alcoholic and Non-Alcoholic and their further breakup their respective categories.

Different Non-Alcoholic Beverages – Stimulating, refreshing and Nourishing drinks - Bar Management.

Unit – II

General Introduction of Wine, History and principal wine producting countries of the would. Types of wine and other classification, manufacturing of wine, Bottling, Labelling and Shipping of Wine.

Unit – III

Spirits – Meaning of Distillation, Spirit, Proof, American proof and conversions

Manufacture of Whiskey – Classification and Quality, Brand Names, Service of Whisky.

Manufacture of Brandy – Types, Brand Names and Service.

Unit – IV

Beer – History, Manufacture, Types, Storage and Service. Liquor – types, Classification, Methods of Manufacture and Service.

Unit – V

Cocktails – Mixed drinks – classification.

Cocktails and mock tails – definition – types methods of mixing.

Tobacco – types, storage, service

PRACTICALS:

1. Services of Tea, Coffee
2. Service of Wine
3. Services of Spirit and Equipment
4. Different types glassware and equipment
5. Services of cocktails, Mock tails.

REFERENCES:

1. The text of Food & Beverages Service – S. N. Bagchi& Anita Sharma, 1st Ed. Aman Publications, New Delhi (2004)
2. Food & Beverage Service – Vijay Dhawan – Frank Bros & Co., (Publisher) Ltd. New Delhi.
3. Food and Beverage Management – Bernard Devis, Andrew lock wood and sallay stone 3rd edition, published by Elsevier India Pvt. Ltd., New Delhi.
4. Professional Restaurant Service – John Willey & Sons, Inc.
5. Bartenders Guide – John J. Poister.

B.Sc. (CT & HM)
Second Year : III Semester
CT&HM-303 FOOD AND BEVERAGE SERVICE-II
MODEL QUESTION PAPER

Time : 3 Hrs **Marks : 75**

Section-A

Answer any Five Questions
Each question carries 5 marks **5 × 5 = 25 M**

1. What is fermentation? Where do and how do you implement in wine making?
2. What is distillation of write the different methods of distillation?
3. What is an alcoholic beverage give percentage of alcoholic of atleast 6 alcoholic drinks?
4. Explain what is menu and how do you plan a menu?
5. What are the mock tails? Explain with examples?
6. What are the attributes required in Food and Beverages Staff?
7. What is viticulture?
8. What is Whisky write in detail?

Section-B

Answer ALL Questions
Each question carries 10 marks **5 × 10 = 50 M**

9. a) Write the difference between cocktail and mocktail. Give two recipes of cocktail?
   (or)
   b) How is beer made write in detail the procedure and the alcoholic content of beer.

10. a) How do you classify alcoholic beverage? Explain with examples?
    (or)
    b) Explain wine and wine making methods? How do you classify wines?

11. a) Explain the process involved in making of red wine?
    (or)
    b) What are the terms used to denote the level of sweetness in the champagne write the terms used on the label to refer to the champagne produce?

12. a) What is distillation? Part Give the distillation process of Spirit?
    (or)
    b) What is sparkling wine? What are the various methods of making sparkling?

13. a) Write in detail about liqueurs and aperitifs.
    (or)
    b) What is whisky write in detail?

B.A./B.Sc. SECOND YEAR MATHEMATICS SYLLABUS PAPER - III

SEMESTER – III - W.E.F.2016-17

ABSTRACT ALGEBRA

UNIT – 1 : (10 Hrs) GROUPS : -

Binary Operation – Algebraic structure – semi group-monoid – Group definition and elementary properties Finite and Infinite groups – examples – order of a group. Composition tables with examples.

UNIT – 2 : (14 Hrs) SUBGROUPS : -

Complex Definition – Multiplication of two complexes Inverse of a complex-Subgroup definition – examples-criterion for a complex to be a subgroups.

Criterion for the product of two subgroups to be a subgroup-union and Intersection of subgroups.

Co-sets and Lagrange's Theorem :-

Cosets Definition – properties of Cosets–Index of a subgroups of a finite groups–Lagrange's Theorem.

UNIT –3 : (12 Hrs) NORMAL SUBGROUPS : -

Definition of normal subgroup – proper and improper normal subgroup–Hamilton group – criterion for a subgroup to be a normal subgroup – intersection of two normal subgroups – Sub group of index 2 is a normal sub group – simple group – quotient group – criteria for the existence of a quotient group.

UNIT – 4 : (10 Hrs) HOMOMORPHISM : -

Definition of homomorphism – Image of homomorphism elementary properties of homomorphism – Isomorphism – aultomorphism definitions and elementary properties–kernel of a homomorphism – fundamental theorem on Homomorphism and applications.

UNIT – 5 : (14 Hrs) PERMUTATIONS AND CYCLIC GROUPS : -

Definition of permutation – permutation multiplication – Inverse of a permutation – cyclic permutations – transposition – even and odd permutations – Cayley's theorem.

Cyclic Groups :-

Definition of cyclic group – elementary properties – classification of cyclic groups.

Prescribed Text Book :

A. First course in Abstract Algebra, by J.B. Fraleigh Published by Narosa Publishing house.

Chapters : 1 to 7 and 11 to 13.

Reference Books :

1. A text book of Mathematics for B.A. / B.S. by B.V.S.S. SARMA and others Published by S.Chand & Company New Delhi.
2. Modern Algebra by M.L. Khanna.

K. Chi V. Subbaiah Naidu
BOS Chairman
Mathematics
B.T College
Madanapalle.

S.V.UNIVERSITY, MODEL PAPER.

THREE YEAR B.A/B.Sc DEGREE EXAMINATIONS.

CHOICE BASED CREDIT SYSTEM

III SEMESTER

PART II : MATHEMATICS

Paper III :ABSTRACT ALGEBRA

(New Syllabus w.e.f 2015-16)

Time: 3 hours Max Marks :75

SECTION - A

Answer any FIVE of the following questions. Each question carries 5 marks (5X5 = 25).

1. Show that the fourth roots of unity is an abelian group w.r.t multiplication.
2. Prove that identity element in a group is unique.
3. If Z is the additive group of integers, then prove that the set of all multiples of integers by a fixed number "m" is subgroup of Z.
4. Prove that intersection of two sub groups $H_1$and H_2 of group G,is a subgroup of G.
5. Show that H ={ 1,-1} is a normal subgroup of the group of non-zero real numbers under multiplication.
6. If G is a group of non-zero real numbers under multiplication the prove that $f(x) = x^2 : G \to G$ is a homomorphism. Determine Ker f.
7. Examine whether the following permutation is even or odd.

$$\begin{pmatrix} 1 & 2 & 34 & 5 & 67 & 8 & 9 \\ 6 & 1 & 43 & 2 & 57 & 9 & 8 \end{pmatrix}$$

8. Define cyclic group and give an example.

(P.T.O)

SECTION - B

Answer ALL of the five questions. Each question carries 10marks (5X10 = 50).

9 a.Prove that the set-Z of all integers form an abelian group w.r.t the operations defined by

$a * b = a + b + 2$,$\forall$ a,b $\in Z$.

OR

b. Show that the set G= { 1,2,3,4,5,6} is a finite abelian group of order 6 w.r.t X_7 .

10a. Prove that the necessary and sufficient condition for a complex H of a finite group G to be a subgroup is $\forall a, b \in H \Rightarrow ab \in H$.

OR

b. State and prove Lagrange's theorem.

11a. A subgroup H of a group G is a normal subgroup of G iff the product of two right cosets of H in G is again a right coset of H in G.

OR

b. Prove that a sub group H of a group G is normal subgroup of G iff each right coset of H in G is left coset of H in G.

12a. State and prove Fundamental theorem on homomorphism of groups.

OR

b. If $\emptyset : Z_{10} \rightarrow Z_{10}$ be a homomorphism defined by $\emptyset(1) = 8$,then find Ker $\emptyset$.

13a. State and prove Cayley's theorem.

OR

b. The order of a cyclic group is equal to the order of its generator.

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K. Ch. V. Subbaiah Naidu
BOS Chairman
Mathematics
B.T College
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B.Sc MICROBIOLOGY (CBCS) SYLLABUS
SECOND YEAR – SEMESTER- III

3-3-115

MBT- 301 MICROBIAL GENETICS AND MOLECULAR BIOLOGY

TOTAL HOURS:48 **CREDITS: 4**

UNIT-I **No. of hours: 10**

DNA and RNA as genetic material.
Structure and organization of prokaryotic DNA.
Extrachromosomal genetic elements – Plasmids and transposons.
Replication of DNA – Semi conservative mechanism, Enzymes involved in replication.

UNIT-II **No. of hours: 10**

Mutations – spontaneous and induced, base pair changes, frame shifts, deletions, inversions, tandem duplications, insertions.
Mutagens - Physical and Chemical mutagens.
Outlines of DNA damage and repair mechanisms.
Genetic recombination in bacteria – Conjugation, Transformation and Transduction.

UNIT-III **No. of hours: 10**

Concept of gene – Muton, Recon and Cistron. One gene one enzyme and one gene one polypeptide hypotheses.
Types of RNA and their functions.
Genetic code.
Structure of ribosomes.

UNIT-IV **No. of hours: 8**

Types of genes – structural, constitutive, regulatory
Protein synthesis – Transcription and translation.
Regulation of gene expression in bacteria – *lac* operon.

UNIT-V **No. of hours: 10**

Basic principles of genetic engineering.
Restriction endonucleases, DNA polymerases and ligases.
Vectors.
Outlines of gene cloning methods.
Polymerase chain reaction. Genomic and cDNA libraries.
General account on application of genetic engineering in industry, agriculture and medicine.

MBP- 301 MICROBIAL GENETICS AND MOLECULAR BIOLOGY

TOTAL HOURS: 48 **CREDITS: 2**

1. Study of different types of DNA and RNA using micrographs and model / schematic representations
2. Study of semi-conservative replication of DNA through micrographs / schematic representations
3. Isolation of genomic DNA from *E. coli*
4. Estimation of DNA using UV spectrophotometer.
5. Resolution and visualization of DNA by Agarose Gel Electrophoresis.
6. Resolution and visualization of proteins by Polyacrylamide Gel Electrophoresis (SDS-PAGE).
7. Problems related to DNA and RNA characteristics, Transcription and Translation.
8. Induction of mutations in bacteria by UV light.
9. Instrumentation in molecular biology – Ultra centrifuge, Transilluminator, PCR

SUGGESTED READING

Crueger, W. and Crueger, A. (2000). **Biotechnology: A Text Book of Industrial Microbiology,** PrenticeHall of India Pvt. Ltd., New Delhi.

Freifelder, D. (1990). **Microbial Genetics**. Narosa Publishing House, New Delhi.

Freifelder, D. (1997). **Essentials of Molecular Biology**. Narosa Publishing House, New Delhi.

Glazer, A.N. and Nikaido, H. (1995). **Microbial Biotechnology – Fundamentals of Applied Microbiology**, W.H. Freeman and company, New York.

Glick, B.P. and Pasternack, J. (1998). **Molecular Biotechnology**, ASM Press, Washington D.C., USA.

Kannan, N. (2003). **Hand Book of Laboratory Culture Medias, Reagents, Stains and Buffers**. Panima Publishing Co., New Delhi.

Lewin, B. (2000). **Genes VIII.** Oxford University Press, England

Maloy, S.R., Cronan, J.E. and Freifelder, D. (1994). **Microbial Genetics**, Jones and Bartlett Publishers, London.

Nicholl, D.S.T. (2004). **An Introduction to Genetic Engineering.** 2 nd Edition. Cambridge University Press, London.

Old, R.W. and Primrose, S.B. (1994) **Principles of Gene Manipulation**, Blackwell Science Publication, New York.

Ram Reddy, S., Venkateshwarlu, K. and Krishna Reddy, V. (2007) **A text Book of Molecular Biotechnology**. Himalaya Publishers, Hyderabad.

Sinnot E.W., L.C. Dunn and T. Dobzhansky. (1958). **Principles of Genetics**. 5 th Edition. McGraw Hill, New York.

Smith, J.E. (1996). **Biotechnology**, Cambridge University Press.

Snyder, L. and Champness, W. (1997). **Molecular Genetics of Bacteria**. ASM press,
Strickberger, M.W. (1967). **Genetics**. Oxford & IBH, New Delhi.

Turner, P.C., Mclennan, A.G., Bates, A.D. and White, M.R.H. (1998). **Instant Notes in Molecular Biology**, Viva Books Pvt., Ltd., New Delhi.

Twynan, R.M. (2003). **Advanced Molecular Biology**. Viva books Pvt. Ltd. New Delhi.

Verma, P.S. and Agarwal, V.K. (2004). **Cell Biology, Genetics, Molecular Biology, Evolution and Ecology.** S. Chand & Co. Ltd., New Delhi.
Washington, D.C., USA.

SUBJECT:: B.Sc., MICROBIOLOGY (CBCS) MODEL QUESTION PAPER

SECOND YEAR – SEMESTER III

MBT-301 : MICROBIAL GENETICS AND MOLECULAR BIOLOGY

Time 3 hrs Max marks -75

SECTION-A

I ANSWER ANY FIVE OF THE FOLLOWING 5 x 5 M= 25 marks

Draw labeled diagrams wherever necessary

1. Z-DNA structure
2. Define plasmid
3. Tandem duplication
4. Define Transduction
5. Role of Nitrous acid
6. t-RNA structure
7. Functions of Stop codon
8. Structure of ribosome

SECTION- B

II ANSWER ANY FIVE OF THE FOLLOWING 5 x 10 M= 50 marks

Draw labeled diagrams wherever necessary

9. a) Write about Transposons and their function in detail.

Or

b) Differentiate the function of DNA and RNA.

10. a) Write the Semi conservative mechanism of DNA replication.

Or

b) List out the Physical mutagens and write their effect on mutagenesis.

11. a) Differentiate the mechanism of Conjugation and Transformation in genetic recombination of bacteria.

Or

b) Explain One gene and One enzyme hypothesis in detail.

12. a) What is Genetic code? Discuss in detail about various genetic codes in prokaryotes.

Or

b) Explain the mechanism of regulation of gene express in bacteria in related to *lac-operon*.

13. a) Discuss the basic principles of Genetic engineering with suitable examples.

Or

b) What is PCR ? Explain the principle and application of PCR in genetic engineering.

3-3-116

B.Sc. PHYSICS

(For Mathematics Combinations)

III SEMESTER – W.E.F.2016-17

OPTICS & LASER PHYSICS

Work load:60 hrs per semester **4 hrs/week**

UNIT-I (8hrs)

1. Aberrations:

Introduction – monochromatic aberrations, spherical aberration, methods of minimizing spherical aberration, coma, astigmatism and curvature of field, distortion. Chromatic aberration-the achromatic doublet. Achromatism for two lenses (i) in contact and (ii) separated by a distance.

UNIT-II (14hrs)

2. Interference

Principle of superposition – coherence-temporal coherence and spatial coherence-conditions for interference of light. Fresnel's bi-prism-determination of wavelength of light –change of phase on reflection. Oblique incidence of a plane wave on a thin film due to reflected and transmitted light (cosine law) –colors of thin films- Interference by a film with two non-parallel reflecting surfaces (Wedge shaped film). Determination of diameter of wire, Newton's rings in reflected light. Michelson interferometer, Determination of wavelength of monochromatic light using Newton's rings and Michelson Interferometer.

UNIT-III (14hrs)

3. Diffraction

Introduction, distinction between Fresnel and Fraunhoffer diffraction, Fraunhoffer diffraction –Diffraction due to single slit-Fraunhoffer diffraction due to double slit-Fraunhoffer diffraction pattern with N slits (diffraction grating).Resolving power of grating, Determination of wavelength of light in normal incidence and minimum deviation methods using diffraction grating, Fresnel's half period zones-area of the half period zones-zone plate-comparison of zone plate with convex lens-difference between interference and diffraction.

UNIT-IV(10 hrs)

4. Polarisation:

Polarized light: methods of polarization polarization by reflection, refraction, double refraction, scattering of light-Brewster's law-Mauls law-Nicol prism polarizer and analyzer-Quarter wave plate, Half wave plate-optical activity, determination of specific rotation by Laurent's half shade polarimeter-Babinet's compensator - idea of elliptical and circular polarization

UNIT-V (14hrs)

5. Lasers and Holography

Lasers: introduction, spontaneous emission, stimulated emission. Population Inversion, Laser principle-Einstein coefficients-Types of lasers-He-Ne laser, Ruby laser- Applications of lasers. Holography: Basic principle of holography-Gabor hologram and its limitations, Applications of holography.

6. Fiber Optics

Introduction- different types of fibers, modes in an optical fiber, fiber material, principles of fiber communication (qualitative treatment only), advantages of fiber optic communication.

REFERENCE BOOKS:

1. BSc Physics, Vol.2, Telugu Akademy, Hyderabad
2. A Text Book of Optics-N Subramanyam, L Brijlal, S.Chand& Co.
3. Unified Physics Vol.II Optics & Thermodynamics – Jai Prakash Nath&Co.Ltd., Meerut
4. Optics, F..A. Jenkins and H.G. White, Mc Graw-Hill
5. Optics, Ajoy Ghatak, Tata Mc Graw-Hill.
6. Introduction of Lasers – Avadhanulu, S.Chand& Co.
7. Principles of Optics- B.K Mathur, Gopala Printing Press, 1995

Practical Paper III: Optics & Laser Physics

Work load:30hrs **2hrs/week**

Minimum of 6 experiments to be done and recorded

1. Determination of refractive index of liquid-Boy's method.
2. Refractive index of a liquid-hallow prism
3. Dispersive power of a prism.
4. Determination of thickness of a thin wire by wedge method
5. Determination of radius of curvature of a given convex lens-Newton's rings.
6. Determination of wavelength of light using diffraction grating-minimum deviation method.
7. Determination of wavelength of light using diffraction grating-normal incidence method.
8. Resolving power of grating.
9. Resolving power of a telescope.
10. Study of optical rotation –Polarimeter.
11. Determination of wavelength of Laser light using diffraction grating

Suggested student activities

Student seminars, group discussions, assignments, field trips, study project and experimentation using virtual lab

Examples

Seminars :- A topic from any of the Units is given to the student and asked to give a brief seminar presentation.

Group discussion :- A topic from one of the units is given to a group of students and asked to discuss and debate on it.

Assignment :- Few problems may be given to the students from the different units and asked them to solve.

Field trip :- Visit to Satish Dhawan Space Centre, Sriharikota / Thermal and hydroelectric power stations / Science Centres, any other such visit etc.

Study project :- Web based study of different satellites and applications.

Domain skills:

Logical derivation, experimentation, problem solving, data collection and analysis, measurement skills

***** Documental evidence is to be maintained for the above activities.**

MODEL PAPER

THREE YEAR B.Sc DEGREE EXAMINATION

CHOICE BASED CREDIT SYSTEM

THIRD SEMESTER: PART II: PHYSICS

Paper III : Optics and Laser Physics

(With Mathematics Combination)

Time: 3 Hours Max. Marks: 75

Section-A (Essay type)

Answer All questions **Marks :5X10 = 50**

1.a) Explain Chromatic aberration . Explain the condition for removal of Chromatic aberration using two lenses separated by a distance.

OR

b) What is meant by spherical aberration? Deduce the condition for minimum spherical aberration in a combination of two lenses separated by a distance.

2. a) Describe the experimental arrangement of biprism to find the wavelength of light.

OR

b) Explain the formation of Newton's rings in reflected light. Explain the experimental determination of wave length of monochromatic light using Newton's rings.

3.a) Discuss the Fraunhoffer diffraction pattern due to single slit. Obtain expression for intensity distribution , position of the Maxima and Minima.

OR

b) Explain how do you determine the wavelength of light using a grating in the normal incidence position .

4. a) Describe the construction and working of a Nicol prism.

OR

b) Define specific rotation. Describe how specific rotation of sugar solution is determined experimentally.

5. a) What is the principle of Laser. Explain the construction and working of ruby laser.

OR

b) What is total internal reflection? Describe an optical fiber and explain how a light ray propagates in it. Write its uses.

Section-B (Short answer type)

Answer any three questions **Marks: 3X5 = 15**

6. Explain the defect coma and how it is eliminated.
7. Explain the formation of colours in thin films.
8. Explain the construction and working of a zone plate.
9. What is double refraction explain.
10. What is Holography? Write its applications.

Section-C

Answer any two questions **Marks: 2X5 = 10**

11. An achromatic lens of focal length 20 cm is to be made out of 2 thin crown and flint glass lenses in contact. If the dispersive power of crown and flint glasses are 0.2 and 0.4 respectively. Find the focal lengths of the lenses used.

12. In a Newton's rings experiment the diameter of the 16th ring was found to be 0.590 cm and that of 6th ring was 0.336cm if the wavelength of tight used $5893\,\overset{0}{A}$. Find the radius of the Plano convex lens used.

13. A plane diffraction grating in the second order shows an angle of diffraction 40^0 at the mercury blue line of wavelength $4360\,\overset{0}{A}$. Calculate the number of lines per centimeter of the grating plate.

14. Determine the specific rotation of the given sample of sugar solution, if the plane of polarization is turned through 26^0. The length of tube containing 20% of sugar solution is 20 cm.

15. An optical fiber has a core refractive index of 1.50 and a cladding refractive index of 1.45. Determine the critical angle at the core-cladding interface.

SRI VENKATESWARA UNIVERSITY : TIRUPATI

STATISTICS SYLLABUS (II YEAR)

SEMESTER – III (CBCS With Maths Combination Common to BA/BSc)

PAPER – III : STATISTICAL METHODS

UNIT - I

Correlation : Meaning, Types of Correlation, Measures of Correlation : Scatter diagram, Coefficient of Correlation , Rank Correlation Coefficient (with and without ties), Bi-variate frequency distribution, correlation coefficient for bi-variate data and simple problems.

UNIT - II

Correlation Ratio : Measurements, Partial and Multiple correlation coefficients with simple problems. Linear Regression: Regression lines, Regression coefficients and it's properties, Regressions lines for bi-variate date and simple problems.

UNIT - III

Curve fitting: Principals of least squares, Fitting of straight line ($y = a + b\,x$), Fitting of Second degree polynomial or parabola ($y = a + b\,x + c\,x^2$), Fitting of power curve ($y = a\,x^b$) and exponential curves of type i) $y = a\,e^{b\,x}$ and ii) $y = a\,b^x$ with problems.

UNIT – IV

Attributes : Notations, Class, Order of class frequencies, Ultimate class frequencies, Consistency of data, Conditions for consistency of data for 2 and 3 attributes only , Independence of attributes , Association of attributes and its measures, Relationship between association and colligation of attributes, Contingency table: Square contingency($\boldsymbol{\chi^2}$**),** Mean square contingency($\boldsymbol{\Phi^2}$), Coefficient of mean square contingency (C), Tschuprow's coefficient of contingency ($\boldsymbol{\tau^2}$**).**

UNIT - V

Basic concepts: Population, Sample, Parameter, statistic, Sampling distribution, Standard error. Definition and properties of Student t- distribution, F – Distribution, χ^2 Distributions and its applications, interrelationships.

REFERENCE BOOKS:

1. Fundamentals of mathematical statistics: S.C.Guptha and V.K. Kapoor
2. Outlines of statistics, Vol II: Goon Guptha, M.K.Guptha and Das Guptha B
3. Introduction to mathematical Statistical : Hoel P.G
4. BA/BSc II year statistics- Statistical methods and inference- Telugu Academy
5. Statistics Made simple Do it yourself on PC By K.V.S. Sarma
6. Applied Statistics with Microsoft Excel By Gerald Keller

Practical Paper - III

1. Calculation of Correlation coefficient for un groped data (Direct method)
2. Calculation of Correlation coefficient for un groped data (Indirect method)
3. Calculation of Correlation coefficient for Bi-variate data
4. Calculation of Rank correlation coefficient with and without ties
5. Construction of two regressions lines for un grouped data
6. Construction of two regressions lines for Bi-variarte data
7. Calculation of Multiple Correlation coefficients.
8. Calculation of Partial Correlation coefficients.
9. Fitting of straight line $y = a + b\,x$
10. Fitting of second degree polynomial or parabola $y = a + b\,x + c\,x^2$
11. Fitting of exponential curve $y = a\,e^{b\,x}$
12 Fitting of curve $y = a\,b^x$
13. Fitting of power curve $y = a\,x^b$
14. Calculation of Yule's coefficient of association and colligation
15. Calculation of Coefficient of mean square contingency (C), Tschuprow's coefficient of contingency ($\boldsymbol{\tau^2}$**).**

Note : The above practical are to be done using M S Excel and SPSS Package where ever it is possible

THREE YEAR B.A. / B.Sc DEGREE EXAMINATION

CBCS – THIRD SEMESTER

Part - II - STATISTICS (WM)

Paper III : STATISTICAL METHODS

W.E.F. 2016 - 17

MODEL PAPER

Max. Marks: 75 **Times: 3 Hours**

Part – A

Answer any **FIVE** questions, each question carries equal marks (**5X5=25 marks**)

1. Derive the limits of correlation coefficient.
2. Discuss about correlation ratio.
3. Discuss about multiple correlation.
4. Explain the method of least squares.
5. Write all combinations of classes for 3 attributes.
6. What do you mean by independence of attributes?
7. Define the terms (i) parameter (ii) Statistic with suitable examples.
8. What is standard error (S.E). Write Standard errors of different statistic's.

Part – B

Answer ALL questions, each question carries equal marks (5X10=50 marks)

UNIT - I

9. If X,Y are independents,U= aX+bY, V= aX-bY then find the correlation coefficient between U and V.

OR

10. Derive the formula of Spearman's rank correlation coefficient.

UNIT - II

11. Derive the regression lines of y on x and x on y.

OR

12. Write the properties of regression coefficients with at least two proofs.

UNIT - III

13. Explain fitting of Exponential curve $y = a\, e^{b\,x}$.

OR

14. Fit a straight line of the given data

X	149	157	142	140	138	142	145	142	144	140	146	144
Y	129	110	126	130	141	129	127	127	119	118	119	131

UNIT -IV

15. Define consistency of the data. Discuss the conditions for consistency of the data?

OR

16. Discuss about association and colligation of two attributes.

UNIT - V

17. What is t- distribution and write down the properties.

OR

18. What is χ^2- distribution and write its applications.

SRI VENKATESWARA UNIVERSITY : : TIRUPATHI
ZOOLOGY SYLLABUS FOR III SEMESTER
W.E.F. 2016-17
ZOOLOGY –PAPER-III (THEORY)
CYTOLOGY, GENETICS AND EVOLUTION

PERIODS- 60 MAX. MARKS -100

UNIT-I

1. Cytology-I

1.1. Definition , History, Prokaryotic and eukaryotic cells, virus ,viroids Mycoplasma
1.2. Electron microscopic structure of eukaryotic cell.
1.3. Plasma Membrane-Different models of plasma membrane

UNIT- II

2.1 Cell Organelles

2.1. Structure and functions of Endoplasmic Reticulum
2.2 Structure and functions of Golgi apparatus
2.3 Structure and Functions of Lysosomes
2.4 Structure and functions of Ribosomes
2.5 Structure and functions of Mitochondria
2.6 Nucleus
2.7 Chromatin-Structure and Significance, Chromosomes-Structure, Types , Functions

UNIT-III

3.1 Genetics-I

3.1.1 Mendels work on transmission of traits
3.1.2 Principles of inheritance
3.1.3 Incomplete dominance and co-dominance
3.1.4 Lethal alleles, Epistasis, Pleiotropy

UNIT-IV

4.1 Genetics-II

4.1.1 Sex Determination
4.1.2 Sex Linked inheritance
4.1.3 Linkage and crossing over .
4.1.4 Extra chromosomal inheritance
4.1.5 Human Karyotyping

UNIT-V

5.1 Evolution

5.1.1 Origin of life
5.1.2 Lamarckism, Darwinisim, Neo-Darwinisim, Hardy-Weinberg Equilibrium
5.1.3 Variations, isolating mechanisims, natural selection
5.1.4 Types of natural selection(Directional, Stablizing, disruptive)
5.1.5 Artificial Selections and forces of evolution
5.1.6 Speciation (Allopatric and Sympatric)
5.1.7 Macro evolutionary principles(Examples : Darwin's finches)

SUGGESTED READINGS

Lodish Berk,zipursky,Matsudaria, Baltimore, Darnell 'Molecular cell Biology' W.H Free man and Company New York..

Gardner, E.J., Simnons.,M.J Snustad,D.P(2008), Principle of Genetics. VIII Edition wiley india.

Snustand , D.P Simmons,M.J (2009) Principles of Genetics.V Edition. John.

Mohan.P Arrora-History and Genetics, Himalaya Publishing House.

Klug, W.S Cummings, M.R Spencerm C.A(2012). Concepts of Genetics. X Edition Benjamin Cummings.

Russell, P J (2009) Genetics-A Molecular Approach. III Edition, Benjamin Cummings.

Griffiths, A.J.F Wessler, S .R Lewonthin, R.C and carroll, S.B Introudction top genetic analysis. IX Edition W.H Free man and Co.

Ridely.M.(2004) Evolution. III Edition , Blackwell Publishing.

Douglas, J Futuyma(1997), Evolutionary Biology Sinauer Assocites.

Minkoff. E(1983). Evolutionary Biology Addison –Wesley.

Neil A.Cambel., Jane. B Reece, Bilogy,7th ed, Cimmings

De.Robertis & De Robertis 'Cell and Molecular Biology' by Saunders College.

James D.Watson, Naney H Hopkins' Molecular Biology of the Gene.

P Arora,' Molecular Biology' Himalaya Publishing house Pvt. Ltd.

Edward Gasque' Manual of Laboratory Experiments in Cell Biology 'W.C Brouh Publishers.

Mohan P.Arora , ' Biomolecules,' Himalaya Publishing House Pvt.Ltd.

25-5-2016

Dr. Md Azhar Baig
BOS Chairman

SRI VENKATESWARA UNIVERSITY : : TIRUPATHI
ZOOLOGY PRACTICAL EXAMINATION FOR III SEMESTER
ZOOLOGY –PAPER-III (PRACTICAL)
CYTOLOGY, GENETICS AND EVOLUTION

PERIODS- 24 MAX. MARKS -50

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1. Cytology

1 Preparation of Temporary slides of Mitotic division with onion root tips.
2 Observation of Various Stages of Mitosis and meiosis (Prepared slides)
3 Mounting of Salivary gland Chromosomes of Chirnomes larva .

2. Genetics

1 Study of Mendelian Inheritence using suitable examples
2 Study of linkage recombination,gene mapping using the data
3 Study of human karyotypes

3. Evolution

1 Study of fossil evidences

2 Study of homology and analogy from suitable specimens and pictures

3 Phylogeny of horse with pictures
4 Darwins finches(Pictures)
5. Visit to natural history museum and submission of report

Certified Laboratory record should be submitted at the time of practical examination.



25-5-2016
Dr. Md Azhar Baig
BOS Chairman

SRI VENKATESWARA UNIVERSITY : : TIRUPATHI
ZOOLOGY MODEL QUESTION PAPER FOR III SEMESTER
ZOOLOGY –PAPER-III (THEORY)
CYTOLOGY, GENETICS AND EVOLUTION

TIME- 3 Hrs MAX. MARKS -75

PART-A

I. Answer any Five of the following 5X5=25
Each question carry 5 marks
Draw labeled diagrams wherever necessary

1. Mitochondrion
2. Ribosomes
3. Neo Darwinism
4. Natural selection
5. Incomplete Dominance
6. Crossing over
7. Mendel's Laws
8. Hardy Weinberg equilibrium

PART-B

II. Answer any five questions .each question carry 10.marks 5X10=50
Draw labeled diagrams wherever necessary

9. Give account of Plasma membrane .

Or

Describe types, Structure and functions of Chromosomes.

10. Write an essay on Extra Chromosomal inheritance.

Or

Give an account of Sex linked inheritance

11. Explain the significance of human karyotyping .

Or

Give an account of Gene Interactions .

12. Write an essay on Sex Determination

Or

Write an essay on Mutations.

13. Give an account of isolating Mechanisms .

Or

Write an essay on Organic Variations.

25-5-2016
Dr. Md Azhar Baig
BOS Chairman

SRI VENKATESWARA UNIVERSITY : : TIRUPATHI
ZOOLOGY MODEL PRACTICAL EXAMINATION FOR III SEMESTER
ZOOLOGY –PAPER-III (Practical)
CYTOLOGY, GENETICS AND EVOLUTION

TIME- 2 Hrs **REVISED** MAX. MARKS -50

1. Squash Preparation of Onion root tip for Mitotic Chromosomes. 10M

Or

Mounting of salivary gland chromosomes of chironomous

2. Identify and Comment on the following spotters 5 X6= 30 M

1) Mitosis stage -1
2) Meiosis State- 1
3) Human Karyotype
4) Horse evolution clipping- 1
5) Homologous clipping -1
6) Hardy -Weinberg Equalibraium-1

3. Certified Record 10M

Examiners are instructed to set the question paper as per the practical syllabus.

Spotters :

Identification -1 Mark
Diagram -2 Mark
Comments -2 Mark

Certified Practical Record is Compulsory. Student is not admitted to Practical's without Record Book.

_____

25-5-2016
Dr. Md Azhar Baig
BOS Chairman

Foundation Course - 8

ANALYTICAL SKILLS

Syllabus, Forall Degree Programmes.

w.e.f. 2015-16 (Revised in April, 2016)

Semester – IV (Total 30 Hrs)

UNIT – 1

Data Analysis:-The data given in a Table, Graph, Bar Diagram, Pie Chart, Venn diagram or a passage is to be analyzed and the questions pertaining to the data are to be answered.

UNIT – 2

Sequence and Series:- Analogies of numbers and alphabets completion of blank spaces following the pattern in A:b::C: d relationship odd thing out; Missing number in a sequence or a series.

UNIT - 3

Arithmetic ability:-Algebraic operations BODMAS, Fractions, Divisibility rules, LCM&GCD (HCF).

Date, Time and Arrangement Problems: Calendar Problems, Clock Problems, Blood Relationship.

UNIT - 4

Quantitative aptitude:- Averages, Ration and proportion, Problems on ages, Time-distance – speed.

UNIT – 5

Business computations:- Percentages, Profit &loss, Partnership, simple compound interest.

Reference Books:

1. Quantitative Aptitude for Competitive Examination by R S Agrawal, S.Chand publications.
2. Quantitative Aptitude and Reasoning by R V Praveen, PHI publishers.
3. Quantitative Aptitude : Numerical Ability (Fully Solved) Objective Questions, Kiran Prakashan, Pratogitaprakasan, Kic X, Kiran Prakasan publishers
4. Quantitative Aptitude for Competitive Examination by Abhijit Guha, Tata Mc Graw hill publications.
5. Old question Paper of the exams conducted by (Wipro, TCS, Infosys, Etc) at their recruitment process, source-Internet.

SEMESTER-END EXAMINATION

Pattern of the Question Paper for Analytical Skills

Time: 2 Hours
Marks: 50

Maximum

	Part - A	
1. Comprehension	-	5 Marks(Five Multiple Choice Questions)
	Part - B	
2. Objective Type Questions Questions)	-	20 Marks (Twenty Multiple Choice
	Part - C	
3. One Word Answers	-	10 Marks (Ten Questions)
	Part - D	
4. One Sentence Answers	-	10 Marks (Five Questions)
	Part - E	
5. Matching	-	5 Marks (5=6)

Reference Books:

1. Quantitative Aptitude for Competitive Examination by R S Agrawal, S.Chand publications.

2. Quantitative Aptitude and Reasoning by R V Praveen, PHI publishers.

3. Quantitative Aptitude : Numerical Ability (Fully Solved) Objective Questions, Kiran Prakashan , Pratogita Prakasan, Kic X , Kiran Prakasan publishers

4. Quantitative Aptitude for Competitive Examination by Abhijit Guha, Tata Mc Graw hill publications.

5. Old question Paper of the exams conducted by (Wipro, TCS, Infosys, Etc) at their recruitment process, source-Internet.

SEMESTER-END EXAMINATION

Pattern of the Question Paper for Analytical Skills

Model paper

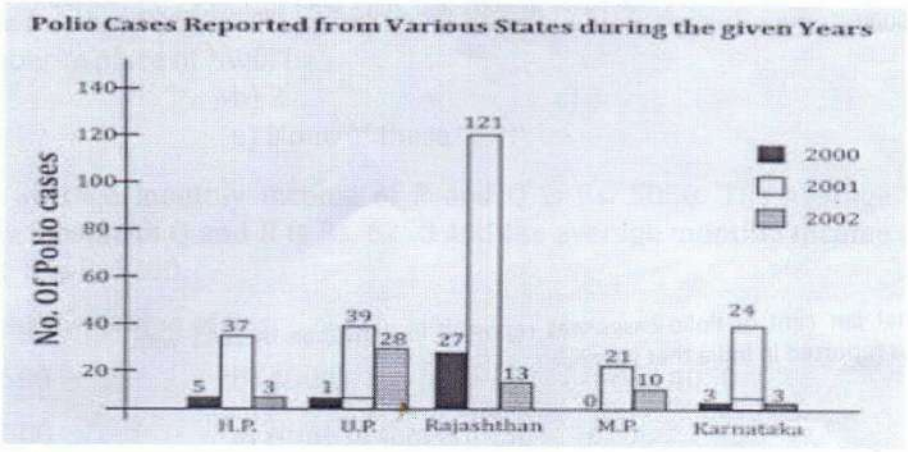
Time: 2 Hours

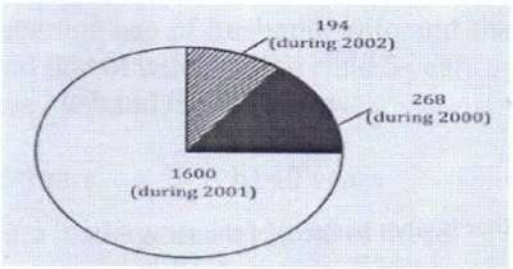
Maximum Marks: 50

Part - A

1. Comprehension - 5 Marks(Five Multiple Choice Questions)

Study the following graph and pie chart carefully to answer the questions





1.What is the average difference between Polio cases in 2001 and that in 2002?
(A) 35

(B) 37

(C) 38

(D) 39

(E) None of these

2.In which state the difference between Polio cases in 2001 and 2002 is 11 and which had zero incidence in 2000?

(A) Rajasthan

(B) U.P.

(C) M.P.

(D) Karnataka

(E)H.P

3.Approximately what per cent of Polio cases was reported in Rajasthan in 2001 with respect to total cases reported in India that year?

(A) 6%

(B) 6.5%

(C) 7%

(D) 7.5%

(E) None of these

4.Polio cases in H.P. in 2002 and Rajasthan in 2000 together is what per cent of the Polio cases in Karnataka in 2001?

(A) 120%

(B) 80%

(C) 125%

(D) 75%

(E) 95%

5. Find the ratio between the total number of cases in the five states to that in the rest of country in 2000.

(A) 9 : 67

(B) 2 : 29

(C) 29 : 4

(D) 9 : 58

Part - B

2. Objective Type Questions - 20 Marks (Twenty Multiple Choice Questions)

1) The difference between the local value and the face value of 7 in the numberal 32675149 is

a) 75142 b) 64851 c) 5149

d) 69993 e) None of these

2) If the number 91876 * 2 is completely divisible by 8, then the smallest number in place of * will be :

a) 1 b) 2 c) 3

d) 4 e) None of these

3) The average monthly income of P and Q is Rs. 5050. The average monthly income of Q and R is Rs. 6250 and the average monthly income of P and R is Rs5200.

The monthly income of P is:

a) 3500 b) 4000 c) 4050

d) 5000 e) None of these

4)The average age of husband, wife and their child 3 years ago was 27 years and that of wife and the child 5 years ago was 20 years. The present age of the husband is:

a) 35 years b) 40 years c) 50 years

d) Data inadequate e) None of these

5)A car owner buys petrol at Rs.7.50, Rs. 8 and Rs. 8.50 per liter for three successive years. What approximately is the average cost per liter of petrol if he spends Rs. 4000 each year?

a) Rs. 7.98 b) Rs. 8 c) Rs. 8.50

d) Rs. 9 e) None of these

6)The maximum numbers of students among them 1001 pens and 910 pencils can be distributed in such a way that each student gets the same number of pens and same number of pencils is

a) 91 b) 910 c) 1001

d) 1911 e) None of these

7) 252 can be expressed as a product of prime as

a) $2 \times 2 \times 3 \times 3 \times 7$ b) $2 \times 2 \times 2 \times 3 \times 7$ c) $3 \times 3 \times 3 \times 3 \times 7$

d) $2 \times 3 \times 3 \times 3 \times 7$ e) None of these

8)Three different containers contain 496 litres, 403 litres and 713 litres of mixtures of milk and water respectively. What biggest measure can measure all the different quantities exactly?

a) 1 litre b) 7 litre c) 31 litre

d) 41 litre e) None of these

9) If 40% of a number is equal to two-third of another number, what is the ratio of first number to the second number?

a) 2 : 5 b) 3 : 7

d) 7 : 3 e) None of these

10) An amount of Rs.735 was divided between A, B and C. If each of them had received Rs.25 less, their shares would have been in the ratio of 1 : 3 : 2. The money received by C was :

a) Rs.195 b) Rs.200 c) Rs.225

d) Rs.245 e) None of these

11) A shopkeeper buys 100 eggs at Rs.1.20 per piece. Unfortunately 4 eggs got spoiled during transportation. The shopkeeper sells the remaining eggs at Rs.15 a

dozen. Find his profit or loss?

a) Rs.120 b) 102 c) 201

d) 121 e) None of these

12) The speeds of three cars are in the ratio 5 : 4 : 6. The ratio between the time taken by them to travel the same distance is :

a) 5 : 4 : 6 b) 6 : 4 : 5 c) 10 : 12 : 15

d) 12 : 15 : 10 e) None of these

13) A, B and C started a shop by investing Rs.27,000, Rs.72,000 and Rs.81,000 respectively. At the end of the year, the profits were distributed among them. If C's

share of profit be Rs.36,000, then the total profit was :

a) Rs.80,000 b) Rs.95,600 c) Rs.1,08,000

d) Rs.1,16,000 e) None of these

14) A, B, C enter into a partnership investing Rs.35,000, Rs.45,000 and Rs.55,000 respectively. The respective shares of A, B, C in an annual profit of Rs.40,500 are :

a) Rs.10,500, Rs.13,500, Rs.16,500 b) Rs.11,500, Rs.13,000, Rs.16,000

c) Rs.11,000, Rs.14,000, Rs.15,500 d) Rs.11,500, Rs.12,500, Rs.16,500

e) None of these

15)An aeroplane covers a certain distance at a speed of 240 kmph in 5 hours. To cover the same distance in $13\frac{2}{3}$ hours, it must travel at a speed of:

A.300 kmph

B.360 kmph

C.600 kmph

D.720 kmph

16)**If 6th March, 2005 is Monday,** what was the day of the week on 6th March, 2004?

A)Sunday B)Saturday C)Tuesday D)wednes day

17)The reflex angle between the hands of a clock at 10.25 is

A)180°

B)192 ½ ^{0}

C)195°

D)197 ½ ^{0}

18)A father said to his son, "I was as old as you are at present at the time of your birth." If the father's age is 38 years now, the son's age five years back was

a) 14 years b) 19 years c) 33 years

d) 38 years e) None of these

19) I gain 70 paise on Rs.70. My gain percent is

a) 0.1% b) 1% c) 7%

d) 10% e) None of these

20) A book was sold for Rs.27.50 with a profit of 10%. If it were sold for Rs.25.75, then what would have been the percentage of profit or loss?

a) 2% b) 3% c) 4%

d) 5% e) None of these

3. One Word Answers - 10 Marks (Ten Questions)

1) R is sister of M who is brother of H. D is mother of K who is brother of M. How is R related to D?

2) K is brother of T. M is mother of K. W is brother of M. How is W related to T?

3) The greatest number of four digits which is divisible by 15, 25, 40 and 75 is:

4) Simplify - $12.05 \times 5.4 \div 0.6 - .45$

5) If the difference between SI and CI for 2 years is 4 Rs. and Principal is 2500 Rs. then find out the rate of Interest?

6) 8, 12, 24, 60, ?, 630

7) BOATS : HGZLY : : STREAM : ?

8) 8, 52, 13, 47, 18, 42, 23, ?, 28

9) Find the odd one. 3, 5, 7, 9, 11, 13

10) C, A ,G ,E, K, I, O ,M ,_!_, _!_

4. One Sentence Answers - 10 Marks (Five Questions)

1)If 'black' is called 'red', 'red' is called 'yellow', 'yellow' is called 'green', 'green' is called 'white' and 'white' is called 'orange'; then what is the colour of blood?

2)The L.C.M. of two numbers is 48. The numbers are in the ratio 2 : 3. Then sum of the number is:

3) If '+' means '÷' , '–' means '×', '×' means '+' and '÷' means '–' then find out the value of 36 + 3 × 4 ÷ 2 – 3 ?

4) If the perimeter of a rectangle is increased by 20%, by how much percent its area will increase?

5)The least among the following is: 0.2,1/0.2,0.02,(0.2)x(0.2)

5. Matching - **5 Marks (5=5)**

1. Identify the figure that completes the pattern.



(X) (1) (2) (3) (4)

A.1
B.2
C.3
D.4

2. Identify the figure that completes the pattern.



(X) (1) (2) (3) (4)

A.1
B.2
C.3
D.4

3. Identify the figure that completes the pattern.



(X) (1) (2) (3) (4)

A.1
B.2
C.3
D.4

4. Identify the figure that completes the pattern.



(X) (1) (2) (3) (4)

A.1
B.2
C.3
D.4

5. Identify the figure that completes the pattern.



(X) (1) (2) (3) (4)

A.1
B.2
C.3
D.4

(S. SURYANARAYANA)
CHAIRMAN, BOS - English
Sri Venkateswara University, Tirupati

FOUNDATION COURSE -7

COMMUNICATION SKILLS AND SOFT SKILLS-3 (CSS -3)

IV SEMESTER – W.E.F. 2016-17

COURSE CONTENT (30 hours)

A current axiom is that hard skills will get a person an interview, but soft skills will get that person the job. Unit I of the course is on soft skills, which are absolutely necessary in the global job market. Writing is considered the most difficult of all the skills. Units II to V help the learner improve their writing skills, especially academic/formal writing.

Unit I: Soft Skills

1. Positive Attitude
2. Body Language
3. SWOT/SWOC Analysis
4. Emotional Intelligence
5. Netiquette

Unit II: Paragraph Writing

1. Paragraph Structure
2. Development of Ideas

Unit III: Paraphrasing and Summarizing

1. Elements of Effective Paraphrasing
2. Techniques for Paraphrasing
3. What Makes a Good Summary?
4. Stages of Summarizing

Unit IV: Letter Writing

1. Letter Writing (Formal and Informal)
2. E-correspondence

Unit V:

1. Resume and CV
2. Cover Letter

Three Year BA/B.Sc/B.Com Degree Model Question Paper, May 2017
CHOICE BASED CREDIT SYSTEM
SEMESTER IV– FOUNDATION COURSE

CSS – III - COMMUNICATION SKILLS AND SOFT SKILLS

Time 2 Hours **Max Marks : 50**

I. Attempt any TWO of the following questions. 2x5=10 marks

1. What is positive attitude? How does it help David defeat Goliath?
2. What is good body language? How can it be improved by students?
3. What is SWOT Analysis? What is the difference between SWOT and SWOC analyses?
4. How does the speaker of the poem "SOAP" prove his emotional balance finally?
5. Write a note on dos and don'ts to be observe by one while sending an e-mail on the internet?

II. Attempt any TWO of the following questions. 2x5=10 marks

1. What is the role of creativity in paragraph writing?
2. What are the essentials of a good paragraph?
3. What are the three types of paragraphs? Write with suitable examples.
4. Write a paragraph on "Mummies ".
5. Expand any one of the following ideas.
   a. All That glitters is not gold
   b. Example is better than precept.

III. Attempt any TWO of the following questions. 2x5=10 marks

1. What are the different stages of summarizing?
2. What are the features of a good summary?
3. Differentiate between a paraphrase and a summary.
4. Paraphrase the following poem.

This is my prayer to thee, my lord---
Strike, strike at the root of penury in my heart.
Give me the strength lightly to bear my
Joys and sorrows.
Give me the strength to make my love
Fruitful in service
Give me the strength never to disown
The poor or bend my knees before insolent might.

Give me the strength to raise my mind
High above daily trifles.
And give me the strength to surrender
My strength to thy will with love.

5. Define social media. Write a note on the advantages and disadvantages of social media.

IV. Attempt any TWO of the following questions. 2x5=10 marks

1. What are the functions of a business letter?
2. What are sales letters? Write an example of a sales letter.
3. Write an enquiry letter asking for the price of a latest android phone.
4. What are the salient feathers of a smart e-mail?
5. One of your friends has recently left for Singapore for doing MBA. You miss him very much. Write an e-mail to your friend on the same.

V. Attempt any TWO of the following questions. 2x5=10 marks

1. What is the purpose of a CV/Resume?
2. What is a cover letter? Write a cover letter for the post of a clerk in a company.
3. Write a CV for the post of an accountant.
4. Write a CV for the post of a News Reader on a TV channel.
5. What should the candidate include in the personal information section in a CV/Resume?

Foundation Course - 9

INFORMATION & COMMUNICATION TECHNOLOGY –2 (ICT-2)

Internet Fundamentals and Web Tools

Common for BA / BCom / B Sc / BBA Programmes

IV SEMESTER – W.E.F. 2016-17

(30 Hours of Teaching Learning including Lab)

Unit-I :

Fundamentals of Internet : Networking Concepts, Data Communication – Types of Networking, Internet and its Services, Internet Addressing – Internet Applications – Computer Viruses and its types – Browser –Types of Browsers.

Unit-II:

Internet applications: Using Internet Explorer, Standard Internet Explorer Buttons, Entering a Web Site Address, Searching the Internet – Introduction to Social Networking: twitter, tumblr, Linkedin, facebook, flickr, skype, yelp, vimeo, yahoo!, google+, youtube, WhatsApp, etc.

Unit-III :

E-mail : Definition of E-mail - Advantages and Disadvantages – UserIds, Passwords, Email Addresses, Domain Names, Mailers, Message Components, Message Composition, Mail Management,Email Inner Workings.

Unit IV:

WWW- Web Applications, Web Terminologies, Web Browsers,URL – Components of URL, Searching WWW – Search Engines and Examples

Unit-III :

Basic HTML: Basic HTML – Web Terminology – Structure of a HTML Document – HTML, Head and Body tags – Semantic and Syntactic Tags – HR, Heading, Font, Image and Anchor Tags –Different types of Lists using tags – Table Tags, Image formats – Creation of simple HTML Documents.

REFERENCE BOOKS :

1. In-line/On-line : Fundamentals of the Internet and the World Wide Web, 2/e – by Raymond Greenlaw and Ellen Hepp, Publishers : TMH

Code No:

SRI VENKATESWARA UNIVERSITY: TIRUPATI
IV SEMESTER – 2016-17 ACADEMIC YEAR
Foundation Course
Internet fundamentals and web tools
ICT-2 (Information and Communication Technology)-2

Time: 2 Hours **Max. Marks: 50**

Note: This question paper contains two parts A and B.
Part A is compulsory which carries 10 marks. Answer any five of the following questions in Part A.
Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 8 marks

PART - A

Answer any Five of the following. All questions carry equal marks
5 x 2 = 10 Marks

1. Give a note on networking concepts.
2. Write short notes on types of browsers.
3. What are the features of face book?
4. What are the features of google puls?
5. Write about domain names in e-mail address.
6. Write about URL.
7. What are the uses of search engines?
8. Write about passwords in e-mail.

Part – B

Answer one question from each Unit. All questions carry equal marks
5 x 8 = 40 Marks

UNIT - I

9. Explain in detail about internet and it services
10. Discuss in detail about different types of computer viruses

UNIT - II

11. Explain about internet applications
12. Describe different types of social networks

UNIT - III

13. Explain advantages and disadvantages of user ids
14. Discuss about mail management

UNIT - IV

15. Discuss about web technologies
16. Describe about searching "www"

UNIT - V

17. Describe the structure of HTML document
18. Explain a) image and anchor tax
    b) Symantec and syntax tax

FOUNDATION COURSE

LEADERSHIP EDUCATION

Syllabus, Forall Degree Programmes.

with Effect From 2016-17

Semester – IV (Total 30 Hrs)

1. Organisation – Management – Leadership –Meaning and Significance – Different theories – Trait Theory, Blake &Mountan Theory – Other functions of Management.
2. Behavioral Concepts – Individual Behaviour – Perception – Learning – Attitude Formation and Change – Motivation – Theories of Motivation – Personality Development.
3. Interpersonal Behaviour – Communication – Leadership – Influencing Relations – Transactional Analysis.
4. Group Dynamics – Roles – Morale – Conflict – Groups – Inter-Group Behaviour – Inter-Group Collaboration and Conflict Management.
5. Team Building and Management – Developing team resources – Designing team – Participation and Repercussion – Team building activities.

Reference Books:

1. Fred Luthans, "Organizational Behaviour", Tata McGraw Hill Publishing Co., New Delhi.
2. Robins, Stephen P, "OrganisationalBehaviour", 9th Edition, Prentice Hall of India, New Delhi.
3. Koontz and O "Donnell", Essentials of Management,Tata McGraw Hill Publishing Co., New Delhi, 2000.
4. Keith Davis, "Human Behaviour at Work", Tata McGraw Hill Publishing Co., New Delhi.
5. Aswathappa,"OrgnizationalBehaviour", Himalaya Publishing House, Mumbai
6. Stoner Freeman, "Management", Prentice Hall of India, New Delhi.

SRI VENKATESWARA UNIVERSITY, TIRUPATI.

II BA/B.Com/B.Sc Degree Examinations.

LEADERSHIP EDUCATION,

(with effect from 2016-17)

Time: 2.00 Hrs. Max. Marks: 50.

PART - A.

~~ఈ~~ క్రింది వాటిలో ఏవేని 5 ప్రశ్నలకు సమాధానాలు రాయండి. 5X4=20

1. వ్యవస్థను నిర్వహించుము?
2. ప్లేటో సిద్ధాంతాన్ని వివరించండి?
3. అభ్యసనం అనగా నేమి?
4. ప్రేరణ అనగా నేమి?
5. కమ్యూనికేషన్ గురించి వివరించండి?
6. లాంఛన ప్రయత్నేతర కమ్యూనికేషన్ అనగానేమి?
7. అంతర్గత సమూహ సంఘర్షణ అనగా నేమి?
8. సమ్మోహన సాధనం అనగా నేమి?

PART - B.

~~ఈ~~ క్రింది వాటిలో ప్రతి యూనిట్ నుండి ఒకేఒక్క ప్రశ్నకు సమాధానం రాయండి 5X6 = 30.

UNIT - I

9. a) వ్యవస్థ యొక్క విభాగములను గురించి రాయుము. (లేదా)
   b) నాయకత్వము అనగా నేమి? దాని విధులను చర్చించుము.

UNIT - II

10. a) అవగాహన అనగా నేమి? దాని పాత్రను వివరించుము. (లేదా)
    b) వ్యక్తిత్వము అనగానేమి? దాని స్వభావాన్ని గురించి తెల్పుము.

Telugu BOS chairperson.

UNIT - III

11 a) కమ్యూనికేషన్ విధానాలను వివరించుము (లేదా)

b) వ్యవస్థాపరమైన కమ్యూనికేషన్ గురించి వివరించండి

UNIT - IV

12 a) శక్తివంతమైన గ్రూపులను గురించి వివరించండి (లేదా)

b) గ్రూపు నిర్ణయ ప్రక్రియలు వివిధ పద్ధతులను తెల్పుంది

UNIT - V

13 a) ఇల్లు నిర్మాణాలు ఏవనగానేమి? ఇల్లు నిర్మాణాలలోని వివిధ విధానాలను వివరింపుము. (లేదా)

b) ఇల్లును ఉష్ణమండల వేయబడిన గల వివిధ దశలను వివరించండి.

X

HOD
Telugu BOS Chairperson.

B. A. HISTORY

II Year B. A. Programme (UG) Courses – Under CBCS

SEMESTER – IV – W.E.F. 2016-17

Paper – IV (Core Paper)

SOCIAL REFORM MOVEMENT & FREEDOM STRUGGLE (1857 to 1947 A.D.)

(History and Culture of India (1857 – 1947))

Unit - 1	Social, Religious & Self-Respect Movements: Social & Cultural Awakening – Brahma Samaj, Arya Samaj, Theosophical Society, Ramakrishna Mission, Aligarh Movement – Emancipation of Women – Struggle Against Caste: JyotibaPhule, Narayana Guru, Periyar, Dr. B. R. Ambedkar.
Unit - II	Growth of Nationalism in the 2nd Half of 19th Century – Impact of British Colonial Policies under Viceroys' Rule and the Genesis of Freedom Movement – Birth of Indian National Congress.
Unit - III	Freedom Struggle from 1885 to 1920: Moderate Phase — Partition of Bengal - Emergence of Militant Nationalism –Swadeshi & Boycott Movement – Home Rule Movement.
Unit - IV	Freedom Struggle from 1920 to 1947: Gandhiji's Role in the National Movement – Revolutionary Movement –Subhas Chandra Bose.
Unit - V	Muslim League & the Growth of Communalism – Partition of India – Advent of Freedom - Integration of Princely States into Indian Union – SardarVallabhai Patel.

References:

1	Anil Seal, Emergence of Indian Nationalism
2	Banerjee, Sekhar, From Plassey to Partition
3	Bayly, C A., Indian Society and Making of the British Empire
4	Brown, Judith: Gandhi's Rise to Power
5	Chandra, Bipan, et. al., India's Struggle for Independence
6	Chatterjee, Jaya, Bengal Divided: Hindu Communalism and Partition 1932-1947
7	Desai, A. R, : Social Background to Indian Nationalism
8	Dutt, R.P., India Today
9	Joshi, P.C., Rammohun and the Forces of Modernisation in India
10	Sarkar Sumit: Modern India 1885 to 1947
11	Stokes, Eric, Peasants and the Raj
12	R.C. Majumdar, The Struggle for Freedom, BharatiyaVidhyaBhavan Series

Project Work: As part of Internal Assessment, Project Work may be given on regional or local history related to culture, economy, struggles, land relations, cultural institutions and their influence on the society.

They can also be asked to create a play centered on any event in social reform movement or freedom struggle.

B.A. HISTORY

II Year B.A. Programme (UG) Courses – Under CBCS

Semester –IV

Paper – IV (Core Paper)

SOCIAL REFORM MOVEMENT & FREEDOM STRUGGLE (1858 to 1947 A.D.)

(History and Culture of India (1858-1947)

Time : 3hrs **Max.marks : 75**

PART – A

Answer any Five Questions choosing one question from each unit

(Marks 5X10 = 50)

1. Explain the role of Brahmo samaj in the Socio Religious Movement in India

   (or)

   Write a brief note on Self-respect movements in India
2. Estimate the Administrative measures of Lord Ripon.

   (or)

   Describe the causes that led to the rise of Nationalism in India.
3. Explain the role of moderates in the Indian National Movement

   (or)

   Write a note on Home Rule Movement during the Indian National Movement
4. Write a note on the role of Gandhiji in the Indian National Movement.

   (or)

   Elaborate the role of Subhas Chandra Bose during the Indian National Movement
5. Explain the events briefly that led to the Partition of India in 1947 A.D.

   (or)

   Describe the role of Patel in the Unification of Princely states into Indian Union.

PART – B

Answer any five Questions

(Marks -5X5 = 25)

6. Arya Samaj
7. Indian national Congress
8. Rowlat-Act
9. Partition of Bengal
10. Muslim league
11. Jyothiba Pule
12. Tilak
13. Dr. B.R.Ambedkar

Chairman
BOS - HISTORY

II B.A. ECONOMICS – W.E.F. 2016-17

Semester – IV, Paper -4
Banking and International Trade

Module - 1

Trade Cycles - meaning and definition - Phases of a Trade Cycle -Inflation - definition - types of inflation - causes and effects of inflation measures to control inflation.

Module - 2

Banking: Meaning and definition -Functions of Commercial Banks - Concept of Credit creation-Functions of RBI - Recent developments in banking sectors.

Module – 3

Non-Bank Financial Institutions – Types of NBFIs - Factors contributing to the Growth of NBFIs –-Money market – Defects of Indian money market.

Module – 4

Concepts of Shares-Debentures - Stock Market - Functions - Primary and Secondary Markets - SEBI - Insurance - Life Insurance and General Insurance.

Module - 5

Macro Economic Policy - Fiscal, Monetary and Exchange rate policies Objectives and Significance - Importance of International Trade - Regional and International Trade – Defining Balance of Trade and Balance of Payment.

REFERENCES:

1. G.Ackley - "Macro Economics Theory and Policy", Collier Macmillan, 1978.
2. E.Shapiro - "Macro Economic Analysis", Galgotia Publications, 1999.
3. Central Statistical Organisations - "National Accounts Statistics".
4. R.Dornbush, s.Fisher and R.Startz - "Macro Economics", Tata Mc.Graw Hill, 9/e, 2004.
5. M.L.Seth-"Macro Economics", Lakshmi Narayana Agarwal, 2015.
6. K.P.M. Sundaram - "Money, banking & International Trade", Sultan Chand, 2010.
7. Dillard, D - "The Economics of John Maynard Keynes", Crossby Lockwood & Sons.
8. M.N.Mish ra & S.B.Mishra - "Insurance Principles & Practice" S.Chand 2012.
9. Bharati V.Pathak "The Indian Financial System Markets. Institutions & Services". Pearson.
10. D.M.Mithani & G.K.Murty - "Business Economics", Himalaya Publishing House, 2015.
11. M.L.Jhingan - Economic Development - Vikas, 2012.
12. G.Omkarnath - Economics - A Primer for India - Orient Blackswan, 2012.
13. Agarwal, V. (2010) Macroeconomics: theory and Policy, Dorling Kindersley (India) Pvt. Ltd., New Delhi
14. Ahuja, H.L. (2012) Macro Economics, Theory and policy, S. Chand and Company Ltd., New Delhi
15. Vaish. M.C. (2005), Macroeconomic Theory, Vishwa Prakashan, New Delhi.
16. Telugu Academy Publications.
17. Mishra M.N. Money, Banking and International Trade, Sulthanchant New Delhi.
18. Mithani D.A. Money Banking International Trade and Public Finance, Himalaya publishing House, Mumbai.
19. Varshney P.N and D.K.Mittal, (2003), Indian Financial System, Sultan Chand & Sons, New Delhi
20. Machiraju H.R,(2002), Indian Financial System, Vikas Publishing House Pvt, Ltd, New Delhi.

Sri Venkateswara University - Tirupati - CBCS Syllabus.

B.A - Economics - Semester - IV - paper - IV - w.e.f. 2016-2017.

BANKING and INTERNATIONAL TRADE.

MODEL QUESTION PAPER

Time: 3 hours | Max. Marks: 75

PART-A

Answer any FIVE Questions from the following; 5×5 = 25

1. Stag-flation → స్తంభన ద్రవ్యోల్బణం
2. open Market Systems → బహిరంగ మార్కెట్ చర్యలు.
3. Debentures → డిబెంచర్లు
4. Primary Market → పెలితమిక మార్కెట్
5. Life Insurance → జీవిత భీమా
6. Fiscal policy → కోశ విధానము
7. Money Market → ద్రవ్య మార్కెట్
8. Balance of payment → అంతర్జాతీయ వ్యాపార చెల్లింపుల శేషం.

PART-B

Answer any FIVE Questions from the following; 10×5 = 50

9. (a) Explain the phases of Trade Cycles ?
వ్యాపార చక్రాల దశలను గూర్చి వివరించుము?

(OR)

(b) what are the measures to Control the inflation in India ?
భారత దేశంలో ద్రవ్యోల్బణాన్ని అరికట్టే చర్యలను తెలియజేయుము?

10. (a) What are the Functions of Commercial Banks - explain ?
వాణిజ్య బ్యాంకుల విధులను గూర్చి వివరించండి ?

(OR)

(b) Describe the Functions of Reserve Bank of India ?
కేంద్ర బ్యాంకు యొక్క విధులను గూర్చి వివరించండి ?

11. (a) What are the Types of Non-Banking Financial Institutions ?
బ్యాంకేతర వితత సహాయ సంస్థల రకాలను గూర్చి వివరించండి?

(OR)

(b) what are the deffects occuring in Indian Money Market ?
మన దేశ ద్రవ్య మార్కెట్ లోని లోపాలను గూర్చి వివరించండి?

P.T.O

12. (a) what are the Functions of primary and Secondary Markets?
ప్రాథమిక మరియు ద్వితీయ మార్కెట్ల ఎనితీరును వివరించుము?

(OR)

(b) Describe the SEBI → Securities and Exchange Board of India?
సెక్యూరిటీస్ మరియు ఎక్స్‌చేంజ్ బోర్డ్ ఆఫ్ ఇండియా గూర్చి వివరించండి?

13. (a) Explain the Importance of International Trade?
అంతర్జాతీయ వ్యాపారం యొక్క ప్రాధాన్యతను గూర్చి వివరించండి?

(OR)

(b) Explain the Differences between Regional and International Trade?
దేశీయ, అంతర్జాతీయ వ్యాపారాల మధ్యగల తేడాలను వివరించండి?

=== ooo ===

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Board of Studies

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CBCS: Syllabus –Semester Wise (2016-17)
SECOND YEAR: SEMESTER –IV
B.A POLITICAL SCIENCE
PAPER – IV (CORE): INDIAN POLITICAL PROCESS

Unit – I Introduction to Indian Political Process

a) Evolution of party system in India
b) National parties –Congress, BJP,CPM., Regional parties – TDP, TRS, AAP.

Unit – II Electoral process in India

a) Trends from One party system to multi – party system
b) Determinants of voting behavior in India – Caste, Class & Money.

Unit – III Election Commission

a) Powers and Functions of Election Commission.
b) Role of Election Commission in Indian Political system.

Unit – IV Religion and Politics

a) Challenges to Indian democracy – Religious fundamentalism, Regionalism.
b) Impact of Defections – Anti-defection Law

Unit - V Recent Trends

a) Need for Electoral reforms.
b) Women representation in Parliament.

Reference books:

1. Biju M.R. (2009): Democratic Political Process, Mittal publishers.
2. Awasthi, A.P (2009): Indian Government and Politics, Lakshmi Narayana Agarwal.
3. Bhambari. P. (2007) : The Indian State and Political process, Shipman Publications, New Delhi.
4. Kohliatul and Prema Singh (Ed) (2013) : Routledge Hand book of Indian Politics Routledge, NewYork.
5. Rajeev Bhargava (Ed) Secularism and its Critics (1998), Delhi, OUP.

BOS : chairperson: 13/12/2k16

Members : 1. 13/12/16

2. 13/12/16

3. 13/12/16

SRI VENKATESWARA UNIVERSITY,TIRUPATHI
MODEL QUESTION PAPER
II YEAR SEMESTER – IV (CBCS)
B.A POLITICAL SCIENCE
PAPER IV: INDIAN POLITICAL PROCESS

Time: Three hours **Marks: 75**

SECTION- A **(5x5= 25 marks)**
Answer any FIVE questions
Each question carries 5 marks

1. Party system in India
2. TRS
3. Two party system
4. Role of class
5. Election Commission
6. Universal Adult Franchise
7. Communalism
8. Defections
9. Role of money in Elections
10. Women Representation

SECTION- B **(5x10= 50 marks)**
Answer all the questions
Each question carries 10 marks

1. (a) Explain the evolution of party system in India.
(OR)
(b) Trace the growth of AAP as a regional party.

2. (a) Discuss the fall of Congress party in Indian politics.
(OR)
(b) Analyse the role of caste in Indian elections

3. (a) Examine the powers and functions of election commission.
(OR)
(b) Assess the role of chief election commissioner in conducting elections in India.

4. (a) Explain briefly the major challenges to Indian democracy
(OR)
(b) What are the features of Anti – Defection Law?

5. (a) Examine the need for Electoral Reforms.
(OR)
(b) Do you think women representation is inadequate in our parliament? Explain.

BOS: chairperson: 13/12/2k16

Members: 1. 13/12/16

2. 13/12/16

3. 13/12/16

SRI VENKATESWARA UNIVERSITY : TIRUPATI

STATISTICS SYLLABUS (II YEAR)

Semester – IV (CBCS Non- Maths Combination BA)

Paper – IV : Random Variables and Probability Distributions

UNIT - I

Probability : Basic Concepts of Probability, Definitions of probability: Classical, statistical and axiomatic, Addition and Multiplication theorem on Probability for two and three events only, Baye's theorem - Simple problems on these topics.

UNIT – II

Random Variable: Definition, Types of random variables and its properties. Probability function: Probability mass function and Probability density function. Distribution function: Definition, Types and properties and simple problems.

UNIT – III

Mathematical Expectation: Definition and properties, Statement and proof of Addition, Multiplication theorems on mathematical expectation for two variables only. Definitions and properties of Moment Generating Function(M.G.F), Characteristic function(C.F), Cumulant Generating Function(C.G.F) without proofs

UNIT – IV

Discrete Distributions : Definition, characteristics and applications of Bernoulli Distribution, Binomial Distribution, Poisson Distribution, Negative Binomial Distribution, Geometric Distribution,. (Derivation of Mean and variance for all distributions)

UNIT – V

Continuous Distributions : Rectangular Distribution, Exponential distribution-Definitions and properties, Derivation of Mean and Variance only , Normal Distribution- Properties and applications.

Reference Books:

1. Fundamentals of Mathematical Statistics: S.C.Guptha and V.K. Kapoor

2. An outlines of statistics, Vol. II: Goon Guptha A.M, M.K.Guptha and Das Guptha B

3 Basic statistics By B.N Aggrawal

4. Statistical methods by S.P. Gupta

5. Fundamentals of Statistics by S.C. Gupta

4. Statistical methods and inference B.A.,/B.Sc., II year statistics - Telugu Academy

5. Statistics Made Simple Do it yourself on PC By K.V.S. Sarma

6. Applied Statistics with Microsoft Excel By Gerald Keller

Practical Paper – IV : Random Variables and Probability Distributions

1. Calculation of probability for future events by using Baye's theorem
2. Fitting of Binomial distribution and calculate expected frequencies (Direct method)
3. Fitting of Binomial distribution and calculate expected frequencies
(Recurrence relation method)
4. Fitting of Poisson distribution and calculate expected frequencies (Direct method)
5. Fitting of Poisson distribution and calculate expected frequencies
(Recurrence relation method)
6. Fitting of Negative Binomial distribution and calculate expected frequencies (Direct method)
7. Fitting of Negative Binomial distribution and calculate expected frequencies
(Recurrence relation method)
8. Fitting of Geometric distribution and calculate expected frequencies (Direct method)
9. Fitting of Geometric distribution and calculate expected frequencies (Recurrence relation method)
10. Fitting of Normal distribution and calculate expected frequencies (Ordinates method)
11. Fitting of Exponential distribution and calculate expected frequencies (Direct method)

Note : The above practical are to be done using M S Excel and SPSS Package where ever it is possible

THREE YEAR BA DEGREE EXAMINATION
CBCS – Fourth Semester
Part – II STATISTICS (NM)
Paper IV : Random variables and Probability distributions
(New Syllabus w.e.f. 2015-16)
Model Paper

Time : 3 hours **Max. Marks :75**

PART - A

Answer any FIVE questions, each question carries 5 marks (5x5=25 Marks)

1. Define probability density function (pdf).
2. Define the following terms

   a) Random Experiment b) Sample space c) Equally likely events.
3. Explain types of Random variable and its properties.
4. Define Mathematical Expectation and its properties
5. Define Moment generating function and its properties
6. Define poisson distribution and give its properties
7. Define Geometric distribution and also give its properties.
8. Give the applications of Normal distribution.

PART – B

Answer any ONE question from each unit, each question carries 10 Marks
(5x10=50 Marks)

UNIT – I

9. State and prove Addition theorem on probability for three events.

(or)

10. A box contains 7 red, 3 green and 5 yellow balls, if 3 balls are drawn randomly from the box. Find the probability that drawn balls are of

    a) different colours b) red colour

UNIT – II

11. Explain the Distribution Function and also give its properties.

(or)

12. A random variable (r.v) 'X' has the following probability function.

X:	0	1	2	3	4	5	6	7
P(X):	0	K	2k	2k	3k	K^2	$2K^2$	$7K^2+k$

a) find 'k' value and b) $P(x<6)$

UNIT – III

13. Explain MGF and CGF and also discuss the properties.

(or)

14. Find Mean 'E(X)' and Variance 'V(X)' for the following probability distribution.

X	0	1	2	3
P(X)	$\frac{1}{3}$	$\frac{1}{2}$	$\frac{1}{24}$	$\frac{1}{8}$

UNIT – IV

15. Define Binomial distribution and deduce Mean and Variance.

(or)

16. Define Poisson distribution and give its properties, applications

UNIT – V

17. Define Exponential distribution and derive its Mean and Variance.

(or)

18. Define Normal distribution and also give its properties.

THREE YEAR BA DEGREE EXAMINATION
CBCS – Fourth Semester
Part – II STATISTICS (NM)
Paper IV : Random variables and Probability distributions
(New Syllabus w.e.f. 2015-16)
Model Paper

Time : 3 hours **Max. Marks :75**

PART - A

Answer any FIVE questions, each question carries 5 marks (5x5=25 Marks)

1. Define probability density function (pdf).
2. Define the following terms

   a) Random Experiment b) Sample space c) Equally likely events.
3. Explain types of Random variable and its properties.
4. Define Mathematical Expectation and its properties
5. Define Moment generating function and its properties
6. Define poisson distribution and give its properties
7. Define Geometric distribution and also give its properties.
8. Give the applications of Normal distribution.

PART – B

Answer any ONE question from each unit, each question carries 10 Marks
(5x10=50 Marks)

UNIT – I

9. State and prove Addition theorem on probability for three events.

(or)

10. A box contains 7 red, 3 green and 5 yellow balls, if 3 balls are drawn randomly from the box. Find the probability that drawn balls are of

    a) different colours b) red colour

UNIT – II

11. Explain the Distribution Function and also give its properties.

(or)

12. A random variable (r.v) 'X' has the following probability function.

X:	0	1	2	3	4	5	6	7
P(X):	0	K	2k	2k	3k	K^2	$2K^2$	$7K^2+k$

a) find 'k' value and b) $P(x<6)$

UNIT – III

13. Explain MGF and CGF and also discuss the properties.

(or)

14. Find Mean 'E(X)' and Variance 'V(X)' for the following probability distribution.

X	0	1	2	3
P(X)	$\frac{1}{3}$	$\frac{1}{2}$	$\frac{1}{24}$	$\frac{1}{8}$

UNIT – IV

15. Define Binomial distribution and deduce Mean and Variance.

(or)

16. Define Poisson distribution and give its properties, applications

UNIT – V

17. Define Exponential distribution and derive its Mean and Variance.

(or)

18. Define Normal distribution and also give its properties.

II B.Com/B.Com(CA)/B.Com (ASM)/ B.Com (Tax)/B.A (ACCOUNTANCY)

IV SEMESTER – W.E.F. 2016-17

DSC 1D - ACCOUNTING FOR SERVICE ORGANIZATIONS

Unit-I: Non-Trading/ Service Organizations:

Concept - Types of Service Organizations – Section (8) and other Provisions of Companies Act, 2013 –Receipts and Payments Accounts and Income and Expenditure Account- preparation of income and expenditure account and Balance sheet (Simple problems).

Unit – II Electricity Supply Companies:

Accounts of Electricity supply companies: Double Accounting system – Revenue Account – Net Revenue Account – Capital Account – General Balance Sheet. (Simple problems).

Unit – III - Bank Accounts

Bank Accounts – Books and Registers to be maintained by Banks – Banking Regulation Act, 1969 - Legal Provisions Relating to preparation of Final Accounts, Rebate on bills discounted. (including problems).

Unit-IV: Insurance Companies -I

Life Insurance Companies –Preparation of Revenue Account, Profit and Loss Account, Balance Sheet (including problems) – LIC Act, 1956. Preparation and valuation of balance sheet – correct life assurance fund including problems.

Unit – V: Insurance Claims:

Insurance concepts - average clause-calculation of salvage value – claims for loss of stock (problems on valuation of loss of stock only).

Suggested Readings

1. Modern Accounting: A. Mukherjee, M. Hanife :McGraw Hill Company Ltd., New Delhi.
2. Corporate Accounting: T.S Reddy & A. Murthy; Margam Publications.
3. Corporate Accounting – RL Gupta & M. Radha Swami
4. Corporate Accounting – P.C. Tulsian
5. Company Accounts : Monga, Girish Ahuja and Shok Sehagal
6. Advanced Accountancy: Jain and Narang
7. Advanced Accountancy : R.K. Gupta and M. Radhaswamy
8. Advanced Accountancy : Chakraborty
9. Advanced Accountancy: S.P. Iyengar
10. Accounting standards and Corporate Accounting Practices: T.P. Ghosh Taxman
11. Corporate Accounting: S.N. Maheswari, S.R. Maheswari, Vikas Publishing.

12. Advanced Accountancy: Arutanandam, Raman, Himalaya Publishing House.
13. Advanced Accounts: M.C. Shukla, T.S. Grewal, S.C. Gupta, S. Chand.

SRI VENKATESWARA UNIVERSITY

MODEL PAPER

II B.Com/B.Com(CA)/B.Com (ASM)/ B.Com (Tax)/ B.A(ACCOUNTANCY)

SEMESTER – IV

DSC 1D – ACCOUNTING FOR SERVICE ORGANIZATIONS

Time: 3 hours **Max.Marks: 75 M**

Section A

Answer any Five of the following **5X3=15 Marks**

1. a) Income and Expenditure Account b) Receipts and Payments Account
c) Double Accounting System d) Single Accounting Vs Double Accounting
e) Rabate on Bills Discounted f) Types of Deposits
g) Valuation Balance Sheet h) Claims
i) Average Clause j) Memorandum Trading Account

Section B

Answer **ONE** question from each unit of the following: **5X12=60 Marks**

UNIT I

Q.2 Explain service Organisation and distinguish between Receipts & Payments Account and Income & Expenditure Account

OR

Q.3. Prepare an Income & Expenditure Account for the year ending with 31st March, 2014 and the Balance Sheet on that date of Officers' club from the following :

RECEIPTS AND PAYMENTS ACCOUNT

For the year ended with 31st March 2014

Receipts	Amount (Rs)	Payments	Amount (Rs.)
To Balance b/d	40,000	By Pay & Allowances	24,000
To Subscription received	1,18,000	By Expenditure for games	5,600
To Annual maintenance fee	24,000	By Books for Library	16,000
To Interest on securities	10,000	By News Papers & Journals	2,400
To Rent the function Hall	42,000	By Telephone Expenses	4,800

To Collection received for tour	24,000	By Construction of New hall	64,000
To Sale of News Papers etc.	400	By Repairs and Maintenance	20,000
		By Tour Expenses	30,000
		By General Expenses	6,000
		By Balance c/d	42,600
TOTAL	2,58,400	TOTAL	2,58,400

The club has the assets as below as on 31.03.2013 :
Furniture Rs.30,000, Buildings Rs.5,00,000, Library books 24,000, Investments Rs. 1,00,000 Annual Maintenance receivable from the members for 2013-14 is Rs. 2,800 and received in advance for 2014-15 is Rs.2,200 ; Depreciation on Buildings 2%, Books 5% and furniture 5%.

UNIT II

4. The following are the balances on 31-03-14 in the books of the Ernakulam Power and Light company Ltd.,

	Rs.	Rs.
Lands on 31-3-13	1,20,000	-
Lands expended during 2013-14	4,000	-
Machinery on 31-3-13	4,80,000	-
Machinery expended during 2013-14	4,000	-
Mains including cost of laying	1,60,000	-
Mains expended during 2013-14	40,800	-
Equity shares	-	4,39,200
Debentures	-	1,60,000
Sundry Creditors	-	800
Depreciation Fund A/c	-	2,00,000
Sundry debtors for Current supplied	32,000	-
Other debtors	400	-
Cash	4,000	-
Cost of generation of electricity	28,000	-
Cost of distribution of electricity	4,000	-
Rent rates and taxes	4,000	-
Management Expenses	9,600	-
Depreciation	16,000	-
Sale of current	-	1,04,000
Rent of Meters	-	4,000
Interest on Debentures	8,000	-
Interim dividend	16,000	-
Net Revenue A/c Balance on 31-3-13	-	22,800
	9,30,800	9,30,800

From the above Trial Balance, Prepare Revenue A/c, Net Revenue A/c, Capital A/c and General Balance Sheet.

OR

5. The following balances appeared in the books of Universal Electric Supply Corporation Ltd., as on 31.12.2013:

Particulars	Debit Balances Rs.	Credit Balances Rs.
Equity Shares	-	6,00,000
Debentures	-	2,00,000
Land on 31.12.13	1,50,000	-
Land Purchased during the year	60,000	-
Mains including cost of laying to 31.12.13	1,60,000	-
Mains expended during the year	76,000	-
Machinery on 31.12.2013	5,50,000	-
Machinery purchased during the year	66,000	-
Sundry Creditors	-	1,000
Depreciation Fund Account	-	2,50,000
Sundry Debtors for Current Supplied	40,000	-
Other Book Debts	500	-
Stores in Hand	6,000	-
Cash in Hand	4,000	-
Cost of Generation of Electricity	30,000	-
Cost of Distribution of Electricity	9,000	-
Sale of Current	-	1,50,000
Meter Rent	-	5,000
Rent, rates & Taxes	12,000	-
Establishment Expenses	21,000	-
Interest on Debentures	10,000	-
Interim Dividend	20,000	-
Depreciation	20,000	-
Net Revenue A/c Balance on 31.12.13	-	28,500
	12,34,500	12,34,500

From the above balances, prepare the Revenue A/c, Net Revenue A/c, Capital A/cand General Balance Sheet.

UNIT III

6.From the following particulars, prepare a Profit and Loss A/c of New bank Ltd., for the year ended 31.12.2015.

	Rs. (in '000)		Rs. (in '000)
Interest on loans	260	Interest on cash credits	225
Interest on fixed deposits	280	Rent and taxes	20
Rebate on bills discounted	50	Interest on overdrafts	56

Commission charged to customers	9	Director's and Auditor's fees	4
Establishment expenses	56	Interest on savings bank accounts	70
Discount on bills discounted	200	Postage and telegrams	2
Interest on current accounts	45	Sundry charges	2
Printing and advertisements	3		

OR

7. Given below is an extract from the Trial balance of Mayura Bank Ltd., as on 31.12.2015.

PARTICULARS	Dr. Rs.	Dr. Rs.
Bills discounted	15,00,000	
Rebate on bills discounted on 1.1.2015		5,340
Interest and discount		91,473

An analysis of the bills discounted shows the following.

Amount Rs.	Due date Rs.	Rate of discount % p.a
1,45,000	6th March	5%
4,31,000	15th March	6%
2,90,000	21st March	4%
3,98,000	14th April	3.5%
2,36,000	24th April	4.5%

Show with the aid of workings how the relevant items will appear in the bank's balance sheet as on 31.12.2015 and in the Profit and Loss Account for the same period.

UNIT IV

8. The Revenue account of a Life Insurance Company showed the life fund at Rs.73,17,000 on 31.3.2016 before taking into account the following items:

	Rs.
a. Claims intimated but not admitted	98,250
b. Bonus utilised in reduction of premium	13,500
c. Interest accrued on investments	29,750
d. Outstanding premiums	27,000
e. Claims covered under re insurance	40,500
f. Provision for taxation	31,500

Pass journal entries giving effect to the above adjustments and show the adjusted life fund.

9. A Life Insurance Company got its valuation made once in every three years. The Life Assurance Fund on 31.3.16 amounted to Rs.41,92,000 before providing for Rs.32,000 for the shareholder's dividend for the year 2014-15. Its actuarial valuation on 31.3.16 disclosed a net

liability of Rs.40,40,000 under the assurance and annuity contracts. An Interim bonus of Rs.40,000 was paid to the policy holders during the period ending 31.3.16.

Prepare a statement showing the amount now available as bonus to policy holders.

UNIT V

10.A fire occurred on 15th September, 2014 in the premises of X Co., Ltd.. From the following figures, calculate the amount of claim to be lodged with the insurance company for loss of stock:

	Rs.
Stock at cost as on 1st January, 2013	20,000
Stock at cost as on 1st January, 2014	30,000
Purchases 2013	40,000
Purchases from 1st January, 2014 to 15th September, 2014	88,000
Sales 2013	60,000
Sales from 1st January, 2014 to 15th September 2014	1,05,000

During the current year cost of purchases has risen by 10% above last year's level. Selling prices have gone up by 5%. Salvage value of stocks after fire was Rs.2,000.

OR

11. A fire occurred in the business premises of M/s Poonawalla on 15th October, 2015. From the following particulars ascertain the loss of stock and prepare a claim for insurance:

	Rs.
Stock as on 1-1-2014	30,600
Purchases from 1-1-2014 to 31-12-2014	1,22,000
Sales from 1-1-14 to 31-12-14	1,80,000
Stock as on 31-12-14	27,000
Purchases from 1-1-15 to 14-10-15	1,47,000
Sales from 1-1-15 to 14-10-15	1,50,000

The stocks were always valued at 90 per cent of cost. The stock saved from fire was worthRs.18,000. The amount of the policy was Rs.63,000. There was an average clause in the policy.

బి.ఏ. డిగ్రీ ద్వితీయ సంవత్సరము పాఠ్యప్రణాళిక

Advanced తెలుగు సాహిత్య చరిత్ర - II 2016 - 2017

IV సెమిస్టర్

1.	నాయక రాజుల పాలనలో సాహిత్యం	–	యక్షగానాలు – వచన కావ్యాలు – శతకాలు (సుమతి, వేమన) విజయవిలాసం
2.	ఆధునిక కవిత్వం	–	గురజాడ, కృష్ణశాస్త్రి, జాషువ, శ్రీశ్రీ, అబ్బూరి ఛాయాదేవి.
3.	నవల	–	కందుకూరి, ఉన్నవ, విశ్వనాథ, కొడవటిగంటి రంగనాయకమ్మ, వాసిరెడ్డి, కేశవరెడ్డి
4.	నాటకం	–	ధర్మవరం వేదం వేంకటరాయశాస్త్రి, తిరుపతి వేంకటకవులు.
5.	కథానిక	–	శ్రీ పాదసుబ్రమణ్యశాస్త్రి, చలం, కనుపర్తి వరలక్ష్మమ్మ – మధురాంతకం రాజారాం – రంగనాయకమ్మ – కాళీపట్నం రామారావు.

Telugu BOS Chairperson

1) 13/12/16

2)

3) 13/12/16

బి.ఏ. **Advanced** తెలుగు - ద్వితీయ సంవత్సరం

పాఠ్య ప్రణాళిక.

తెలుగు సాహిత్య చరిత్ర

సెమిస్టర్ – IV

Part A

I ఏవి క్రింది వాటిలో ఇవ్వబడిన ప్రశ్నలకు సమాధానాలు రాయండి. 5×5=25

1. యక్షగాన సాహిత్యాన్ని వివరించండి.
2. వేమకవికూర వేంకటేశకవి ప్రతిపద్య చమత్కృతిని తెల్పండి.
3. గురజాడ రచనల్లో పరిచయం చేయండి.
4. ఆధునిక సాహిత్యానికి కృష్ణశాస్త్రి చేసిన సేవ తెల్పండి.
5. నవలా లక్షణాలు వివరించండి.
6. పంచ సంధులు వివరించండి.
7. తెలుగు కథకు శ్రీపాద సుబ్రహ్మణ్య శాస్త్రి చేసిన సేవలేమిటో?
8. భావ కవిత్వ రీతుల్ని తెల్పండి.

Part - B.

1. యక్షగాన వాఙ్మయాన్ని విశ్లేషణాత్మకంగా వివరించండి.

(లేదా)

శతక సాహిత్య లక్షణాలను వివరించండి.

2. ఆధునిక సాహిత్యానికి శుద్ధం జాషువా కృషి ఎట్టిది?

(లేదా)

ఆధునిక కాలపు అభ్యుదయ దృక్పథాన్ని సోదాహరణంగా విమర్శించండి.

3. మూలపల్లి నవలలోని సాంఘిక పరిస్థితులు వివరించండి.

(లేదా)

కొడవటి గంటి రచనలను పరిచయం చేయండి.

4. తెలుగు సాంఘిక ప్రహసన వికాసాన్ని వివరించండి.

(లేదా)

కాసుల పేరు వేంకటేశ్వర్లు నాటక కర్తృత్వానికి చేసిన సేవ్యను తెలపండి

P.T.O

5. ప్రత్యేక కథానిక లక్షణాలను వివరించండి.

లేదా

తెలుగు సాహిత్యానికి కనువర్తి వరలక్ష్మమ్మ చేసిన సేవని వివరించండి.

Telugu BOS Chairperson.

1. NB 13/12/16

2. ~~K Gopinath~~

3. M 13/12/16

S.V. UNIVERSITY; TIRUPATI

B.Com., / B.Sc., / B.A. (CA) II YEAR - IV SEMESTER

OBJECT ORIENTED PROGRAMMING WITH C++

Unit-1

Introduction:- Programming Language generations, Object Oriented Paradigm, Basics of OOPs, Benefits, Applications of OOPs, Object Oriented Languages, Difference between OOPs and Procedure Oriented Programming

Unit - 2

Introduction to C++, General Structure of a C++ program, cin and cout objects, Keywords, identifiers, Constants, variables, Data types in C++, Operators-scope resolution operator, Control structures: Conditional statements and Looping statements, Functions –function with default arguments, inline functions, function overloading, reference variables Arrays - Single and multidimensional arrays.

Unit-3

Object and Classes-Structure and Class, Defining a class, defining member functions, member function with object as arguments and argument as return type, array of objects, static member data and member function, friend function and friend class.

Constructor and destructors-characteristics of constructor, constructor types-default, parameterized, copy and dynamic, constructor overloading.

Unit-4

Operator overloading, defining operator function, overloading unary, binary and relational operators

Inheritance-benefits of inheritance, types of inheritance, methods overriding, virtual functions.

Unit- 5

C++ Streams and File handling-Stream class, unformatted i/o operations, formatting of output-ios class functions and flags, manipulators, Files-File classes, file types, file functions.

Error handling, command-line arguments

Reference Books

1. Object Oriented Programming with C++ - M.T. Somashekara, D.S.Guru, H.S. Nagendraswamy, K.S. Manjunatha, PHI 2nd Edition

2. Object Oriented Programming with C++ - E. Balagurusamy, 4th Edition, Tata Mc Graw Hill Publication

3. Object Oriented Programming in C++ - Robert Lafore, 4th Edition, Pearson Education

4. Object-Oriented Programming with ANSI and Turbo C++.

B.Com., B.Sc., B.A. (CA) II YEAR - IV SEMESTER (MODEL PAPER)

OBJECT ORIENTED PROGRAMMING WITH C++

Time: 3 Hrs **Max. Marks: 75**

SECTION – A

Answer any 5 Questions : **5 x 3 =15 M**

1. a) Define class and its scope.

   b) What is object oriented paradigm

   c) What is polymorphism and advantages?

   d) Difference between if and switch.

   e) Explain ios class function statements.

   f) What is destructor? How to Define?

   g) What are the benefits of inheritance?

   h) Difference between overriding and overloading

   i) What is file handling?

   j) Describe about file types

SECTION – B

Answer one question from each unit. Each carries equal marks: **5 x 12 = 60 M**

UNIT- I

2. What is OOPs? Explain the advantages and applications of OOPs.

(or)

3. Write the difference between OOPs and Procedure Oriented Programming.

UNIT- II

4. a. Define cin and cout statements with suitable example.
   b. Explain different data types in C++.

(or)

5. Discuss the types of functions with suitable example.

UNIT- III

6. Explain about objects and classes along with structure and member functions?

(or)

7. What is constructor? How the constructors are created with suitable example.

UNIT- IV

8. What is operator overloading? Define binary and relational operators.

(or)

9. What is inheritance? Explain the types of inheritance with an illustration.

UNIT - V

10. Explain C++ streams with a C++ program.

(or)

11. Explain the following
    (a) File types
    (b) File function

S.V. UNIVERSITY; TIRUPATI

B.Com - SEMESTER – IV

Sl. No.	Course	Name of the subject	Total Marks	Mid. Sem. Exam	Sem. End Exam	Teaching Hours**	Credits
1.	Foundation Course- 7	Communication & Soft Skills-3	50	---	50	2	2
2.	Foundation Course- 8	Analytical Skills*	50	---	50	2	2
3.	Foundation Course- 9	ICT-2 (Information & communication Technology)	50	---	50	2	2
4.	Foundation Course- 10	Leadership Education**	50	---	50	2	2
5.	DSC 1 D	Accounting for Service Organizations	100	25	75	6	4
6.	DSC 2 D	Business Laws	100	25	75	6	4
7.	DSC 3 D	Income Tax	100	25	75	6	4
Total			**500**	**75**	**425**	**26**	**20**

* To be taught by Maths/Statistics Teachers (and partly by English teachers)

** To be taught by Telugu Teachers

II B.Com/B.Com(CA)/B.Com (ASM)/ B.Com (Tax)/B.A (Accountancy)
IV SEMESTER – W.E.F. 2016-17
DSC 1D - ACCOUNTING FOR SERVICE ORGANIZATIONS

Unit-I: Non-Trading/ Service Organizations:
Concept - Types of Service Organizations – Section (8) and other Provisions of Companies Act, 2013 –Receipts and Payments Accounts and Income and Expenditure Account- preparation of income and expenditure account and Balance sheet (Simple problems).

Unit – II Electricity Supply Companies:
Accounts of Electricity supply companies: Double Accounting system – Revenue Account – Net Revenue Account – Capital Account – General Balance Sheet. (Simple problems).

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Unit-IV: Insurance Companies -I
Life Insurance Companies –Preparation of Revenue Account, Profit and Loss Account, Balance Sheet (including problems) – LIC Act, 1956. Preparation and valuation of balance sheet – correct life assurance fund including problems.

Unit – V: Insurance Claims:
Insurance concepts - average clause-calculation of salvage value – claims for loss of stock (problems on valuation of loss of stock only).

Suggested Readings

1. Modern Accounting: A. Mukherjee, M. Hanife :McGraw Hill Company Ltd., New Delhi.
2. Corporate Accounting: T.S Reddy & A. Murthy; Margam Publications.
3. Corporate Accounting – RL Gupta & M. Radha Swami
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10. Accounting standards and Corporate Accounting Practices: T.P. Ghosh Taxman
11. Corporate Accounting: S.N. Maheswari, S.R. Maheswari, Vikas Publishing.
12. Advanced Accountancy: Arutanandam, Raman, Himalaya Publishing House.
13. Advanced Accounts: M.C. Shukla, T.S. Grewal, S.C. Gupta, S. Chand.

II B.Com/B.Com(CA)/B.Com (ASM)/ B.Com (Tax)- IV Semester

DSC 2D - BUSINESS LAWS

Unit-I:

Contract: Meaning and Definition of Contract-Essential elements of valid Contract -Valid, Void and Voidable Contracts - Indian Contract Act, 1872.

Unit-II:

Offer and Acceptance: Definition of Valid Offer, Acceptance and Consideration -Essential elements of a Valid Offer, Acceptance and Consideration.

Unit-III:

Capacity of the Parties and Contingent Contract: Rules regarding to Minors contracts - Rules relating to contingent contracts.

Unit-IV:

Sale of Goods Act 1930: Contract of sale – Sale and agreement to sell – Implied conditions and warranties – Rights of unpaid vendor.

Unit-V:

Cyber Law: Cyber Law and Contract Procedures - Digital Signature - Safety Mechanisms.

Suggested Readings:

1. Business Law; Tulsian , Mc Graw Hill
2. J. Jayasankar, Business Laws, Margham Publication. Chennai -17
3. Kapoor ND, Mercentile Law , Sultan Chand
4. Business Law ; Mathur; Mc Graw Hill
5. Pillai Bhagavathi, Business Law , S.Chand.
6. Business Laws, Maruthi Publishers

II B.Com– IV Semester

DSC 3D - Income Tax

Unit-I

Introduction: Income Tax Law – Basic concepts: Income, Person, Assesse, Assessment year, Agricultural Income, Capital and revenue, Residential status, Income exempt from tax (theory only).

Unit-II

Income from salary: Allowances, perquisites, profits in lieu of salary, deductions from salary income, computation of salary income and qualified savings eligible for deduction u/s 80C (including problems).

Unit-III

Income from House Property: Annual value, let-out/self occupied/deemed to be let-out house, deductions from annual value - computation of income from house property (including problems).

Unit-IV

Income from Capital Gains – Income from other sources – (from Individual point of view) - chargeability – and assessment (including problems).

Unit-V:

Computation of total income of an individual – Deductions under section - 80 (including problems).

Reference Books:

1. Gaur and Narang; Income Tax, Kalyani Publishers, New Delhi.
2. **Incom Tax; J.S.Johar; Mc Graw Hill**
3. Dr. Vinod; K. Singhania; Direct Taxes – Law and Practice, Taxman Publications
4. B.B. Lal; Direct Taxes; Konark Publications
5. Dr. Mehrotra and Dr. Goyal; Direct Taxes – Law and Practice; Sahitya Bhavan Publication.

SRI VENKATESWARA UNIVERSITY

MODEL PAPER

II B.Com/B.Com(CA)/B.Com (ASM)/ B.Com (Tax)/ B.A(ACCOUNTANCY)

Semester – IV

DSC 1D – Accounting for Service Organizations

Time: 3 hours **Max.Marks: 75 M**

Section A

Answer any Five of the following

1. a) Income and Expenditure Account b) Receipts and Payments Account
c) Double Accounting System d) Single Accounting Vs Double Accounting
e) Rabate on Bills Discounted f) Types of Deposits
g) Valuation Balance Sheet h) Claims
i) Average Clause j) Memorandum Trading Account

Section B

UNIT I

Q.2 Explain service Organisation and distinguish between Receipts & Payments Account and Income & Expenditure Account

OR

Q.3. Prepare an Income & Expenditure Account for the year ending with 31st March, 2014 and the Balance Sheet on that date of Officers' club from the following :

RECEIPTS AND PAYMENTS ACCOUNT

For the year ended with 31st March 2014

Receipts	Amount (Rs)	Payments	Amount (Rs.)
To Balance b/d	40,000	By Pay & Allowances	24,000
To Subscription received	1,18,000	By Expenditure for games	5,600
To Annual maintenance fee	24,000	By Books for Library	16,000
To Interest on securities	10,000	By News Papers & Journals	2,400
To Rent the function Hall	42,000	By Telephone Expenses	4,800
To Collection received for tour	24,000	By Construction of New hall	64,000
To Sale of News Papers etc.	400	By Repairs and Maintenance	20,000
		By Tour Expenses	30,000
		By General Expenses	6,000
		By Balance c/d	42,600
TOTAL	2,58,400	TOTAL	2,58,400

The club has the assets as below as on 31.03.2013 :
Furniture Rs.30,000, Buildings Rs.5,00,000, Library books 24,000, Investments Rs. 1,00,000 Annual Maintenance receivable from the members for 2013-14 is Rs. 2,800 and received in advance for 2014-15 is Rs.2,200 ; Depreciation on Buildings 2%, Books 5% and furniture 5%.

UNIT II

4. The following are the balances on 31-03-14 in the books of the Ernakulam Power and Light company Ltd.,

	Rs.	Rs.
Lands on 31-3-13	1,20,000	-
Lands expended during 2013-14	4,000	-
Machinery on 31-3-13	4,80,000	-
Machinery expended during 2013-14	4,000	-
Mains including cost of laying	1,60,000	-
Mains expended during 2013-14	40,800	-
Equity shares	-	4,39,200
Debentures	-	1,60,000
Sundry Creditors	-	800
Depreciation Fund A/c	-	2,00,000
Sundry debtors for Current supplied	32,000	-
Other debtors	400	-
Cash	4,000	-
Cost of generation of electricity	28,000	-
Cost of distribution of electricity	4,000	-
Rent rates and taxes	4,000	-
Management Expenses	9,600	-
Depreciation	16,000	-
Sale of current	-	1,04,000
Rent of Meters	-	4,000
Interest on Debentures	8,000	-
Interim dividend	16,000	-
Net Revenue A/c Balance on 31-3-13	-	22,800
	9,30,800	9,30,800

From the above Trial Balance, Prepare Revenue A/c, Net Revenue A/c, Capital A/c and General Balance Sheet.

OR

5. The following balances appeared in the books of Universal Electric Supply Corporation Ltd., as on 31.12.2013:

Particulars	Debit Balances Rs.	Credit Balances Rs.
Equity Shares	-	6,00,000
Debentures	-	2,00,000
Land on 31.12.13	1,50,000	-
Land Purchased during the year	60,000	-
Mains including cost of laying to 31.12.13	1,60,000	-
Mains expended during the year	76,000	-
Machinery on 31.12.2013	5,50,000	-
Machinery purchased during the year	66,000	-
Sundry Creditors	-	1,000
Depreciation Fund Account	-	2,50,000
Sundry Debtors for Current Supplied	40,000	-
Other Book Debts	500	-
Stores in Hand	6,000	-
Cash in Hand	4,000	-
Cost of Generation of Electricity	30,000	-
Cost of Distribution of Electricity	9,000	-
Sale of Current	-	1,50,000
Meter Rent	-	5,000
Rent, rates & Taxes	12,000	-
Establishment Expenses	21,000	-
Interest on Debentures	10,000	-
Interim Dividend	20,000	-
Depreciation	20,000	-
Net Revenue A/c Balance on 31.12.13	-	28,500
	12,34,500	12,34,500

From the above balances, prepare the Revenue A/c, Net Revenue A/c, Capital A/cand General Balance Sheet.

UNIT III

6.From the following particulars, prepare a Profit and Loss A/c of New bank Ltd., for the year ended 31.12.2015.

	Rs. (in '000)		Rs. (in '000)
Interest on loans	260	Interest on cash credits	225
Interest on fixed deposits	280	Rent and taxes	20
Rebate on bills discounted	50	Interest on overdrafts	56
Commission charged to customers	9	Director's and Auditor's fees	4
Establishment expenses	56	Interest on savings bank accounts	70
Discount on bills discounted	200	Postage and telegrams	2
Interest on current accounts	45	Sundry charges	2
Printing and advertisements	3		

OR

7. Given below is an extract from the Trial balance of Mayura Bank Ltd., as on 31.12.2015.

PARTICULARS	Dr. Rs.	Dr. Rs.
Bills discounted	15,00,000	
Rebate on bills discounted on 1.1.2015		5,340
Interest and discount		91,473

An analysis of the bills discounted shows the following.

Amount Rs.	Due date Rs.	Rate of discount % p.a
1,45,000	6th March	5%
4,31,000	15th March	6%
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3,98,000	14th April	3.5%
2,36,000	24th April	4.5%

Show with the aid of workings how the relevant items will appear in the bank's balance sheet as on 31.12.2015 and in the Profit and Loss Account for the same period.

UNIT IV

8. The Revenue account of a Life Insurance Company showed the life fund at Rs.73,17,000 on 31.3.2016 before taking into account the following items:

	Rs.
a. Claims intimated but not admitted	98,250
b. Bonus utilised in reduction of premium	13,500
c. Interest accrued on investments	29,750
d. Outstanding premiums	27,000
e. Claims covered under re insurance	40,500
f. Provision for taxation	31,500

Pass journal entries giving effect to the above adjustments and show the adjusted life fund.

9. A Life Insurance Company got its valuation made once in every three years. The Life Assurance Fund on 31.3.16 amounted to Rs.41,92,000 before providing for Rs.32,000 for the shareholder's dividend for the year 2014-15. Its actuarial valuation on 31.3.16 disclosed a net liability of Rs.40,40,000 under the assurance and annuity contracts. An Interim bonus of Rs.40,000 was paid to the policy holders during the period ending 31.3.16.

Prepare a statement showing the amount now available as bonus to policy holders.

UNIT V

10.A fire occurred on 15th September, 2014 in the premises of X Co., Ltd.. From the following figures, calculate the amount of claim to be lodged with the insurance company for loss of stock:

	Rs.
Stock at cost as on 1st January, 2013	20,000
Stock at cost as on 1st January, 2014	30,000
Purchases 2013	40,000
Purchases from 1st January, 2014 to 15th September, 2014	88,000
Sales 2013	60,000
Sales from 1st January, 2014 to 15th September 2014	1,05,000

During the current year cost of purchases has risen by 10% above last year's level. Selling prices have gone up by 5%. Salvage value of stocks after fire was Rs.2,000.

OR

11. A fire occurred in the business premises of M/s Poonawalla on 15th October, 2015. From the following particulars ascertain the loss of stock and prepare a claim for insurance:

	Rs.
Stock as on 1-1-2014	30,600
Purchases from 1-1-2014 to 31-12-2014	1,22,000
Sales from 1-1-14 to 31-12-14	1,80,000
Stock as on 31-12-14	27,000
Purchases from 1-1-15 to 14-10-15	1,47,000
Sales from 1-1-15 to 14-10-15	1,50,000

The stocks were always valued at 90 per cent of cost. The stock saved from fire was worthRs.18,000. The amount of the policy was Rs.63,000. There was an average clause in the policy.

Sri Venkateswara University

Model Paper- II B.Com/B.Com(CA)/B.Com (ASM)/ B.Com (Tax)

Semester – IV, April, 2017

DSC 2D – BUSINESS LAWS

Time: 3 hours **Max.Marks: 75 M**

Section - A

1. Answer any **Five** of the following. 5X3=15 M

a. Contract	**b.** Fee consent	**c.** Consideration	**d.** Minor
e. Contingent contract	**f.** Acceptance	**g.** Implied conditions	
h. Cyber Law	**i.** Digital Signature	**j.** Right of Lien	

Section – B

Answer **ONE** question from each unit of the following: 5X12=60 M

UNIT-I

2. What are the essential elements of valid contract?

or

3. What are the different types of contracts?

UNIT-II

4. What are the essential elements of valid offer?

or

5. What are the essential elements of valid consideration?

UNIT-III

6. What are the rules relating to minor contracts?

or

7. What are the rules relating to contingent contracts?

UNIT-IV

8. Distinguish between sale and agreement to sell?

or

9. What are of the rights unpaid vendor?

UNIT-V

10. Explain Cyber Law

11. Explain Cyber Law and Contract procedures.

S.V.Univeraity : TIRUPATI
II B.Com(General) IV Semester
3 D-Income Tax Modal Paper

Time : 3 Hours **Marks 75**

Section A

Answer any FIVE questions from following **5x3 =15 Marks**

Q.1. a) Income **b**)Person **c)**Allowance **d)** Perquisite **e)** Annual Value **f)**Let out **g)** Capital gain **h)** Assessee **i)** Total Income **j)** Section 80 D

Section B

Answer **ONE** question from each unit of the following: **5X12=60 Marks**

UNIT I

Q.2. What are the rules and principles of for a) Ordinarily Resident b) Resident c) Non Resident

OR

Q.3. From the following particulars compute the Taxable Income of Mr.Venkatesh if he is a)Ordinarily Resident b) Resident c) Non Resident

i) Interest accrued in India Rs.15,000
ii) Salary accrued and received in India Rs. 1,60,000
iii) Profit from business controlled in India (half is received in India Rs. 90,000
iv) Agricultural Income in Malasia Rs. 30,000
v) Income received business set up out side India but controlled from India Rs.40,000
vi) Post untaxed Income remitted to India Rs.14,000

UNIT II

Q.4. From the following particulars of Ramu, an employee in a private company compute Income from Salary:

Basic pay p.m. Rs. 30,000Dearness Allowance 60% of the pay
Sales made by the employee Rs.16,00,000
Commission on the sale 5 %
His contribution to RPF 48,000 ; same contribution by the employer
Interest on RPF at 12% 6,000
Entertainment Allowance Rs.6,000

OR

Q.5. Mr Janardhan is an employee of Esteem Company Ltt.
His salary details are given below. Compute the taxable Income of Salary.
Basic Pay Rs.40,000 pm ;
DA at 70 % of the basic pay which includes for the benefits of retirement.
Children Education Allowance Rs. 7,200 p.a. for TWO children.
Transport allowance Rs.1,000 pm
He paid LIC premium Rs. 36,000. PPF Rs.6,000; NSC Rs.10,000

UNIT III

Q.6. Janakiram has given his house on rent. The particulars are given below.

The Municipal Value Rs.14,000 pm
Fair Rent Rs.16,000 pm
Standard Rent Rs.10,000 pm.
Actual Rent pm 16,000
Municipal taxes paid Rs.4,400 half yearly . Compute Income from House Property.

OR

Q.7. Seethapathi has four houses with the following details.

Particulars	House No.1 (Rs)	House No.2 (Rs)	House No.3 (Rs)	House No.4 (Rs)
Municipal Value	30,000	48,000	54,000	50,000
Fair Rent	36,000	54,000	50,000	56,000
Standard Rent	----	60,000	----	48,000
Actual Rent per month	2,000	4,000	4,500	3,000
Municipal Taxes During the year	3,000 paid	3,000 not paid	3,000 not paid	3,000 not paid

UNIT IV

Q.8. Sri Ganesh purchased a land on 1st April 1975 for Rs.75,000 and constructed one floor on this land at the cost of Rs.2,00,000 on 1st January 1979. On 1.04.1981 the Fair Municipal Value of the house has been Rs.4,11,000. He constructed one additional floor on this on 15.07.1998 at the cost of Rs.11,00,000. On 15.03.2014 the house has been sold for Rs.75,00,000. Calculate capital gain for the Assessment year 2014-15 i.e Previous year 2013-14

Note : Cost of Inflation Index 1981 =100; 2013-14 = 939 ; 1998-99 = 351

OR

Q.9. Explain long term capital Assets and short term assets under Income Tax Act.

UNIT V

Q.10. Explain the deductions under section 80C of Income Tax Act.

OR

Q.11. Compute total income of Sri Kedarnath for 2013-14 previous year
Business Income Rs.2,00,000 ; Long term capital gains Rs.8,20,000
Salary Income Rs.1,5,000 ; Prize from lottery Rs.50,000
Interest on savings Rs.36,000 ; Donation to National Trust for welfare of Blind Rs.10,000
Donation to Rajive Gandhi Foundation Rs.12,000 ; Prime Minister drought Relief Fund Rs.12,000
Contribution to Pension Plan Rs.32,000 ; Paid LIC premium Rs.64,000 and PPF Rs.16,000

S.V. UNIVERSITY; TIRUPATI

II B.Com (CA) - SEMESTER – IV

Sl. No.	Course	Name of the subject	Total Marks	Mid. Sem. Exam	Sem. End Exam	Teaching Hours**	Credits
1.	Foundation Course- 7	Communication & Soft Skills-3	50	---	50	2	2
2.	Foundation Course- 8	Analytical Skills*	50	---	50	2	2
3.	Foundation Course- 9	ICT-2 (Information & communication Technology)	50	---	50	2	2
4.	Foundation Course- 10	Leadership Education**	50	---	50	2	2
5.	DSC 1 D	Accounting for Service Organizations	100	25	75	6	4
6.	DSC 2 D	Business Laws	100	25	75	6	4
7.	DSC 3 D	Object Oriented Programming with C++	100	25	75	4	4
		Practical's	50	-	50	2	2
Total			**550**	**125**	**475**	**26**	**22**

* To be taught by Maths/Statistics Teachers (and partly by English teachers)

** To be taught by Telugu Teachers

S.V. UNIVERSITY; TIRUPATI

II B.Com/B.Com(CA)/B.Com (ASM)/ B.Com (Tax)/B.A (Accountancy) IV Semester
DSC 1D - Accounting for Service Organizations

Unit-I: Non-Trading/ Service Organizations:
Concept - Types of Service Organizations – Section (8) and other Provisions of Companies Act, 2013 –Receipts and Payments Accounts and Income and Expenditure Account- preparation of income and expenditure account and Balance sheet (Simple problems).

Unit – II Electricity Supply Companies:
Accounts of Electricity supply companies: Double Accounting system – Revenue Account – Net Revenue Account – Capital Account – General Balance Sheet. (Simple problems).

Unit – III - Bank Accounts
Bank Accounts – Books and Registers to be maintained by Banks – Banking Regulation Act, 1969 - Legal Provisions Relating to preparation of Final Accounts, Rebate on bills discounted. (including problems).

Unit-IV: Insurance Companies -I
Life Insurance Companies –Preparation of Revenue Account, Profit and Loss Account, Balance Sheet (including problems) – LIC Act, 1956. Preparation and valuation of balance sheet – correct life assurance fund including problems.

Unit – V: Insurance Claims:
Insurance concepts - average clause-calculation of salvage value – claims for loss of stock (problems on valuation of loss of stock only).

Suggested Readings

1. Modern Accounting: A. Mukherjee, M. Hanife :McGraw Hill Company Ltd., New Delhi.
2. Corporate Accounting: T.S Reddy & A. Murthy; Margam Publications.
3. Corporate Accounting – RL Gupta & M. Radha Swami
4. Corporate Accounting – P.C. Tulsian
5. Company Accounts : Monga, Girish Ahuja and Shok Sehagal
6. Advanced Accountancy: Jain and Narang
7. Advanced Accountancy : R.K. Gupta and M. Radhaswamy
8. Advanced Accountancy : Chakraborty
9. Advanced Accountancy: S.P. Iyengar
10. Accounting standards and Corporate Accounting Practices: T.P. Ghosh Taxman
11. Corporate Accounting: S.N. Maheswari, S.R. Maheswari, Vikas Publishing.
12. Advanced Accountancy: Arutanandam, Raman, Himalaya Publishing House.
13. Advanced Accounts: M.C. Shukla, T.S. Grewal, S.C. Gupta, S. Chand.

DSC 2D - Business Laws

Unit-I:

Contract: Meaning and Definition of Contract-Essential elements of valid Contract -Valid, Void and Voidable Contracts - Indian Contract Act, 1872.

Unit-II:

Offer and Acceptance: Definition of Valid Offer, Acceptance and Consideration -Essential elements of a Valid Offer, Acceptance and Consideration.

Unit-III:

Capacity of the Parties and Contingent Contract: Rules regarding to Minors contracts - Rules relating to contingent contracts.

Unit-IV:

Sale of Goods Act 1930: Contract of sale – Sale and agreement to sell – Implied conditions and warranties – Rights of unpaid vendor.

Unit-V:

Cyber Law: Cyber Law and Contract Procedures - Digital Signature - Safety Mechanisms.

Suggested Readings:

1. Business Law; Tulsian , Mc Graw Hill
2. J. Jayasankar, Business Laws, Margham Publication. Chennai -17
3. Kapoor ND, Mercentile Law , Sultan Chand
4. Business Law ; Mathur; Mc Graw Hill
5. Pillai Bhagavathi, Business Law , S.Chand.
6. Business Laws, Maruthi Publishers

B.Com., / B.Sc., / B.A. (CA) II YEAR - IV SEMESTER

Object Oriented Programming with C++

Unit-1

Introduction:- Programming Language generations, Object Oriented Paradigm, Basics of OOPs, Benefits, Applications of OOPs, Object Oriented Languages, Difference between OOPs and Procedure Oriented Programming

Unit - 2

Introduction to C++, General Structure of a C++ program, cin and cout objects, Keywords, identifiers, Constants, variables, Data types in C++, Operators-scope resolution operator, Control structures: Conditional statements and Looping statements, Functions –function with default arguments, inline functions, function overloading, reference variables Arrays - Single and multidimensional arrays.

Unit-3

Object and Classes-Structure and Class, Defining a class, defining member functions, member function with object as arguments and argument as return type, array of objects, static member data and member function, friend function and friend class.

Constructor and destructors-characteristics of constructor, constructor types-default, parameterized, copy and dynamic, constructor overloading.

Unit-4

Operator overloading, defining operator function, overloading unary, binary and relational operators

Inheritance-benefits of inheritance, types of inheritance, methods overriding, virtual functions.

Unit- 5

C++ Streams and File handling-Stream class, unformatted i/o operations, formatting of output-ios class functions and flags, manipulators, Files-File classes, file types, file functions.

Error handling, command-line arguments

Reference Books

1. Object Oriented Programming with C++ - M.T. Somashekara, D.S.Guru, H.S. Nagendraswamy, K.S. Manjunatha, PHI 2nd Edition

2. Object Oriented Programming with C++ - E. Balagurusamy, 4th Edition, Tata Mc Graw Hill Publication 3. Object Oriented Programming in C++ - Robert Lafore, 4th Edition, Pearson Education

4. Object-Oriented Programming with ANSI and Turbo C++.

Sri Venkateswara University
II Year Model Paper
B.Com/ B.Com (CA)/ B.Com(ASM)/B.Com(Tax)/B.A (Accountancy)
Semester – IV

DSC 1D – Accounting for Service Organizations

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1. a) Income and Expenditure Account b) Receipts and Payments Account
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Section B

UNIT I

Q.2 Explain service Organisation and distinguish between Receipts & Payments Account and Income & Expenditure Account

OR

Q.3. Prepare an Income & Expenditure Account for the year ending with 31st March, 2014 and the Balance Sheet on that date of Officers' club from the following :

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For the year ended with 31st March 2014

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		By General Expenses	6,000
		By Balance c/d	42,600
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Machinery expended during 2013-14	4,000	-
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Mains expended during the year	76,000	-
Machinery on 31.12.2013	5,50,000	-
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Depreciation Fund Account	-	2,50,000
Sundry Debtors for Current Supplied	40,000	-
Other Book Debts	500	-
Stores in Hand	6,000	-
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Purchases from 1st January, 2014 to 15th September, 2014	88,000
Sales 2013	60,000
Sales from 1st January, 2014 to 15th September 2014	1,05,000

During the current year cost of purchases has risen by 10% above last year's level. Selling prices have gone up by 5%. Salvage value of stocks after fire was Rs.2,000.

OR

11. A fire occurred in the business premises of M/s Poonawalla on 15th October, 2015. From the following particulars ascertain the loss of stock and prepare a claim for insurance:

	Rs.
Stock as on 1-1-2014	30,600
Purchases from 1-1-14 to 31-12-14	1,22,000
Sales from 1-1-14 to 31-12-14	1,80,000
Stock as on 31-12-14	27,000
Purchases from 1-1-15 to 14-10-15	1,47,000
Sales from 1-1-15 to 14-10-15	1,50,000

The stocks were always valued at 90 per cent of cost. The stock saved from fire was worthRs.18,000. The amount of the policy was Rs.63,000. There was an average clause in the policy.

Sri Venkateswara University
Model Paper
II B.Com/ B.Com(CA)/B.Com(ASM)/B.Com(Tax) Semester – IV
DSC 2D – BUSINESS LAWS

Time: 3 hours **Max.Marks: 75 M**

Section - A

1. Answer any **Five** of the following.

a. Contract	**b.** Fee consent	**c.** Consideration	**d.** Minor
e. Contingent contract	**f.** Acceptance	**g.** Implied conditions	
h. Cyber Law	**i.** Digital Signature	**j.** Right of Lien	

Section - B

UNIT-I

2. What are the essential elements of valid contract?

3. What are the different types of contracts?

UNIT-II

4. What are the essential elements of valid offer?

5. What are the essential elements of valid consideration?

UNIT-III

6. What are the rules relating to minor contracts?

7. What are the rules relating to contingent contracts?

UNIT-IV

8. Distinguish between sale and agreement to sell?

9. What are the rights of unpaid vendor?

UNIT-V

9. Explain Cyber Law

10. Explain Cyber Law and Contract procedures.

B.Com., B.Sc., B.A. (CA) II YEAR - IV SEMESTER (model paper)
Object Oriented Programming with C++

ime: 3 Hrs **Max. Marks: 75**

SECTION – A

Answer any 5 Questions : **5 x 3 =15 M**

1. a) Define class and its scope.
   b) What is object oriented paradigm
   c) What is polymorphism and advantages?
   d) Difference between if and switch.
   e) Explain ios class function statements.
   f) What is destructor? How to Define?
   g) What are the benefits of inheritance?
   h) Difference between overriding and overloading
   i) What is file handling?
   j) Describe about file types

SECTION – B

Answer one question from each unit. Each carries equal marks: **5 x 12 = 60 M**

UNIT- I

2. What is OOPs? Explain the advantages and applications of OOPs.

(or)

3. Write the difference between OOPs and Procedure Oriented Programming.

UNIT- II

4. a. Define cin and cout statements with suitable example.
   b. Explain different data types in C++.

(or)

5. Discuss the types of functions with suitable example.

UNIT- III

6. Explain about objects and classes along with structure and member functions? (or)
7. What is constructor? How the constructors are created with suitable example.

UNIT- IV

8. What is operator overloading? Define binary and relational operators.

(or)

9. What is inheritance? Explain the types of inheritance with an illustration.

UNIT - V

10. Explain C++ streams with a C++ program.

(or)

11. Explain the following
    (a) File types
    (b) File function

B.Sc., BIOTECHNOLOGY
B.Sc., II – SEMESTER IV - W.E.F. 2016-17
BT401: IMMUNOLOGY

UNIT I

Immune system, Organs and cells of immune system Immunity, innate immune mechanism Acquired immune mechanism, Antigen, Antigenecity (factors affecting antigenecity) Humoral immunity, main pathways of complement system.

UNIT II

Antibody structure and classes, Antibody diversity, Genes of antibodies, Theories of formation of antibodies.

UNIT III

Cell mediated immunity: TC mediated immunity, NK cell mediated immunity, ADCC, delayed type hypersensitivity, cytokines and brief idea of MHC.

UNIT IV

Hypersensitivity and vaccination: General features of hypersensitivity, various types of hypersensitivity, Vaccination: Discovery, principles, significance. Concept of autoimmunity.

UNIT V

Immunological Techniques: Antigen-antibody reactions: Precipitation, agglutination, complement fixation, immunodiffusion, ELISA.

Hybridoma technology: Monoclonal antibodies and their applications in immunodiagnosis.

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B.Sc. II SEMESTER IV PRACTICALS

BIOTECHNOLOGY

BT 402: IMMUNOLOGY & BIOPHYSICAL TECHNIQUES

1. Antigen – antibody reaction – determination of Blood group
2. Pregnancy test
3. Widal test
4. Ouchterloney immunodiffusion
5. Radial immunodiffusion
6. ELISA
7. Isolation of casein by isoelectric precipitation
8. Production of antibodies and their titration

Note: - Mandatory to perform at least 6 practicals

BSc II BIOTECHNOLOGY

SEMESTER IV
MODEL QUESTION PAPER
COURSE CODE: BT 401
COURSE NAME: IMMUNOLOGY

Time 3 Hrs Marks 75

Attempt any *five* questions from Part A and *all* questions from Part B
PART A (5x3=15 Marks)

Note: At least one question must be set from each UNIT

1. Define immunity
2. what is antigen?
3. Define antibody
4. Types of antibodies
5. NK Cell
6. hypersensitivity
7. Principle of Elisa
8. Vaccines uses

PART B (5x12=60 Marks)
Answer the following

9 (a) Discuss in detail on elements of complementation system

Or

(b) Explain the mechanisms involved in innate immunity and add note on advantages

10 (a) Write on IgG structure.

Or

(b) Discuss on formation of antibodies.

11 (a) Discuss in detail on delayed hypersensitivity reactions.

Or

(b) Explain the mechanics of MHC.

12 (a) What are vaccines? How are they produced?

Or

(b) Discuss about autoimmunity and add note on its advantages.

13 (a) Discuss the principles of antigen and antibody interactions..

Or

(b) What are monoclonal antibodies? How are they being prepared and used?

II B. Sc - SEMESTER- IV THEORY: BOTANY SYLLABUS

PAPER – DSC IIB: Plant Physiology and Metabolism

W.E.F. 20I6 - I7

Total hours of teaching 60hrs @ 4 hrs per week

UNIT – I: Plant – Water relations (12 hrs)

1. Physical properties of water, Importance of water to plant life.
2. Diffusion, imbibition and osmosis; concept & components of Water potential.
3. Absorption and transport of water and ascent of sap.
4. Transpiration –Definition, types of transpiration, structure and opening and closing mechanism of stomata.

UNIT –II: Mineral nutrition & Enzymes (12hrs)

1. Mineral Nutrition**:** Essential elements (macro and micronutrients) and their role in plant metabolism, deficiency symptoms.
2. Mineral ion uptake (active and passive transport).
3. Nitrogen metabolism- biological nitrogen fixation in *Rhizobium*, outlines of protein synthesis (transcription and translation).
4. Enzymes**:** General characteristics, mechanism of enzyme action and factors regulating enzyme action.

UNIT –III: PHOTOSYNTHESIS (12 hrs)

1. Photosynthesis: Photosynthetic pigments, photosynthetic light reactions, photo-phosphorylation, carbon assimilation pathways: C_3, C_4, and CAM (brief account)
2. Photorespiration and its significance.
3. Translocation of organic solutes: mechanism of phloem transport, source-sink relationships.

UNIT – IV: PLANT METABOLISM (12 hrs)

1. Respiration: Glycolysis, anaerobic respiration, TCA cycle, electron transport system.
   Mechanism of oxidative phosphorylation.
2. Lipid Metabolism**:** Types of lipids, Beta-oxidation.

UNIT –V: GROWTH AND DEVELOPMENT (12hrs)

1. Growth and development: definition, phases and kinetics of growth.
2. Physiological effects of phytohormones - Auxins, Gibberellins, Cytokinins, ABA, Ethylene and Brassinosteroids.
3. Physiology of flowering -photoperiodism, role of phytochrome in flowering; Vernalization.
4. Physiology of Scenescence and Ageing.

Suggested activity: Seminars, Quiz, Debate, Question and Answer sessions, observing animations of protein biosynthesis in you tube.

13/12/16
Boschairperson

K. Sujatha 13/12/16

13/12/16

B. Lobo 13/12/16

Books for Reference:

1. Steward. F.C (1964): Plants at Work (A summary of Plant Physiology) Addison-Wesley Publishing Co., Inc. Reading, Massachusetts, Palo alto, London.
2. Devlin, R.M. (1969) : Plant Physiology, Holt, Rinehart & Winston & Affiliated East West Press (P) Ltd., New Delhi .
3. Noggle, R.& Fritz (1989):Introductory Plant Physiology Prentice Hall of India.
4. Lawlor.D.W. (1989): Photosynthesis, metabolism, Control & Physiology ELBS/Longmans-London.
5. Mayer, Anderson & Bonning(1965): Introduction to Plant Physiology D.Van Nostrand . Publishing Co., N.Y.
6. Mukherjee, S. A.K. Ghosh(1998) Plant Physiology ,Tata McGraw Hill Publishers(P) Ltd., New Delhi.
7. Salisbury, F.B & C.W. Ross (1999): Plant Physiology CBS Publishers and Printers, New Delhi.
2. Plummer, D.(1989) Biochemistry–the Chemistry of life ,McGraw Hill Book Co., London, N.Y. New Delhi, Paris, Singapore, Tokyo.
9. Day, P.M.& Harborne, J.B. (Eds.,) (2000): Plant Biochemistry. . Harcourt Asia (P) Ltd., India & Academic Press, Singapore.

13/12/16
BOS chairperson

K. Sujatha 13/12/16.

13/12/2016

B. Lakshmi
13/12/16

II B. Sc SEMESTRE- IV. – BOTANY PRACTICAL SYLLABUS

PAPER- DSC IIB - Plant Physiology and Metabolism)

W.E.F. 2016-17

Total hours of laboratory Exercises 30 hrs @ 2 per week

Suggested Laboratory Exercises:

1. Osmosis – by potato osmoscope experiment
2. Determination of osmotic potential of plant cell sap by plasmolytic method using leaves of *Rheo / Tradescantia.*
3. Structure of stomata (dicot & monocot)
4. Determination of rate of transpiration using cobalt chloride method.
5. Demonstration of transpiration by Ganongs' photometer
6. Demonstration of ascent of sap/Transpiration pull.
6. Effect of Temperature on membrane permeability by colorimetric method.
7. Study of mineral deficiency symptoms using plant material/photographs.
8. Separation of chloroplast pigments using paper chromatography technique.
9. Rate of photosynthesis under varying Co_2 concentrations.
10. Effect of light intensity on oxygen evolution in photosynthesis using Wilmott' bubbler.

II B. Sc – SEMESTRE- IV. BOTANY PRACTICAL MODEL PAPER

(PAPER- IV - Plant Physiology and Metabolism)

1. Perform the Experiments A & B. Give the aim, principle, procedure and observation. Tabulate the results if any. Draw labeled diagram. 2 x 15 = 30 marks
2. Give the protocol of the experiments C & D 2 x 5 = 10 marks
3. Record & Viva 10 marks

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50 marks

13/12/16

Signature of the ~~Chairman~~ / Chairperson:

Signature of the Members : 1. K. Sujatha 13/12/16

2. 13/12/2016

3. B. Lad 13/12/16

II B.Sc. BOTANY

Theary Model Question Paper

Paper IV (Plant Physiology and Metabolism) W.E.F. 2016-17

SEMESTER - IV

Time: 3 Hrs. **Max. Marks:75**

Section - I

Answer any Five of the Following questions 5 x 5 = 25

ఏదేని ఐదు ప్రశ్నలకు సమాధానములు వ్రాయండి.

1. Osmosis : ద్రవ్యోద్గమం
2. Importance of N.P.K. Fertilizers in Agriculture వ్యవసాయంలో N,P,K, ఎరువుల ప్రాముఖ్యత.
3. CAM : క్రాసు లేషియన్ ఆమ్లజీవక్రియ.
4. Photo synthetic Pigment Systems

   కిరణజన్య సంయోగక్రియలోని వర్ణవ్యవస్థలు.
5. R.Q. శ్వాసక్రియకోషంట్
6. Biological Nitrogen Fixation

   జీవ నత్రజని స్థాపన
7. Role of Phyto Chrome in Flowering

   పుష్పించుటలో ఫైటోక్రోమ్ పాత్ర
8. ~~Gluconeogenesis~~ : ~~గ్లూకోనియోజెనిసిస్~~

8. ABA - ఆబ్సిసిక్ ఆమ్లము

Section - II

Answer the follwong Questions 5 x 10 = 50

క్రింది ప్రశ్నలకు సమాధానములు వ్రాయండి.

9. Describe the methods of water absorption in plants

   మొక్కలలో నీటిశోషణ యాంత్రికాలను విశదీకరించండి.

[OR]

Write about different types of Transpiration, and Opening and closing of stomata.

భాష్పోత్సేక రకాలను వివరించి, పత్రరంధ్రాలు మూసుకుని తెరచుకునే విధానమును గూర్చి వ్రాయుము.

[PTO]

BOS chairman 13/12/16

K. Sujatha 13/12/16

13/12/2016

B. 13/12/16

11. (a). Describe the internal structure of pinus needle and its xerophytic characters.

పైనస్‌నీడిల్ అంతర్నిర్మాణమును వివరించి దాని యొక్క ఎడారి మొక్కల లక్షణాలు వ్రాయండి.

(or)

(b). Discuss the Economic importance of various taxa of gymnosperms.

వివృత బీజాల ఆర్థిక ప్రాముఖ్యత గురించి వ్యాసము వ్రాయుము.

12. (a). Write an essay on complex Tissues.

సంక్లిష్ట కణజాలాలు గురించి వ్యాసము వ్రాయుము.

(or)

(b). Describe the various theories regarding the organisation of the stem apex.

కాండాగ్ర నిర్మాణమును వివరించే వివిధ సిద్ధాంతాలను గురించి వ్రాయుము.

13. (a). Describe anomalous secondary growth in Boerhaavia stem.

బోయర్‌హావియా కాండములో జరిగే అసంగత ద్వితీయ వృద్ధిని వివరించుము.

(or)

(b). Describe the wood structure and uses of Teakwood and Red sanders.

టేకు, ఎర్రచందనం మొక్కల కలప లక్షణాలను మరియు ఉపయోగాలను వ్రాయుము.

13/12/16
BOS chairperson

1. K. Sujatha 13/12/16
2. 13/12/16
3. B. Lakshmi 13/12/16

S.V. UNIVERSITY; TIRUPATI
SEMESTER IV (W.E.F. 2016-17)
Paper IV (SPECTROSCOPY & PHYSICAL CHEMISTRY)

60 hrs (4 h / w)

SPECTROSCOPY 30 hrs (2h / w)

UNIT-I 6h

General features of absorption - Beer-Lambert's law and its limitations, transmittance, absorbance, and molar absorptivity. Single and double beam spectrophotometers. Application of Beer-Lambert law for quantitative analysis of 1. Chromium in $K_2Cr_2O_7$
2. Manganese in Manganous sulphate

Electronic spectroscopy: 8h

Interaction of electromagnetic radiation with molecules and types of molecular spectra. Energy levels of molecular orbitals (σ, π, n). Selection rules for electronic spectra. Types of electronic transitions in molecules effect of conjugation. Concept of chromophore and auxochrome.

UNIT-II

Infra red spectroscopy 8h

Different Regions in Infrared radiations. Modes of vibrations in diatomic and polyatomic molecules. Characteristic absorption bands of various functional groups. Interpretation of spectra-Alkanes, Aromatic, Alcohols Carbonyls, and amines with one example to each.

Proton magnetic resonance spectroscopy (^{1}H-NMR) 8h

Principles of nuclear magnetic resonance, equivalent and non-equivalent protons, position of signals. Chemical shift, NMR splitting of signals - spin-spin coupling, coupling constants. Applications of NMR with suitable examples - ethyl bromide, ethanol, acetaldehyde, 1,1,2-tribromo ethane, ethyl acetate, toluene and acetophenone.

PHYSICAL CHEMISTRY 30 hrs (2h / w)

UNIT-III

Dilute solutions 10h

Colligative properties. Raoult's law, relative lowering of vapour pressure, its relation to molecular weight of non-volatile solute. Elevation of boiling point and depression of freezing point. Derivation of relation between molecular weight and elevation in boiling point and depression in freezing point. Experimental methods of determination. Osmosis, osmotic pressure, experimental determination. Theory of dilute solutions. Determination of molecular weight of non-volatile solute from osmotic pressure. Abnormal Colligative properties- Van't Hoff factor.

UNIT-IV

Electrochemistry-I **10h**

Specific conductance, equivalent conductance. Variation of equivalent conductance with dilution. Migration of ions, Kohlrausch's law. Arrhenius theory of electrolyte dissociation and its limitations. Ostwald's dilution law. Debye-Huckel-Onsagar's equation for strong electrolytes (elementary treatment only). Definition of transport number, determination by Hittorfs method. Application of conductivity measurements- conductometric titrations.

UNIT-V

1. Electrochemistry-II **4h**

Single electrode potential, sign convention, Reversible and irreversible cells Nernst Equation- Reference electrode, Standard Hydrogen electrode, calomel electrode, Indicator electrode, metal – metal ion electrode, Inert electrode, Determination of EMF of cell, Applications of EMF measurements - Potentiometric titrations.

2.Phase rule **6h**

Concept of phase, components, degrees of freedom. Thermodynamic Derivation of Gibbs phase rule. Phase equilibrium of one component system - water system. Phase equilibrium of two- component system, solid-liquid equilibrium. Simple eutectic diagram of Pb-Ag system, simple eutectic diagram, desilverisation of lead., NaCl-Water system, Freezing mixtures.

List of Reference Books

1. Spectroscopy by William Kemp

2. Spectroscopy by Pavia

3. Organic Spectroscopy by J. R. Dyer

4. Modern Electrochemistry by J.O. M. Bockris and A.K.N.Reddy

5. Advanced Physical Chemistry by Atkins

6.Introduction to Electrochemistry by S. Glasstone

7.Elementary organic spectroscopy by Y.R. Sharma

8. Spectroscopy by P.S.Kalsi

VERIFIED AND FINALISED
BY BOS CHAIR PERSON
A.VENKATA RAJU

LABORATORY COURSE – IV

Practical Paper - IV Physical Chemisry and IR Spectral Analysis

(at the end of semester IV)

30 hrs (2 h / W)

Record-10, Experiment-40=Total 50

Physical Chemistry **20M**

1.Critical Solution Temperature- Phenol-Water system

2. Effect of NaCl on critical solution temperature (Phenol-Water system)

3.Determination of concentration of HCl conductometrically using standard NaOH solution.

4.Determination of concentration of acetic acid conductometrically using standard NaOH Solution.

IR Spectral Analysis **20 M**

5. IR Spectral Analysis of the following functional groups with examples

a) Hydroxyl groups

b) Carbonyl groups

c) Amino groups

d) Aromatic groups

VERIFIED AND FINALISED
BY BOS CHAIR PERSON
A.VENKATA RAJU

Sri Venkateswara University

Model Question paper for **4th semester** of **B.Sc** degree course from the academic year **2016-17**

Name of the Subject: **CHEMISTRY**

Max.Marks:75

Section-I

Answer any **Five** of the following: 5x5=25

1. Write notes on chromphores.
2. Write a note on finger print region.
3. What is coupling constant and explain its significance.
4. Explain the terms: (a) Absorbance (b) Transmittance.
5. Explain Rauolt's law.
6. Explain molar conductivity and equivalent conductivity.
7. Write a note on calomel electrode.
8. Write short notes on eutectic point.

Section-II

Answer **All** the question: 5x10=50

9. a) What is chemical shift? Write the factors affecting chemical shift?

(OR)

b) Explain principles of IR spectroscopy.

10. a) State and explain Beer-Lambert's law. Explain any two of its applications.

(OR)

b) Explain different types of spectrophotometers with schematic diagrams.

11. a) Define osmotic pressure? How is it determined using Berkeley-Hartley method.

(OR)

b) How molecular weight can be determined by depression in freezing point using Beckmann's method

12. a) Explain Kohlraush law and its applications.

(OR)

b) Define transport number? How it can be determined by Hittorf's method.

13. a) Define phase rule? Explain the phase diagram of water system.

(OR)

b) Explain the terms involved in phase rule.

OOP-Required

II YEAR IV SEMESTER
W.E.F. 2016 - 17

DATA STRUCTURES

3-4-108

UNIT I

Concept of Abstract Data Types (ADTs)- Data Types, Data Structures, Storage Structures, and File Structures, Primitive and Non-primitive Data Structures, Linear and Non-linear Data Structures.

Linear Lists – ADT, Array and Linked representations, Pointers.

Arrays – ADT, Mappings, Representations, Sparse Matrices, Sets – ADT, Operations

Linked Lists: Single Linked List, Double Linked List, Circular Linked List , applications

UNIT II

Stacks: Definition, ADT, Array and Linked representations, Implementations and Applications

Queues: Definition, ADT, Array and Linked representations, Circular Queues, Dequeues, Priority Queues, Implementations and Applications.

UNIT III

Trees: Binary Tree, Definition, Properties, ADT, Array and Linked representations, Implementations and Applications. Binary Search Trees (BST) – Definition, ADT, Operations and Implementations, BST Applications. Threaded Binary Trees, Heap trees.

UNIT IV

Graphs – Graph and its Representation, Graph Traversals, Connected Components, Basic Searching Techniques, Minimal Spanning Trees

UNIT- V

Sorting and Searching: Selection, Insertion, Bubble, Merge, Quick, Heap sort, Sequential and Binary Searching.

REFERENCE BOOKS

1. D S Malik, Data Structures Using C++, Thomson, India Edition 2006.
2. Sahni S, Data Structures, Algorithms and Applications in C++, McGraw-Hill, 2002.
3. SamantaD, Classic Data Structures, Prentice-Hall of India, 2001.
4. Heilman G I,. Data Structures and Algorithms with Object-Oriented Programming, Tata McGraw-l lill. 2002. (Chapters I and 14).
5. Tremblay P, and Sorenson P G, Introduction to Data Structures with Applications, Tata McGraw-Hill,

Student activity:

1. **Create a visible stack using C-graphics**
2. **Create a visible Queue using C-graphics**

13/12/16

13/12/16

DATA STRUCTURES ~~USING JAVA LAB~~ (Implementation using Java)

LAB

1. Write a Program to implement the Linked List operations
2. Write a Program to implement the Stack operations using an array.
3. Write Programs to implement the Queue operations using an array.
4. Write Programs to implement the Stack operations using a singly linked list.
5. Write Programs to implement the Queue operations using a singly linked list.
6. Write a program for arithmetic expression evaluation
7. Write a program to implement Double Ended Queue using a doubly linked list.
8. Write a program to search an item in a given list using Linear Search and Binary Search
9. Write a program for Quick Sort
10. Write a program for Merge Sort
11. Write a program on Binary Search Tree operations(insertion, deletion and traversals)
12. Write a program for Graph traversals

13/12/16

13/12/16

Code No:

SRI VENKATESWARA UNIVERSITY: TIRUPATI
B.Sc., (Computer Science)
Fourth Semester Examinations
DATA STRUCTURES

Time: 3 Hours **Max. Marks: 75**

Note: This question paper contains two parts A and B.
Part A is compulsory which carries 25 marks. Answer any five of the following Questions in Part A.
Part B consists of 5 Units. Answer any one full question from each unit.
Each question carries 10 marks

PART - A

Answer any Five of the following. All questions carry equal marks
5 x 5 = 25 Marks

1. List and discuss about the Data types?
2. What are Storage structures?
3. What is the concept of ADT?
4. Give a note on the procedure of Stack?
5. What is Binary tree? Give example
6. What is the Tree Traversal?
7. Describe in brief about Graph Searching Techniques?
8. What is the process of Searching and sorting?

PART - B

Answer one question from each Unit. All questions carry equal marks
5 x 10 = 50 Marks

UNIT – I

9. Differentiate between Primitive and Non-primitive data structures

OR

10. Write a program in Java to represent single linked list..

UNIT-II

11. Explain about stack implementations and its Applications with an example?

OR

12. Explain the method of DE queues and Circular Queue Representations with an illustration?

UNIT-III

13. Discuss about Heap Trees and Applications in detail?

OR

14. What are Binary search Trees? Explain with its Applications.

UNIT-IV

15. Explain the process of Graph Representation with connected components?

OR

16. Explain about Prim's Minimum spanning tree in detail?

UNIT-V

17. Write a program in java for selection sort for a given number by the user?

OR

18. Explain the process of Searching in detail with an example program?

SECOND YEAR IV SEMESTER
401- TOURISM MARKETING
W.E.F. 2016 - 17

Theory: 4 hrs/week
Practicals : 3 hrs/week

THEORY:

Unit-I

Definition, Concept of Tourism Marketing – Marketing Tourism Products – Marketing Mix – Consumer Behaviour – Product life cycle – Pricing a Product – TQM – Integrating TQM in marketing and programmes.

Unit – II

Tourism marketing related to 5 A's (Attraction – Accebility – Accomodation – Ameneties – Activities). New trends in tourism - Health tourism, co-tourism and MICE – Principles in hospitality selling – AIDA model.

Unit – III

Advertising – Sales promotion publicity – market segment action (Demographic, Psychological and Behavioural segmentation) marketing strategies – Methods of marketing segments – Target Market – Selecting and Marketing for target market.

Unit – IV

Marketing skills for tourism – Development creativity – communication SMMR Model Communication – self motivation personality development – Team building – Need for market research and information system.

Unit – V

Economics of Tourism – Impact on National Income – Multiplier Effect Foreign exchange as revenue earner for government – factors effecting Tourism earnings.

REFERENCES:

1. Tourism Marketing – GPH panel of Experts – Gully Baba Publishing House (P) Ltd. 2009.
2. Tourism marketing – Roth Field CW
3. Marketing Management – Philip Kotter
4. Tourism and Travel Marketing – Jag Mohan Nagi
5. Airlines and Ticketing for Tourism – Jag Mohan Nagi
6. Francis Buttle (1995) Hotel and Food Service Marketing – A Managerial Approach – Cassell Education Ltd. London

B.Sc. (CT & HM)
Second Year : IVSemester
401 – Tourism Marketing
Model Question Paper

Time : 3 Hrs | Marks : 75

Section-A

Answer any Five Questions not exceeding 10 sentences.
Each question carries 5 mark **5 × 5 = 25 M**

1. Discuss the need for marketing in in the tourism industry?
2. Critically evaluate the role of consumer Behaviour in Tourism?
3. Explain on the Five A'S of Tourism marketing.
4. Eco Tourism is a new Phenomenon, Justify?
5. Explain the role of Team Building for a successful marketing campaign.
6. Write a short notes on contribution of tourism to the National Income?
7. Write importance of VISA's?
8. Describe Airline Ticketing?

Section-B

Answer any Five Questions not exceeding Two pages each
Each question carries 10 mark **5 × 10 = 25 M**

9. a) Discuss in brief the factors for pricing of various tourism products.
   (or)
   b) Briefly write about the various strategies to be taken at various stage of the product life cycle?

10. a) Is MICE evolving? Critically evaluate the performance over the last ten years in India.
   (or)
   b) Identify the various parameters to lead a nation with successful medical tourism.

11. a) Explain the principles of personal selling AIDA Model.
   (or)
   b) Write in detail the various components of market segmentation.

12. a) Discuss the computer reservation system in Airline Ticketing
   (or)
   b) Write notes on: 1) ABC Codes 2) Manual Ticketing

13. a) Discuss the role of Tourism satellite Accounting (TSA) for evaluating success of a country/state tourism performance.
   (or)
   b) Explain SMMR Model of Communication.

SECOND YEAR: IV SEMESTER
402- FRONT OFFICE-II
W.E.F. 2016 - 17

Theory: 4 hrs/week
Practicals : 3 hrs/week

THEORY:

Unit-I

Reservation Introduction – Reservation Terminology – Types of Room – Types of Rates an Plan – Meal Menus Related to plans – Other Rates – Sources of Reservations – Modes of Reservation – Types of Reservation – Manual System of Reservation by Phone – Automated systems – E-commerce.

Unit – II

Reception Introduction – Reception Terminology. Front Desk Counter – Support Devices – Assignment of Room – The morning Shift – Automated system – Other registration optimum – Upselling.

Unit – III

Uniformed service introduction – Lobby organization – Lobby Terminology – Bell Desk procedure – Other Duties Bell Desk Staff.

Unit – IV

Concierge Services Introduction – Role of a Concierge – Handling Mail – Handling Instored or Registered Mail and Courier Services – Handling Messages – pluging – Providing information – Function in the Hotel – Guest Rack.

Unit – V

Guest Relation executive Introduce – Organization of GRE – Important Department for GRE – Telecommunication Introduction – Types of exchange – Other communication Equipment – Organization of Telecommunication Department.

PRACTICALS:

1. Arrival & Departure procedures – Registration
2. Arrival & Departure and Discrepancy report
3. Group cancellation procedures.
4. Handling guest complaints.
5. Registration form
6. Group Check-in, checkout procedures

REFERENCES:

1. Front Office procedures- Michael L. Kasavenna (Fifth Edition) Richard Books.
2. Front Office Operation – Patrick J Marcru, Gail L Soloman, Jim Doogam Prenticel Hall.
3. A Manual of Hotel Reception – Heeves and Medlik – Hoinemann, London
4. Front Office Psychology – John Willey INC - Hinderbrand
5. Front Office Management – John Wiley.

B.Sc. (CT & HM)
Second Year : IV semester
402 – FRONT OFFICE - II Model
Question Paper

Time : 3 Hrs **Marks : 75**

Section-A

Answer any Five Questions not exceeding 10 sentences.
Each question carries 5 mark **5 × 5 = 25 M**

1. Write briefly about front office accounting?
2. Write the different modes of payments.
3. What are the types of account maintained in the front office accounting?
4. How does casher handles the bills when it's a card payment?
5. Draw the model foreign exchange voucher of a hotel?
6. Explain briefly the front office accounting cycle?
7. Explain about the front office budgeting?
8. Write about the establishing room rates?

Section-B

Answer any Five Questions not exceeding Two pages each
Each question carries 10 mark **5 × 10 = 25 M**

9. a) Write the group registrations and the crew arrival procedure.
   (or)
   b) Write in detail the procedure for a VIP guest?

10. a) Explain the skills required to handle guests
    (or)
    b) Write in detail about night shift reception procedure.

11. a) Explain in detail about front office accounting
    (or)
    b) Write about maintenance of Guest arrival and departure register.

12. a) What item are recorded on a front office cash sheet? How does cash sheet help ensure internal control in the front office?
    (or)
    b) Why is fore casting important to front office professionals?

13. a) Write about Job description of front office professionals.
    (or)
    b) Write the detail explain types of room rates?

SECOND YEAR: IV SEMESTER
403- ACCOMMODATION OPERATION-II
W.E.F. 2016 - 17

Theory: 4 hrs/week
Practicals : 3 hrs/week

THEORY:

Unit-I

Housekeeping Inventories – Cleaning Equipment – Cleaning equipment – Cleaning Agents – Guest supplies – Linen Uniforms – Composition, Care and Cleaning of Different Surfaces – Metals, Glass, Wood, Stone, Rubber.

Unit – II

Hotel Guest room importance to Guest – Types of Guest room – Guest room status – Guest Floor Rules – Guest room Furniture – Furniture fixtures and fittings, Beds, Mattresses and Soft Furnishes – Guest room Accessories – Placement of guest Supplies.

Unit – III

Cleaning Guest room – Types of Soil – Nature of soil Standards of Cleaning – The Science of Cleaning. The cleaning process – Cleaning public Areas – Entrances, lobbies, front desk, elevators, staircases, Guest Corridors, public rest room, Banquet Halls, Role of Supervisor – Function of Supervisors.

Unit – IV

Housekeeping control Desk – Co-ordination with other departments – handling telephone calls budgeting for housekeeping Expenses – Inventory Control and stock – Taking purchasing.

Unit – V

Textile terminology – Classification and Identification of Textile Fibres – Fabric Construction. Use of Textiles in Hotels. The linen and Uniform room – storage of Linen, Linen exchange – Par stock Laundry equipment – The Laundry Process – Stain Removal.

PRACTICALS:

1. Different types of stains removal
2. Washing of Linen, Cotton, Silk and Dry Cleaning
3. Washing of woollen labries.
4. Floor cleaning procedures for hard floor.
5. Cleaning of wall finishes
6. Cleaning of floor surfaces

REFERENCES:

1. Hotel & Hospital Housekeeping – Branson, Joan C and Lennex, Margaret, 2003.
2. Hotel Housekeeping Management – Sudhir Andernes The McGraw – Hill Companies (Publication)
3. Hotel Housekeeping – G Raghu Balan – Smrithe, Raghu Balan – Oxford University – Published in India.
4. Housekeeping Training Manual – Sudhir Andrews
5. Professional Housekeeping – Schneider, Madiline Tucher.

B.Sc. (CT & HM)
Second Year : IV Semester
403 – ACCOMMODATION OPERATION - II
Model Question Paper

Time : 3 Hrs **Marks : 75**

Section-A

Answer any Five Questions not exceeding 10 sentences.
Each question carries 5 mark **5 × 5 = 25 M**

1. Write in detail about different fibers giving example.
2. Write the standard sizes of bed linen.
3. Write briefly the skills required is handle guest.
4. Write the generate procedure of washing linen.
5. Explain the floor polishing procedure.
6. Explain the cleaning of Chandelier.
7. Explain in detail about carpet cleaning

Section-B

Answer any Five Questions not exceeding Two pages each
Each question carries 10 mark **5 × 10 = 25 M**

8. a) Write the aims and objectives of pest and rodent control.

   (or)

   b) Classify the different stains and the stain removal procedures to be followed.

9. a) Write the procedure for cleaning of domes and high attitude area and what are the safety measures taken.

   (or)

   b) Write the linen room and uniform room activities in detail.

10. a) Draw the layout of the housekeeping department and explain about the work units.

    (or)

    b) Explain the organization of a housekeeping department and describe the roles of personnel.

11. a) Explain the procedures for requisitioning fresh linen, guest and cleaning supplies.

(or)

b) Explain the methods of cleaning public area in a hotel.

12. a) What is a linen room? Elucidate the storage condition, tips and practices.

(or)

b) Explain about the equipment and accessories for linen and uniform rooms and procedures of stock taking.

13. a) Write about the different cleaning agents. Discuss the principles in selection.

(or)

b) Elucidate the different cleaning equipment and discuss the standard and specifications for their selection

B.A./B.Sc. SECOND YEAR MATHEMATICS SYLLABUS PAPER-IV
(SEMESTER – IV) - W.E.F. 2016-17
REAL ANALYSIS

UNIT – I (12 hrs) : REAL NUMBERS :

The algebraic and order properties of R, Absolute value and Real line, Completeness property of R, Applications of supreme property; intervals. No. Question is to be set from this portion.

Real Sequences : Sequences and their limits, Range and Boundedness of Sequences, Limit of a sequence and Convergent sequence.

The Cauchy's criterion, properly divergent sequences, Monotone sequences, Necessary and Sufficient condition for Convergence of Monotone Sequence, Limit Point of Sequence, Subsequences and the Bolzano-weierstrass theorem – Cauchy Sequences – Cauchey's general principle of convergence theorem.

UNIT –II (12 hrs) : INFINITIE SERIES :

Series : Introduction to series, convergence of series. Ceanchy's general principle of convergence for series tests for convergence of series, Series of Non-Negative Terms.

1. P-test
2. Canchy's n^{th} root test or Root Test.
3. D'-Alemberts' Test or Ratio Test.
4. Alternating Series – Leibnitz Test.

Absolute convergence and conditional convergence, semi convergence.

UNIT – III (12 hrs) : CONTINUITY :

Limits : Real valued Functions, Boundedness of a function, Limits of functions. Some extensions of the limit concept, Infinite Limits. Limits at infinity. No. Question is to be set from this portion.

Continuous functions : Continuous functions, Combinations of continuous functions, Continuous Functions on intervals, uniform continuity.

UNIT – IV (12 hrs) : DIFFERENTIATION AND MEAN VALUE THEORMS :

The derivability of a function, on an interval, at a point, Derivability and continuity of a function, Graphical meaning of the Derivative, Mean value Theorems; Role's Theorem, Lagrange's Theorem, Cauchhy's Mean value Theorem - Generalized Mean value Theorems - Taylor's Theorem, Maclaurin's Theorem, Expansion of functions with different forms of remainders, Taylor's Maclaurins Seriess, power series representation of functions.

UNIT – V (12 hrs) : RIEMANN INTEGRATION :

Riemann Integral, Riemann integral functions, Darboux theorem. Necessary and sufficient condition for R – integrability, Properties of integrable functions, Fundamental theorem of integral calculus, integral as the limit of a sum, Mean value Theorems. Deletion ,

TEXT BOOK :-

REAL NUMBERS

"Introduction to Real Analysis" by RABERT g BARTELY and .D.R. SHERBART Published by John Wiley. (Chapters 3.1 to 3.7, 5.1 to 5.4, 6.1 to 6.4, 7.1 to 7.3, 9.1 to 9.3)

REFERENCE TEXT BOOKS :

1. A Text Book of B.Sc mathematics by B.V.S.S. Sarma and Published by . S. Chand & Company Pvt. Ltd., New Delhi.
2. Elements of Real Analysis on per UGC Syllabus by Shanthi Narayan and Dr. M.D. Raisingkania Published by S. Chand & Company Pvt. Ltd., New Delhi.

K. Ch. V. Subbaiah Naidu
BOS Chairman
Mathematics
B.T College
Madanapalle .

S.V.UNIVERSITY, MODEL PAPER.

THREE YEAR B.A/B.Sc DEGREE EXAMINATIONS.

CHOICE BASED CREDIT SYSTEM

SEMESTER- IV

PART II : MATHEMATICS

Paper IV :REAL ANALYSIS

(New Syllabus w.e.f 2015-16)

Time: 3 hours

Max Marks :75

SECTION - A

Answer any FIVE of the following questions. Each question carries 5 marks (5X5 = 25).

1. Test the convergence of the sequence $S_n = \frac{3n-1}{n+1}$

2. Define Cauchy Sequence and give an example.

3. Test the convergence $\sum_{n=1}^{\infty} \frac{1}{2^n+3^n}$

4. Test the convergence $\sum_{n=0}^{\infty} \frac{(-1)^n}{n!}$

5. Define continuity of a function at point and give an example for discontinuous function.

6. Test the differentiability of the function $f(x) = |x|$ at $x = 0$

7. If $f(x)=x^2 : [0,1] \to R$ and partition set is $P=\{0, \frac{1}{4}, \frac{2}{4}, \frac{3}{4}, 1\}$, then compute L(P,f).

8. Show that $\lim_{n\to\infty} \sum_{r=1}^{n} \frac{n}{n^2+r^2} = \frac{\pi}{4}$

(P.T.O)

SECTION - B

Answer ALL of the five questions. Each question carries 10marks (5X10 = 50).

9a. State and prove Bolzano-Weierstrass theoremfor sequences.

OR

b. Applying Cauchy's general principle of convergence show that the sequence $\{a_n\}$is convergent.

where $a_n = 1 + \frac{1}{2^2} + \frac{1}{3^2} + \ldots\ldots\ldots + \frac{1}{n^2}$

10a. Test the convergence of series $\sum \frac{2^n-2}{2^n+1} x^n \quad , \; x > 0$

OR

State and prove Leibnitz test for alternating series.

11a. If f:R→ R is defined as $f(x) = \frac{e^{\frac{1}{x}} - e^{\frac{-1}{x}}}{e^{\frac{1}{x}} + e^{\frac{-1}{x}}}$ $x \neq 0$, and f(0)=1,then test the continuity at x=0.

OR

b. If f(x) is continuous on $[a, b]$, Then prove that f(x) is uniformly continuous on $[a, b]$.

12a. State and prove Rolle's theorem.

OR

b. Show that $\frac{\pi}{6} + \frac{\sqrt{3}}{15} < \sin^{-1} 0.6 < \frac{\pi}{6} + \frac{1}{8}$

13a. Prove that $f(x) = x^2$ is integrable on [0,a] and hence show that $\int_0^a x^2 = \frac{a^3}{3}$

OR

b. State and prove Fundamental theorem of Integral Calculus.

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K.Ch.V. Subbaiah Naidu
BOS Chairman
Mathematics
B.T College
Madanapalle.

B.Sc MICROBIOLOGY (CBCS) SYLLABUS
SECOND YEAR – SEMESTER- IV
W.E.F. 2016 - 17

MBT- 401 IMMUNOLOGY AND MEDICAL MICROBIOLOGY

TOTAL HOURS: 48 **CREDITS: 4**

UNIT-I — No. of hours: 10

Types of immunity – innate and acquired; active and passive; humoral and cell-mediated immunity.
Primary and secondary organs of immune system – thymus, bursa fabricus, bone marrow, spleen and lymph nodes.
Cells of immune system.
Identiification and function of B and T lymphocytes, null cells, monocytes, macrophages, neutrophils, basophils and eosinophils.

UNIT-II — No. of hours: 10

Antigens – types, chemical nature, antigenic determinants, haptens.
Factors affecting antigenicity.
Antibodies – basic structure, types, properties and functions of immunoglobulins.
Types of antigen-antibody reactions - Agglutination, Precipitation, Neutralization, complement fixation, blood groups.
Labeled antibody based techniques – ELISA, RIA and Immunofluroscence. Polyclonal and monoclonal antibodies – production and applications.
Concept of hypersensitivity and Autoimmunity.

UNIT-III — No. of hours: 10

Normal flora of human body.
Host pathogen interactions: infection, invasion, pathogen, pathogenicity, virulence and opportunistic infection.
General account on nosocomial infection.
General principles of diagnostic microbiology- collection, transport and processing of clinical samples.
General methods of laboratory diagnosis - cultural, biochemical, serological and molecular methods.

UNIT-IV — No. of hours: 8

Antibacterial Agents- Penicillin, Streptomycin and Tetracycline.
Antifungal agents – Amphotericin B, Griseofulvin
Antiviral substances - Amantadine and Acyclovir
Tests for antimicrobial susceptibility.
Brief account on antibiotic resistance in bacteria - Methicillin-resistant *Staphylococcus aureus* (MRSA).
Vaccines – Natural and recombinant.

UNIT-V **No. of hours: 10**

General account on microbial diseases – causal organism, pathogenesis, epidemiology, diagnosis, prevention and control-
Bacterial diseases – Tuberculosis and Typhoid
Fungal disease – Candidiasis.
Protozoal disease – Malaria.
Viral Diseases - Hepatitis- B and AIDS

MBP- 401 IMMUNOLOGY AND MEDICAL MICROBIOLOGY

TOTAL HOURS: 48 **CREDITS: 2**

1. Identification of human blood groups.
2. Separation of serum from the blood sample (demonstration).
3. Estimation of blood haemoglobin-Hemoglobinometer/Cyanometenoglobin (CMG) method.
4. Total Leukocyte Count of the given blood sample.
5. Differential Leukocyte Count of the given blood sample.
6. Immunodiffusion by Ouchterlony method.
7. Identify bacteria (*E. coli, Pseudomonas, Staphylococcus, Bacillus*) on the basis of cultural, morphological and biochemical characteristics: IMViC, urease production and catalase tests
8. Isolation of bacterial flora of skin by swab method.
9. Antibacterial sensitivity by Kirby-Bauer method
10. Study the symptoms of the diseases with the help of photographs: Anthrax, Polio, Chicken pox, HBV, HIV, TB, Dermatomycoses (ring worms)
11. Study the various stages of malarial parasite in RBCs using permanent mounts.

SUGGESTED READING

Abbas AK, Lichtman AH, Pillai S. (2007). **Cellular and Molecular Immunology.** 6th edition Saunders Publication, Philadelphia.

Ananthanarayan R. and Paniker C.K.J. (2009) **Textbook of Microbiology**. 8th edition, University Press Publication

Brooks G.F., Carroll K.C., Butel J.S., Morse S.A. and Mietzner, T.A. (2013) Jawetz, Melnick and Adelberg's **Medical Microbiology**. 26th edition. McGraw Hill Publication Publication

Delves P, Martin S, Burton D, Roitt IM. (2006). Roitt's **Essential Immunology**.11th edition Wiley-Blackwell Scientific Publication, Oxford.

Goering R., Dockrell H., Zuckerman M. and Wakelin D. (2007) Mims' **Medical Microbiology.** 4th edition. Elsevier

Goldsby RA, Kindt TJ, Osborne BA. (2007). Kuby's **Immunology**. 6th edition W.H. Freeman and Company, New York.

Jawetz, Melnick and Adelberg's **Medical Microbiology**. 26th edition. McGraw Hill Microbiology. 4th edition. Elsevier Publication

Richard C and Geiffrey S. (2009). **Immunology**. 6th edition. Wiley Blackwell Publication.

Willey JM, Sherwood LM, and Woolverton CJ. (2013) Prescott, Harley and Klein's **Microbiology**. 9th edition. McGraw Hill Higher Education

SUBJECT:: B.Sc., MICROBIOLOGY (CBCS) MODEL QUESTION PAPER

SECOND YEAR – SEMESTER IV

MBT-401 : IMMUNOLOGY AND MEDICAL MICROBIOLOGY

Max marks -75 **Time 3 hrs**

SECTION-A

ANSWER ANY FIVE OF THE FOLLOWING **5 x 5 = 25 marks**

Draw labeled diagrams wherever necessary

1. CMI functions
2. Eosinophils function
3. ELISA principle and applications
4. Define Nosocomial infections
5. Define Virulence and Opportunistic infections
6. Role of Pencillin
7. Attenuated vaccine means
8. Function of Acyclovir

SECTION- B

ANSWER ANY FIVE OF THE FOLLOWING **5 x 10 = 50 marks**

Draw labeled diagrams wherever necessary

9. a) Classify the and Write about the functions of Primary lymphoid organs.

Or

b) Differentiate the function innate and acquired immunity.

10. a) Write the factors affecting the antigenecity mechanism with suitable examples.

Or

b) List out the functions of B and T lymphocytes.

11. a) Classify the antibodies and explain with diagrammatic representation.

Or

b) List out various antigen and antibody reactions and write their principle in detail.

12. a) Discuss various types of host pathogen interactions with suitable examples.

Or

b) Explain the biochemical methods used in laboratory diagnosis of microbial diseases.

13. a) Discuss various tests used for antimicrobial susceptibility in the laboratories

Or

b) What is a vaccine? Classify the types of vaccines and write their applications in detail.

SUBJECT:: B.Sc., MICROBIOLOGY (CBCS) MODEL QUESTION PAPER
SECOND YEAR – SEMESTER IV
MBT-401 : IMMUNOLOGY AND MEDICAL MICROBIOLOGY

Max marks -75 **Time 3 hrs**

SECTION-A

ANSWER ANY FIVE OF THE FOLLOWING **5 x 5 = 25 marks**
Draw labeled diagrams wherever necessary

1. CMI functions
2. Eosinophils function
3. ELISA principle and applications
4. Define Nosocomial infections
5. Define Virulence and Opportunistic infections
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ANSWER ANY FIVE OF THE FOLLOWING **5 x 10 = 50 marks**
Draw labeled diagrams wherever necessary

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SRI VENKATESWARA UNIVERSITY : TIRUPATI

STATISTICS SYLLABUS (II YEAR)

Semester – IV (CBCS With Maths Combination Common to BA/BSc)

Paper – IV : Statistical Inference

W.E.F. 2016 - 17

UNIT - I

Estimation : Estimate and Estimator, Point Estimation and Interval Estimation, Criteria of good estimators: Unbiasedness, Consistency, Efficiency and Sufficiency, with examples, Statement of Neymann Factorization theorem. Estimation methods: Method of Maximum likelihood estimation, Method of moments and its properties with examples. Interval Estimation: Confidence limits for mean μ and variance σ^2.

UNIT - II

Testing of Hypothesis: Hypothesis, Null hypothesis and Alternative Hypothesis, Simple and composite hypothesis, Critical region, One tailed and Two tailed tests, Two Types of Errors, Level of significance, Power of the test and simple problems, Neyman Pearson's Lemma, problems in case of Binomial Distribution, Poisson Distribution and Normal Distribution.

UNIT - III

Large Sample Tests: Single Mean and Difference between Two means test, Single proportion and Difference between Two proportions test, Difference between Two Standard Deviations test, Fisher's Z- Transformation: Single correlation coefficient and Difference between Two correlation coefficients and problems.

UNIT - IV

Small Sample Tests: Single mean test and Difference between Two means test, Paired t- test. F - test. χ^2 – test: Single variance test, Goodness of fit of B.D and P.D, 2X2 contingency test , Independence of attributes test and problems.

UNIT – V

Non-Parametric Test: Definition, Assumptions, Advantages, disadvantages, Uses, Sign test for one and two samples one and two samples, Run test for, Wilcoxon's signed rank test , Median test for two samples only, Mann Whitney U – test and problems.

Reference Books:

1. Fundamentals of mathematical statistics: S.C.Guptha and V.K. Kapoor

2. Outlines of statistics, Vol II: Goon Guptha, M.K.Guptha and Das Guptha B

3. Introduction to mathematical Statistics : Hoel P.G

4. Statistical methods and inference B.A.,/B.Sc., II year statistics - Telugu Academy

5. Statistics Made Simple Do it yourself on PC By K.V.S. Sarma

6. Applied Statistics with Microsoft Excel By Gerald Keller

Practical Paper – IV : Statistical Inference

1. Single mean test for Large samples.
2. Difference between two means test for Large samples
3. Difference between two standard deviations test for Large samples
4. Single Proportion test for Large samples
5. Difference between two Proportions test for large samples
6. Single Correlation coefficient test for large samples
7. Difference between two Correlation coefficients test for large samples
8. Single mean test for Small samples
9. Difference between two means test for small samples
10. Paired t- test
11. F-Test or Difference between two variances test for small samples
12. χ^2 – Test for single sample variance
13. χ^2 – Test for goodness of fit of B.D
14. χ^2 – Test for goodness of fit of P.D
15. χ^2 – Test for independence of attributes
16. Sign test
17. Run test
18. Median test

Note : The above practical are to be done using M S Excel and SPSS Package where ever it is possible

THREE YEAR B.A. / B.Sc., DEGREE EXAMINATION

CBCS – Fourth Semester

Part - II - STATISTICS (WM) Paper IV: Statistical Inference

New syllabus w.e.f. 2015 – 16

MODEL PAPER

Max. Marks: 75 **Times: 3 Hours**

PART - A

Answer any **FIVE** questions. **Each** question carries equal marks 5x5=25 marks

1. Show that Sample mean is always an U.B.E of Population mean.
2. Explain the concept of M.L.E.
3. Explain briefly i) Simple Hypothesis ii) Composite Hypothesis with suitable examples.
4. Explain briefly i) Null and Alternative Hypothesis and ii) Critical Region.
5. A coin is tossed at random 400 times and head turns up 240 times. Can the coin be regarded as unbiased?
6. Explain the test procedure for paired t-test.
7. χ^2 - test for 2x2 contingency table.
8. Advantages and Disadvantages of Non-Parametric Tests.

PART - B

Answer ALL questions, each question carries equal marks 5x10=50 marks

UNIT - I

9. Explain the criteria's of good estimator with examples.

OR

10. Find $100(1-\propto)\%$ Confidence intervals for the parameters i) $\mu$and ii) σ^2 , of the normal distribution.

UNIT - II

11. State and Prove NP-Lemma.

OR

12. Discuss the terms with suitable examples i) Type-I error ii) Type- II error iii)power of the test.

UNIT - III

13. Describe the test procedure for single and two sample proportions.

OR

14. Describe the test procedure for single and two sample Means.

UNIT - IV

15. χ^2 - test for Independence of attributes.

OR

16. The heights of six randomly chosen sailors are in inches: 63, 65, 68, 69, 71, 72. Those of 10 randomly chosen soldiers are 61, 62, 65, 66, 69, 69, 70, 71, 72, 73. Discuss in the light that these data throw on the suggestion that sailors are on the average taller than soldiers.

UNIT - V

17. Describe Run test for two samples also for large case.

OR

18. Elucidate two samples median test.

SRI VENKATESWARA UNIVERSITY : : TIRUPATHI
ZOOLOGY SYLLABUS FOR IV SEMESTER
ZOOLOGY –PAPER-IV (THEORY)
EMBRYOLOGY , PHYSIOLOGY, ECOLOGY, ANIMAL BEHAVIOUR

TIME- 3 Hrs MAX. MARKS -75

UNIT-1 (EMBRYOLOGY)

1.1. Gametogenesis & Fertilization
1.2. Types of Eggs – Alecithil, Microlecithil, Mesolecithil, Megalecithil & Centrolecithil.
1.2 . Development of Frog up to Gastrulation. Formation of Primary Germ Layers and their fate.
1.3.Foetal Membrane of Chick.
1.4 . Placentation in Mammals

UNIT-2: (PHYSIOLOGY- I)

2.1. Digestion: Definition, Digestion of Carbohydrates, Proteins and Lipids. Absorption of digested food materials.
2.2. Respiration: Pulmonary Ventilation &Transport of Respiratory Gases
2.3. Circulation: Human Heart -Structure & Function and Cardiac Cycle.
2.4. Excretion: Structure of Human Kidney & Nephron and Urine Formation.

UNIT-3 (PHYSIOLOGY- II)

3.1. Nerve Impulse: Nature, Origin and Propagation- Local circuit theory, Saltatory Conduction & Synaptic Transmission.
3.2. Muscle Contraction: Ultra Structure of Skeletal Muscle Fiber & Sliding Filament Theory.
3.3; Human Endocrine Glands & Their Hormones: Hypothalamus, Pituitary, Pineal, Thyroid, Parathyroid and Adrenal glands, Pancreas and gonads.

UNIT-4 (ECOLOGY)

4.1. Meaning & Scope of Ecology
4 .2. Pond Ecosystem- Biotic & Abiotic Factors (Temperature, Light , Water), Food Chain & Energy Flow.
4.3. Bio-geo Chemical Cycles of Nitrogen, Carbon and Phosphorous
4.4 . Animal Habitat & Niche and Ecological Succession.
4.5. Community Interactions: Mutualism, Commensalism, Competition and Predation.

13/12/16.

12/12/16

UNIT-5 (ANIMAL BEHAVIOUR)

5.1. Animal Behaviour: Definition & Types.
5.2. Innate Behaviour: Taxes & Reflexes- Reflex Arc Mechanism.
5.3. Learned Behaviour: Associate Learning (Eg. Classical Conditioning & Instrumental Learning).
5.4. Learning & Memory.
5.5. Biological Clocks & Circadian Rhythms.

Suggested Readings

Gilbert , S. F.(2006) . Development Biology , *VII Edition, Sinauer Associates , Inc., Publishers, Sunderland, Massachusetts, USA.*
Balinsky, B.I.(2008). *An Introduction to Embrology, International Thomson Computer Press.*
Carlson , Bruce M (1996). *Patten's Foundations of Embrology, Mc Graw Hill, Inc.*
M.P Arora, ' Ecology ' *Himalaya Publishing Company.*
P.D Sharma, *Environmental Biology.*
P R Trivedi and Gurudeep Raj. *' Environmental Ecology.'*
Buddhadev sarma and Tej Kumar, *Indian Wildlife Thrarts and Preservation Chapman J.L and Reiss M.J Ecology Principles and applications, Second Ed. Cambridge University Press, London .*
Benny Joseph, Environmental Studies, *TATA M Graw Hill Com., New Delhi. Eugene P. Odum, Fundalmental of Ecology Third Ed., Nataraj Publishers, Dehradun.*
Generd.J Tortora and Sandra Reynold *Garwski Principles of Anatomu and Physiology , Tenth Ed. John Wiley & Sons*
P D Sarma Ecology *and environmental Rastogi Publications*
P S Verma and V.K Agarwal-Evolution and Ecology *–S Chand and Company*
Arthur C. Guyton MD, A Tex Book of Medical Physiology , Eleventh ed., John E Hall Harcourt Asia ltd.
Sherwood Klandrof, Yanc , *Human Physiology , Thompson Brooks/Colle,2005*

Signature of BOS Chairman: 13/12/16

BOS: Members 13/12/16. 13/12/16

SRI VENKATESWARA UNIVERSITY : : TIRUPATHI
ZOOLOGY MODEL QUESTION PAPER FOR IV SEMESTER
ZOOLOGY –PAPER-IV (THEORY)
EMBROLOGY , PSYSIOLOGY, ECOLOGY, ANIMAL BEHAVIOUR

TIME- 3 Hrs MAX. MARKS -75

PART-A (Short Answer Questions) (5X5=25)

Answer any Five of the following. Each question carries 5 marks. Draw labeled diagrams wherever necessary

1. Types of Eggs
2. Gametogenesis
3. Structure of Nephron
4. Transport of Oxygen in Blood
5. Pituitary Gland
6. Energy Flow in an Eco System
7. Nitrogen Cycle
8. Ecological Niche

PART-B (Long Answer Questions) (5 x 10 = 50 Marks)

Answer any five questions . Each question carries 10 marks . Draw labeled diagrams wherever necessary

9. Write an essay on the development of Frog upto Gastrulation .

   Or

   Describe Placentation in Mammals.

10. Give an account of Process of Digestion in mammals.

    Or

    Explain the cardiac cycle and functioning in the human heart.

11. Write an account of the propagation of nerve impulse along a nerve fiber .

    Or

    Describe the ultra structure of muscle fiber and explain sliding filament theory of muscle contraction.

12. Write an essay on various types interactions in an animal community.

    Or

    Give an account on ecological succession.

13/12/16 13/12/16. 13/12/16

13. What is associative learning? Explain it with reference to two examples you have studied.

Or

Give account o circadian rhythms in animals

Signature of BOS Chairman 13/12/16

BOS Members: 13/12/16.

13/12/16

SRI VENKATESWARA UNIVERSITY : : TIRUPATHI
ZOOLOGY PRACTICAL SYLLABUS FOR IV SEMESTER
ZOOLOGY –PAPER-IV (PRACTICAL)
EMBRYOLOGY , PHSYSIOLOGY, ECOLOGY

Periods-24 MAX. MARKS -50

1. Embryology

1.1 Observation of the following slides / handouts;

- ❖ Types of Eggs
- ❖ Frog Blastula
- ❖ Frog Grastrula

2. Physiology

2.1 Qualitative Tests for identification of carbohydrates, proteins and lipids.

2.2 Qualitative tests for idenfication of excretory products; ammonia, urea and uric acid.

2.3 Estimation of Haemoglobin (Sahli's Method)

2.4 Study of the histological slides / handout of stomach, intestine, liver, pancreas, lung, kidney, ovary and testis of any chordate.

3. Ecology

3.1 Estimation of salinity in a given water sample

3.2 Estimation of dissolved oxygen in a given water sample

3.3 Determination of PH of a given water sample.

- ❖ Certified Practical record should be submitted at the time of practical examination is compulsory .

Signatures

BOS Chairman 13/12/16

BOS Members: 13/12/16

13/12/16

SRI VENKATESWARA UNIVERSITY : : TIRUPATHI
ZOOLOGY PRACTICAL SYLLABUS FOR IV SEMESTER
ZOOLOGY –PAPER-IV (PRACTICAL)
EMBRYOLOGY , PHSYSIOLOGY, ECOLOGY

Time : 2 hrs MAX. MARKS -50

Q. 1 Physiology Experiment - 10 M
Q. 2 Ecolology Experiment -10 M
Q. 3 Slides or handouts } 5 X 4= 20 M
A B C D E }
(Two from Embryology & Three from Physiology)

Q.4 Certified Practical Record -10 M

Examiners are instructed to set the question paper as per the practical syllabus.

Slides	Identification	- 01 M
	Diagram	- 01 M
	Comments	- 02 M

Certified record is compulsory without certified record student is not admitted to Practical Exam.

Signatures

BOS Chairman 13/12/16

BOS Members: 1) 13/12/16.

13/12/16

B. A. HISTORY

III Year B. A. Programme (UG) Courses – Under CBCS

SEMESTER – V – W.E.F. 2017-18

Paper – V (Core Paper)

AGE OF RATIONALISM AND HUMANISM
THE WORLD BETWEEN 15TH & 18TH CENTURIES

(History of Modern World (1453 – 1821 A.D))

Unit – 1	A Brief introduction to the fall / decline of feudalism & Rise of capitalism - Geographical Discoveries: Causes – Compass & Maps – Portugal Leads and Western World Follows – Consequences;
Unit – II	The Renaissance Movement: Factors for the Growth of Renaissance – Characteristic Features - Transformation from Medieval to Modern World; Reformation & Counter Reformation Movements: The Background – Protestantism – Spread of the Movement– Counter Reformation– Effects of Reformation
Unit - III	Emergence of Nation States: Contributory Factors - England and other Nation States – Impact due to the Emergence of Nation States.;Age of Revolutions: The Glorious Revolution (1688) – Origin of Parliament – Constitutional Settlement – Bill of Rights – Results.
Unit - IV	Age of Revolutions: The American Revolution (1776) – Opening of New World – Causes – Course – Declaration of Independence, 1776 – Bill of Rights, 1791 – Significance.
Unit – V	Age of Revolutions: The French Revolution (1789) – Causes - Teachings of Philosophers - Course of the Revolution – Results.

References:

1	Burke, Peter, The Renaissance
2	C.J.H. Hayes, Modern Europe up to 1870
3	C.D. Hazen, Modern Europe up to 1945
4	Christopher Hill, From Reformation to Industrial Revolution
5	Elton, G.R., Reformation Europe, 1517-1559
6	Ferguson, The Renaissance
7	Gilmore, M.P., The World of Humanism, 1453-1517
8	Hilton, Rodney, Transition from Feudalism to Capitalism
9	J.H.Parry, The Age of Renaissance
10	J.N.L. Baker, History of Geographical Discoveries and Explorations
11	The New Cambridge Economic History of Europe, Vol. I, VII.

Project Work: Individual or group projects may be presented by the students regarding preparation of bibliography on various topics.

Students should also be asked to construct glossaries to help them study and review lessons while helping them to understand a large array of vocabulary words.

B. A. HISTORY

III Year B. A. Programme (UG) Courses – Under CBCS

SEMESTER – V - Paper – VI (Core Paper)**– W.E.F. 2017-18**

HISTORY & CULTURE OF ANDHRA DESA (from 12th to 19th Century A.D.)

(History and Culture of Andhra from Satavahanas to 1857 A.D)

Unit – 1	Andhra during 12th& 13th Centuries A.D.: Kakatiyas – Origin & its Antecedents – Administration – Social & Economic Life – Industries & Trade - Promotion of Literature and Culture – Architecture & Sculpture – Decline; The Age of Reddy Kingdoms: Patronage to Literature – Trade & Commerce.
Unit – II	Andhra between 14th & 16th Centuries A.D.: Vijayanagara Empire: Polity, Administration, Society & Economy – Sri Krishna Devaraya and his contribution to Andhra Culture – Development of Literature & Architecture – Decline and Downfall.
Unit - III	Andhra through 16th& 17th Centuries A.D.: Evolution of Composite Culture - The QutbShahis of Golkonda – Origin & Decline – Administration, Society & Economy – Literature & Architecture.
Unit - IV	The 18th& 19th Centuries in Andhra: East India Company's Authority over Andhra – Three Carnatic Wars – Occupation of Northern Circars and Ceeded Districts –Early Uprisings – Peasants and Tribal Revolts.
Unit – V	The 18th& 19th Centuries in Andhra: Impact of Company Rule on Andhra – Administration – Land Revenue Settlements – Society – Education - Religion – Impact of Industrial Revolution on Economy – Peasantry & Famines – Contribution of Sir Thomas Munroe, C. P. Brown & Sir Arthur Cotton – Impact of 1857 Revolt in Andhra

References:

1	BalenduSekharam, The Andhras Through the Ages
2	K. Sathyanarayana, A Study of the History and Culture of Andhras
3	Mallampalli Soma SekharaSarma, History of the ReddiKindogms
4	K.A.N.Sastry, A History of South India
5	H.K.Sherwani, History of the KutubShahi Dynasty
6	P.R.Rao, History of Modern Andhra
7	KhandavalliLakxmiranjanam&BalenduSekharam, ఆంధ్రులచరిత్ర – సంస్కృతి
8	SuravaramPratap Reddy, ఆంధ్రులసాంఘికచరిత్ర
9	B.S.L.Hanumanta Rao, ఆంధ్రులచరిత్ర
10	I.K.Sarma, *Early Historic Andhra Pradesh,500 B.C.-624 A.D.,* New Delhi, 2008
11	B. Rajendra Prasad, *Early Medieval Andhra Pradesh, A.D.624 -1000 A.D.,* New Delhi, 2009
12	C. Somasundara Rao, *Medieval Andhra Pradesh, A.D. 1000 -1324 A.D.,* New Delhi, 2011
13	R. Soma Reddy, *Late Medieval Andhra Pradesh, A.D. 1324-1724 A.D.,* New Delhi, 2014

Project Work: Students may be asked to identify families/ areas/ institutions/ personalities/ monuments related to freedom struggle and prepare dissertation under the guidance of a teacher so as to equip them with better understanding of society and historical processes. This exercise should also aim at exposing the spirit of research, analysis, criticism, innovation and invention among the students.

BA HISTORY
III Year BA Programma (UG) Courses - Under CBCS
Semester V
Paper V (Core Paper)
AGE OF RATIONALISM AND HUMANISM
THE WORLD BETWEEN 15th & 18th CENTURIES
(History of Modern World (1453-1821)

PART - A

Answer Any FIVE Questions. **5x5=25 M**

Q.No.I. 1) గెలీలియో - Galileo

2) మాజిలన్ - Magelan

3) మానవతావాదము - Humanism

4) మాకియవెల్లి - Maceavelli

5) పాప పరిహారపత్రాలు - Indulgencies

6) పద్నాలుగవ లూయీ - Louix XIV

7) రూసో - Rousseau

8) టౌన్‌షెడ్ పన్నులు - Taxes of Townsed

PART - B

Answer Any FIVE Questions choosing one questions from each unit.
5x10=50 M

2) భౌగోళిక పరిశోధనలకు దారితీసిన పరిస్థితులేవి?

What are the causes led for Geographical discoveries.

Or

భౌగోళిక పరిశోధనల ఫలితాలను చెప్పండి.

What are the results of Geographical discoveries.

3) సాంస్కృతిక పునరుజ్జీవనం ఇటలీలోనే ఎందుకు ఆవిర్భవించినది?

What are the reasons for cultural renaissance in Italy only.

Or

సాంస్కృతిక పునరుజ్జీవన కాలంలో వచ్చిన శిల్ప, చిత్ర కళను వ్రాయండి.

Write the development in Art and Architecture in the age of Cultural renaissance.

(PTO)

4) మత సంస్కరణోద్యమంలో మార్టిన్ లూథర్ పాత్రను తెల్పండి?

Write the role of Martin Louther in religious renaissance?

Or

కాల్వినిజం ముఖ్య లక్షణాలు వివరించండి.

What are the features of Calvinism?

5) రష్యా పీటర్ ది గ్రేట్ గురించి వ్రాయుము.

Write about Peter the Great of Russia?

Or

ఐదవ ఛార్లెస్ యొక్క గొప్పతనము గురించి వివరించుము.

Write about the greatness of Charles V?

6) అమెరికా స్వాతంత్ర్య పోరాట ఫలితాలను వ్రాయుము.

Write the results of the American War of Independence?

Or

ఫ్రెంచి విప్లవ కారణాలను వివరించుము.

Discuss the reasons for the French revolution.

BA HISTORY
III Year BA Programma (UG) Courses - Under CBCS
Semester V
Paper VI (Core Paper)
HISTORY & CULTURE OF ANDHRA DESA (from 12th to 19th C:A.D.)
(History and Culture of Andhradesa from Satavahanas to 1857 AD)

PART - A

Answer Any FIVE Questions. **5x5=25 M**

I. 1) రుద్రమదేవి - Rudramadevi

2) శ్రీకృష్ణదేవరాయలు - Srikrishna Devarayalu

3) అబుల్ హసన్ తానీషా - Abul Hassan Tanisha

4) నిజాం-ఉల్-ముల్క్ - Nizam-Ul-Mulk

5) దత్త మండలాలు - Ceded Districts

6) సర్ సి.పి.బ్రౌన్ (1798-1884) - C.P.Brown

7) సర్ ఆర్థర్ థామస్ కాటన్ (1803-1899) - Sir Arthur Thomas Cotton

8) థార్ కమీషన్, 1948 June 17th - Sir Thar Commission

PART - B

Answer Any FIVE Questions choosing one questions from each unit.
5x10=50 M

II. రెండవ ప్రతాపరుద్రుని విజయాలను సమీక్షించుము.

Discuss the achievements of the Kakatiya king Pratapa Rudra II.

Or

కాకతీయుల కాలమునాటి సాంఘిక, ఆర్థిక పరిస్థితులు వివరించుము.

Write the Socio-Economic conditions of the Kakatiya rulers.

III. విజయనగర రాజుల కాలమునాటి సాంస్కృతిక పరిస్థితులను వివరించుము.

Explain the cultural conditions of the Vijayanagara Kings.

Or

విజయనగర సామ్రాజ్య పతనానికి గల కారణాలను సమీక్షించుము.

Analyse the reasons for the downfall of the Vijayanagara rulers.

VI. గోల్కొండను ఏలిన కుతుబ్‌షాహీ ప్రభువుల కాలంలోని ఆంధ్రదేశ పరిస్థితులను వివరించుము.

Discuss the conditions in Andhra under the Qutub Shahi dynasty of Golkonda.

Or

(PTO)

మద్రాసు రాష్ట్రమునకు సర్ ధామస్ మన్రో చేసిన సేవలను సమీక్షించుము.

Explain the contribution of Sir Thomas Munro to the Madras State?

V. 1857 తిరుగుబాటు వలన ఆంధ్రలో జరిగిన పరిణామాలను వివరించుము.

The consequences that witnessed in Andhra on the eve of 1857 revolt?

Or

19, 20 శతాబ్దాలలో ఆంధ్రదేశములో సాగిన సాంఘిక సంస్కరణోద్యమములను వివరించుము.

Write Social Reform movements in Andhra in 19th, 20th centuries?

VI. ఆంధ్రలో సాగిన వందేమాతరం (1905-1911) ఉద్యమమును గూర్చి వ్రాయుము.

Explain the Vandemataram Movement (1905-1911) in Andhra.

Or

హైదరాబాదు సంస్థానము ఇండియన్ యూనియన్‌లో చేరిన తీరును వివరింపుము (మే 1947 - సెప్టెంబర్ 1948).

How did the Hyderabad State join Indian Union?

B. A. ECONOMICS

III Year B. A. Programme (UG) Courses – Under CBCS

Semester – V

Paper – V (Core Paper)

Economic Development and Indian Economy

Module - 1

Concept of Economic Growth - Distinction between economic growth and development - Measurement of economic development - Theories of Economic Growth: Adam Smith, Rostow, Karl Marx and Harrod & Domar Models.

Module - 2

Sustainable development - Balanced and unbalanced growth-choice of techniques Labour intensive and capital intensive methods.

Module - 3

Basic features of the Indian Economy - Natural Resources – Important Demographic features- Concept of Population Dividend - Population Policy.

Module - 4

National Income in India - trends and composition-poverty, inequalities and Unemployment - Measures taken by the Government. - MGNREGS

Module - 5

Economic reforms - liberalization, privatization and globalisation - concept of inclusive growth.

REFERENCES:

1. Dhingra, I.C - "Indian Economy", Sultan Chand, 2014.
2. Ruddar Dutt and K.P.M. Sundaram - "Indian Economy", S.Chand & Co., 2015.
3. G.M.Meier -"Leading Issues in Economic Development",Oxford University Press, New York.
4. M.P.Todaro - "Economic Development", Longman, London 6/e, 1996.
5. Reserve Bank of India - Hand book of Statistics on Indian Economy (Latest).
6. S.K.Misra & V,K,Puri - "Indian Economy", Himalaya Publishing House, 2015.
7. R.S.Rao, V.Hanumantha Rao & N.Venu Gopal (Ed) - Fifty Years of Andhra Pradesh (1956-2006), Centre for Documentation, Research and Communications, Hyderabad, 2007.
8. G.Omkarnath - Economics - A Primer for India - Orient Blackswan, 2012.
9. Benjamin Higgins - Economic Development
10. Telugu Academy Publications.
11. Dr. Ch.S.G.K. Murthy, Indian Economy - Gitam University

B. A. ECONOMICS
III Year B. A. Programme (UG) Courses – Under CBCS
SEMESTER – V
Paper – VI (Core Paper)

Indian and Andhra Pradesh Economy

Module - 1

Indian Agriculture - Importance of Agriculture in India - Agrarian structure and relations- Factors determining Productivity- Agricultural Infrastructure - Rural credit - Micro Finance - Self Help Groups (SHGs) - Agricultural Price policy- concept of Crop Insurance - Food Security.

Module - 2

Structure and growth of Indian Industry - Industrial policies of 1956 & 1991 Meaning of Micro small and Medium Enterprises (MSMEs)- Problems and Prospects of small scale Industries in India.

Module - 3

Disinvestment in India - FEMA - Foreign direct investment - Services Sector in India – Reforms in Banking and Insurance -, IT, Education and Health.

Module - 4

Planning in India Economy - Objectives of Five year plans - Review of Five year Plans - Current Five year plan- NITI Aayog

Module - 5

Andhra Pradesh Economy - Population - GSDP - Sector Contribution and trends - IT – Small Scale Industry - SEZs.

REFERENCES:

1. Dhingra, I.C - "Indian Economy", Sultan Chand, 2014.
2. Ruddar Dutt and K.P.M. Sundaram - "Indian Economy", S.Chand & Co., 2015.
3. G.M.Meier - "Leading Issues in Economic Development", Oxford University Press, New York, 3/e.
4. M.P.Todaro - "Economic Development", Longman, London 6/e, 1996.
5. Reserve Bank of India - Hand book of Statistics on Indian Economy (Latest).
6. S.K.Misra & V,K,Puri - "Indian Economy", Himalaya Publishing House, 2015.
7. R.S.Rao, V.Hanumantha Rao & N.Venu Gopal (Ed) - Fifty Years of Andhra Pradesh (1956-2006), Centre for Documentation, Research and Communications,Hyderabad, 2007.
8. G.Omkarnath - Economics - A Primer for India - Orient Blackswan, 2012.
9. Telugu Academy Publications.
10. Dr.Ch.S.G.K.Murthy, Indian Economy - Gitam University.

SRI VENKATESWARA UNIVERSITY - TIRUPATI.

: Public Examinations :

Model Question paper - Economics - V Semester - 2017-18

Time : 3 hours | Paper - VI - Indian & Andhra pradesh Economy. | Maximum Marks = 75

Answer any FIVE from the following Questions: 5x5=25

1. Food Security → ఆహార భద్రత
2. Crop Insurance Sheme → పంటల భీమా పథకము
3. MSMEs → సూక్ష్మ మరియు మధ్యతరహా ఎంటర్ ప్రైజెస్ సంస్థలు.
4. Foreign Direct Investments → విదేశీ ప్రత్యక్ష పెట్టుబడులు.
5. NITI Ayog → నీతి ఆయోగ్
6. SEZs → Special Economic Zones → ప్రత్యేక ఆర్థిక మండలి
7. FEMA → Foreign Exchange Management Act
8. Micro Finance → సూక్ష్మ పరపతి.

PART-B

Answer any FIVE Questions from the following;

5x10 = 50

9(a) What are factors determining the Agricultural productivity ?.
వ్యవసాయ ఉత్పాదకతను నిర్ణయించే కారకాలను గూర్చి వివరించండి ?.

(OR)

(b) Explain the major Sources of rural Credit in India ?
భారతదేశంలో గ్రామీణ పరపతికి గల మూలాధారాలను గూర్చి వివరించుము ?

10. (a) Explain the importance and problems of New Industrial policy - 1991 ?
1991 నూతన పారిశ్రామిక విధాన తీర్మానము యొక్క ప్రాధాన్యత మరియు సమస్యలు తెలుపుము ?.

(OR)

(b) Explain the problems of Small Scale Industries in India ? What are the remedial Measures ?

P.T.O

భారతదేశములో చిన్న తరహా పరిశ్రమలు ఎదుర్కొంటున్న సమస్యలను తెలిపి, నివారణ చర్యలు తెలుపుము?.

(11) (a) Explain the Disinvestment policy in India?
భారతదేశములో పెట్టుబడి ఉపసంహరణ విధానమును గూర్చి వివరించండి?.

[OR]

(b) What are the various Reforms introduced in Banking System?.
భారతదేశంలో బ్యాంకింగ్ వ్యవస్థలో వచ్చిన సంస్కరణలను తెలుపుము.

(12) (a) What are the objectives of five years plans of India?.
మనదేశంలో ప్రణాళికల యొక్క లక్ష్యాలను వివరించుము?.

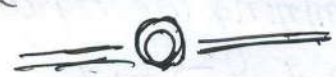
(OR)

(b) Explain the Success and Failures of five year plans in India?
మనదేశములో ప్రణాళికాకాలంలో సాధించిన విజయాలు మరియు అపజయాలు.

(13) (a) Explain the progress achieved in 'IT' Sector in Andhra pradesh?
ఆంధ్రప్రదేశ్ లో సమాచార రంగంలో సాధించిన ప్రగతిని వివరించుము?

(OR)

(b) Explain Sectorwise Contribution to 'GSDP' in A.P.
ఆంధ్రప్రదేశ్ స్థూల రాష్ట్ర దేశీయ ఉత్పత్తిలో వివిధ రంగాల వాటా వివరింపుము.



:References:-
1. Ruddar dutt & K.P.M. Sundaram — Indian Economy
2. Telugu Academy publications — భారత ఆర్థిక వ్యవస్థ
3. S G.K. Murthy — Indian Economy — Gitam University
4. RS Rao & V. HanumanthaRao → Fifty years of Andhra pradesh.

10.5.2017
BOS-Chairman

Member BOS

Member BOS

Member BOS.

SRI VENKATESWARA UNIVERSITY – Tirupati.
-Public Examinations-

Model paper – Economics – V Semester – 2017-18 – paper – VI

Times : 3 hours | Economic Development and Indian Economy | Max. Marks : 75

Answer any FIVE Questions from the following 5x5=25

1. Rostow Model of Economic Growth → Rostow యొక్క ఆర్థిక వృద్ధి నమూనా.
2. Unbalanced Growth → అసంతులిత వృద్ధి సిద్ధాంతము
3. Population Dividend → వృత్తికారి జనాభా విభజన.
4. Poverty Line → పేదరిక రేఖ
5. Disguised Unemployment → ప్రచ్ఛన్న నిరుద్యోగిత
6. Globalisation → ప్రపంచీకరణ.
7. Liberalisation → సరళీకరణ.
8. Trends in National Income → జాతీయ ఆదాయ పోకడలు.

PART – B

Answer any FIVE Questions from the following Questions;

9. a) Distinguish between Economic Growth and Economic Development.
ఆర్థిక వృద్ధి, ఆర్థికాభివృద్ధి మధ్యగల తేడాలను వివరించుము?

(OR).

(b) Explain the Harrod & Domar Model of Economic growth?
హారడ్ & డోమర్ యొక్క ఆర్థిక వృద్ధి నమూనాను వివరించండి?

10. (a) Explain the Sustainable Development?
"పోషింపగల అభివృద్ధి" ని గూర్చి వివరించుము?

(OR)

(b) Explain Advantages and disadvantages of labour intensive Techniques of production?
శ్రమసాంద్రిత ఉత్పత్తి ఎంపిక విధానంలోని ప్రయోజనాలను, అప్రయోజనాలను వివరించుము?

(11) a) Explain the Basic features of Indian Economy?
భారత దేశ ఆర్థిక వ్యవస్థయొక్క మౌలిక లక్షణాలను గూర్చి వివరించండి?

(OR)

b) Explain the National population policy - 2000.
జాతీయ జనాభా విధానము - 2000 వివరించండి?

(12) a) What are the Various reasons for Inequalities in India?
మనదేశములో ఆదాయ అసమానతలకు గల కారణాలు - వివరించుము?

(OR)

b) 'MGNREGS' is the a successful programme - Explain?
మహాత్మాగాంధి జాతీయ గ్రామీణ ఉపాధి హామీ పథకం' వివరణ.

(13) a) What are Effects of privitisation in India?
మనదేశ ఆర్థిక వ్యవస్థపై ప్రవేటీకరణ ప్రభావాన్ని వివరించుము?

(OR)

b) What is inclusive growth? What are the issues arising from it in India?
"సమ్మిళిత వృద్ధి" అనగానేమి? సమ్మిళిత వృద్ధి వలన ఏర్పడిన ఫలితాలను గూర్చి వివరించండి?

References:-

1. Ruddar Dutt & K.P.M. Sundaram "Indian Economy"
2. Telugu Academy publications - భారత ఆర్థిక వ్యవస్థ.
3. SGK. Murthy - Indian Economy - Gitam University
4. RS-Rao & V. Hanumantha Rao → "50 years of Andhra pradesh.

10.5.2017.

Chairman
BOS - Chairman

MEMBER
BOS

MEMBER
BOS

MEMBER
BOS.

W.E.F. 2017-18
THIRD YEAR; SEMESTER – V
B.A. POLITICAL SCIENCE
PAPER-V(CORE): INDIAN POLITICAL THOUGHT

Unit-1: Traditions of Ancient Indian Political Thought

1. Sources and features of Ancient Indian Political Thought
2. Manu: Social laws
3. Kautilya:Theory of the State

Unit-2: Renaissance Thought

1. Rammohun Roy: Religious and Social Reform
2. PanditaRamabai: Gender

Unit-3: Early Nationalism

1. DadabaiNaoroji: Drain Theory and Poverty
2. Ranade M G : The Role of the State and Religious Reform

Unit-4: Religious Nationalism

1. Savarkar V D : Hindutva or Hindu Cultural Nationalism
2. Mohammed Iqbal: Islamic Communitarian Nationalism

Unit-5: Democratic Egalitarianism

1. Gandhi-Swaraj and Satyagraha
2. Jawaharlal Nehru- Democratic Socialism
3. Dr.Ambedkar B R – Annihilation of Caste System
4. M.N.Roy: Radical Humanism

Reference books:

1. Pantham Thomas and Kenneth Deutsch(Ed)(1986)
   Political thought in modern India, Sage, New Delhi
2. BidyutChakrabarthy and Rajendra Kumar Pandey (2009) modern Indian political thought, Sage, New Delhi
3. Gurpreet Mahajan (2013), India : Political ideas and making of a democratic discourse, zed book, London
4. Partha Chatterjee (1986) nationalist thought and the colonial world: A derivative disclosure, zed books, London
5. Bhikhu Parekh (1999) colonialism, tradition and reform,Sage,New Delhi
6. Bhikhu Parekh(1989) Gandhi's political philosophy ,Macmillan, London

THIRD YEAR; SEMESTER – V
B.A. POLITICAL SCIENCE
PAPER-VI (CORE): WESTERN POLITICAL THOUGHT

Unit-1: Classical Western Political Thought

1. Plato: Theory of Forms, Critique of Democracy, Justice
2. Aristotle: Citizenship, State, Justice, Virtue

Unit-2: Early Medieval to the Beginning of Modern Thought

1. St. Augustine: Earthly City and Heavenly City, Evil, Freewill, Moral Action
2. Machiavelli, Statecraft, Virtue, Fortuna

Unit-3: Liberal Thought

1. Thomas Hobbes: Human nature, Social Contract, liberty, State
2. John Locke: Natural Rights, Consent, Social Contract, State
3. Rousseau: Social institutions and Moral Man, Equality, liberty and General Will

Unit-4: Liberal Democratic Thought

1. Jeremy Bentham: Utilitarianism
2. John Stuart Mill: Individual liberty, Representative Government

Unit-5: Philosophical Idealism and its critique

1. Hegel: Individual Freedom, Civil Society, State
2. Karl Marx: Alienation, Surplus Value,Materialist Conception of History, State

Reference books

1. ShefaliJha (2010) Western Political Thought from Plato to Karl Marx, Pearson, NewDelhi
2. Boucher D and Kelly P (Eds) (2009) Political Thinkers from Socrates to the Present, Oxford University press, oxford
3. Coleman J (2000) A History of Modern Political Thought: From Ancient Greece to early Christianity, Blackwell publishers, oxford
4. Macpherson C B (1962) The Political Theory of Possessiveness Individualism, Oxford University press, oxford
5. Hampsher-monk I (2001) A History of Modern Political Thought: Major Political Thinkers fromHobbers to Marx,Blackwell publishers, oxford

Sri Venkateswara University, Tirupati.

Model Question Paper

Third year Semester - V (CBCS)

B.A Political Science

Paper - V Indian Political Thought.

Time - 3hours Max Marks - 75

Answer any Five of the following

each Question carry equal Marks.

PART - A

1. Dharma Theory
   ధర్మ సిద్ధాంతము.
2. Manu Smruti - Smruti
   మనుస్మృతి
3. Saptangh Theory
   సప్తాంగ సిద్ధాంతము.
4. Rama bai
   రమా బాయి
5. Ranade Religious Reforms
   రనడే మత సంస్కరణలు.
6. Hindu cultural
   భారతీయ సంస్కృతి.
7. Mohammed Iqbal
   మహమ్మదీన్ ఇక్బాల్
8. Panchasheela
   పంచశీల
9. Ambedkar on caste system.
   కులవ్యవస్థ పై అంబేద్కర్ భావాలు.
10. Sarvodaya
    సర్వోదయ.

PTO

PART - B

Answer any five of the following
each question carry equal marks. 10 x 5 = 50

11. (a) What are the important features of ancient Indian Political Thought.
ప్రాచీన భారతీయ రాజనీతి తత్వశాస్త్ర ముఖ్య లక్షణములు ఏవి ?

(లేదా)

(b) Write an essay on Kautilya's Arthasastra.
కౌటిల్యుని అర్థశాస్త్రముపై ఒక వ్యాసము వ్రాయుము.

12 (a) Describe the Religious and social Reforms of Raja Ramohun Roy.
రాజారామ్మోహన్ రాయ్ యొక్క సామాజిక, మత సంస్కరణలను వివరించండి.

(లేదా)

(b) Explain the Contribution of Pandita Ramabai to Women equality in Indian society.
భారతీయ సమాజంలో పండిత రమాబాయి స్త్రీ సమానత్వమునకు చేసిన కృషిని వివరించండి.

13 (a) write an essay on Hindu culture Nationalism of V.D Savarkar
V.D సావర్కర్ యొక్క హిందు సంస్కృతి - జాతీయతను వివరించండి.

(లేదా)

(b) Explain the Islam communitarian Nationalism of Mohammad Iqbal.
మహమ్మద్ ఇక్బాల్ ఇస్లాం మతము యొక్క జాతీయతను గురించి వివరించండి.

14 (a) write an essay on Gandhian Philosophy of Swaraj and Satyagraha.
స్వరాజ్, సత్యాగ్రహము పై గాంధీ యొక్క తత్వశాస్త్రమును వ్రాయుము.

(లేదా)

(b) Nehru concepts of Democratic socialism.
ప్రజాస్వామిక సామ్యవాదముపై నెహ్రూ భావాలు.

15 (a) Explain the Political and Social views of Dr. B.R. Ambedkar.
అంబేద్కర్ వివరించిన రాజకీయ, సామాజిక తత్వశాస్త్రములు వ్రాయుము.

(లేదా)

(b) M.N. Roy Radical Humanism.
M.N. రాయ్ రాడికల్ హ్యూమనిజం.

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Sri Venkateswara University, Tirupati.

Model Question Paper

Third year Semester - V (CBCS)

B.A Political Science

Paper - VI Western Political Thought.

Time - 3 hours Max. Marks - 75

Answer any Five of the following
each Question carry equal Marks.

PART - A

1. Plato Dharma Sidhantam.
   ప్లేటో ధర్మ సిద్ధాంతము.
2. Aristotle's classification of Government.
   అరిస్టాటిల్ ప్రభుత్వ వర్గీకరణ.
3. Machiavelli's Prince.
   మాకియవెల్లి రచించిన ప్రిన్స్ గ్రంథము.
4. State of Nature
   ప్రాకృతిక స్థితి.
5. Lock on Natural Rights.
   సహజ హక్కులపై లాక్ భావాలు.
6. Plural voting system.
   బహుళ ఓటు విధానము.
7. Mill on liberty.
   స్వేచ్ఛ పై మిల్.
8. City State
   నగర రాజ్యాలు
9. Hegel civil society.
   హెగెల్ పౌర సమాజము.
10. Karl Marx Theory of surplus value.
    కార్ల్ మార్క్స్ మిగులు విలువ సిద్ధాంతము.

PART - B.

Answer any five of the following
each Question carry equal Marks. 5 X 10 = 50

PTO

11 (a) Plato's views on Rule of Philosopher kings
తాత్వికక రాజుల పాలన పై ప్లేటో యొక్క అభిప్రాయాలు వ్రాయుము.

(లేదా)

(b) Discuss Aristotle's views on revolutions.
విప్లవములపై అరిస్టాటిల్ అభిప్రాయములను చర్చించుము.

12. (a) Write about the St. Augustin's views on Two cities - Earthly and Heavenly.
భూలోక నగరము, పరిశుద్ధ నగరము సిద్ధాంతం గురించి రాసిన అభిప్రాయాన్ని వివరించండి.

(లేదా)

(b) What are the qualities of a 'Prince' as suggested by Machiavelli.
మాకియవెల్లి సూచించిన రాజుయొక్క లక్షణాలు ఏవి?

13 (a) Discuss Hobbes's views on social Contract Theory.
సాంఘిక ఒడంబడిక సిద్ధాంతంపై హాబ్స్ అభిప్రాయములను చర్చించుము.

(లేదా)

(b) Critically examine Rousseau's Theory of General will.
రూసో, యొక్క సిద్ధాంతాన్ని విమర్శనాత్మకంగా పరిశీలించండి.

14 (a) What are Benthams views on Utilitarianism?
ప్రయోజనవాదము పై బెంథామ్ యొక్క అభిప్రాయాలు వ్రాయుము.

(లేదా)

(b) Explain J.S. Mill's views on liberty and representation Government.
స్వేచ్ఛ, ఎంచుకునే ప్రభుత్వంపై J.S మిల్ భావాలు వివరించండి.

15 (a) Hegel's views on Dialected Motivation.
గతి తార్కిక వాదముపై హెగెల్ భావాలు.

(లేదా)

(b) Discribe Karl Marx's Communism.
కార్ల్ మార్క్స్ కమ్యూనిజంను వివరించుము.

Andhra Pradesh State Council of Higher Education

B.A. Special Telugu Syllabus Under CBCS

W.e.f. 2015-16 (Revised in April - 2016)

SEMESTER - V

Paper - V

I. **మాండలికాలు – రకాలు**

II **తెలుగు – తెనుగు – ఆంధ్రము పుట్టు పూర్వోత్తరాలు**

III **భారతదేశంలో భాషా కుటుంబాలు**

IV **ద్రావిడ భాషల్లో తెలుగుకు గల స్థానం**

V **అర్థ విపరిణామం.**

ఆధార గ్రంథాలు:

1. భాషాశాస్త్ర సిద్ధాంతాలు – డా॥.పి.యస్. సుబ్రహ్మణ్యం
2. తెలుగు భాషా చరిత్ర – ఆచార్య భద్రిరాజు కృష్ణమూర్తి
3. ఆంధ్రభాషా వికాసం – ఆచార్య గంటి జోగి సోమయాజులు
4. వ్యవహారిక భాషా స్వరూపం – డా॥ బూదరాజు రాధాకృష్ణ
5. తెలుగు భాషా చరిత్ర – డా॥ స్పూర్తి శ్రీ
6. ఆధునిక తెలుగు భాషా శాస్త్ర విజ్ఞానం – ఆచార్య నేతి అనంత రామశాస్త్రి
7. మాండలిక వృత్తి పదకోశం – భద్రిరాజు కృష్ణమూర్తి
8. ద్రావిడ భాషలు – పి.ఎస్. సుబ్రహ్మణ్యం

స్పెషల్ తెలుగు

సెమిస్టర్-05. పేపర్ - 5

3 గం॥లు **మాదిరి ప్రశ్నాపత్రం** **మార్కులు: 75**

భాగం - అ

I. ఈ క్రింది వాటిలో ఐదింటికి సమాధానాలు రాయండి. 5 × 5 = 25

1. ఉత్తర ద్రావిడ భాషలు
2. ద్రావిడ భాషల్లో సంఖ్యావాచకాలు
3. ఆదాన ప్రదానాలు
4. మాండలిక రేఖ
5. అర్థ సంకోచం
6. ఐతరేయ బ్రాహ్మణంలో 'ఆంధ్ర' శబ్దం
7. ఆర్యభాషా కుటుంబం
8. ముండారి భాషలు

భాగం - ఆ

II. ఈ క్రింది ప్రశ్నలకు సమాధానాలు రాయండి. 5 × 10 = 50

1. భాషా - స్వరూప స్వభావాల గురించి వివరించండి.

(లేదా)

మాండలికం అంటే ఏమిటో నిర్వచించి, మాండలికాలు ఎన్ని రకాలో వర్గీకరించండి.

2. భారతదేశంలోని భాషా కుటుంబాల గురించి రాయండి.

(లేదా)

ద్రావిడ భాషా కుటుంబం గురించి, ఆ భాషల వ్యాప్తి గురించి క్లుప్తంగా రాయండి.

3. తెలుగు, తెనుగు, ఆంధ్రము పుట్టుక పరిణామం గురించి రాయండి.

(లేదా)

అర్థ విపరిణామాన్ని నిర్వచించి, అది ఎన్ని రకాలో వివరించండి.

4. ద్రావిడ భాషల్లో తెలుగుకు గల స్థానమేదో నిర్ణయించండి.

(లేదా)

ద్రావిడ భాషలకు గల సాధారణ లక్షణాల గురించి క్లుప్తంగా రాయండి.

5. ద్రావిడ భాషల పదాంశ విజ్ఞానం గురించి రాయండి.

(లేదా)

ఆదానంలోని రకాల గురించి సంగ్రహంగా రాయండి.

Andhra Pradesh State Council of Higher Education

B.A. Special Telugu Syllabus Under CBCS

W.e.f. 2015-16 (Revised in April - 2016)

SEMESTER - V

Paper - VI

I. **బాల వ్యాకరణం – సంధి, సంజ్ఞా పరిచ్ఛేదాలు**

II **అలంకారాలు – ఉపమ-ప్రతీప-రూపకం-అపహ్నుతి-ఉల్లేఖం-ఉత్రేక్ష-అతిశయోక్తి-దృష్టాంత-నిదర్శనం – అర్థాంతరన్యాసం – స్వభావోక్తి.**

III **ఛందస్సు – వృత్తాలు, జాతులు, ఉపజాతులు**

IV **యతులు-స్వరయతి, గూఢస్వరయతి, అనునాసిక యతి, వర్గయతి, అనుస్వారయతి, ఋవళి, ఋత్వసామ్యవళి.**

V **ప్రాసలు-ద్విప్రాస, త్రిప్రాస, చతుష్ప్రాస, సమప్రాస, దుష్కరప్రాస, అంత్యప్రాస.**

ఆధార గ్రంథాలు:

1.	బాల వ్యాకరణం-ఘంటాపథ వ్యాఖ్య	–	వంతరాం రామకృష్ణారావు
2.	బాల వ్యాకరణ రమణీయము	–	దూసి వేంకట రమణశాస్త్రి
3.	బాల వ్యాకరణము- శ్రీ ప్రభావ్యాఖ్య	–	పి. నరసింహా రెడ్డి.
4.	ఆంధ్ర చంద్రాలోకం	–	అక్కిరాజు ఉమాకాన్తమ్.
5.	బాలప్రౌఢ వ్యాకరణ సర్వస్వం	–	స్ఫూర్తి శ్రీ
6.	అప్పకవీయం	–	బులుసు వేంకట సత్యనారాయణమూర్తి

స్పెషల్ తెలుగు

సెమిస్టర్-05. పేపర్ - 6

3 గం॥లు **మాదిరి ప్రశ్నాపత్రం** **మార్కులు: 75**

భాగం - అ

I. ఈ క్రింది వాటిలో ఐదింటికి సమగ్ర వ్యాఖ్య రాయండి. **5 × 5 = 25**

1. ఆర్య వ్యవహారంబు దృష్టంబు గ్రాహ్యంబు
2. క్తార్థంబైన యిత్తునకు సంధిలేదు
3. జిత్మ బిందు పూర్వంబగు
4. అత్తునకు సంధి బహుళము.
5. దంత్య తాలవ్యంబులయిన చజలు సవర్ణంబులు
6. లక్షణ విరుద్ధంబగు భాష గ్రామ్యంబు
7. ద్రుత ప్రకృతికము మీది పరుషములకు సరళములగు
8. సమాసంబునందు ద్రుతంబునకు లోపంబగు

భాగం - ఆ

II. ఈ క్రింది ప్రశ్నలకు సమాధానాలు రాయండి. **5 × 10 = 50**

1. ఆదేశ సంధులను సోదాహరణంగా వివరించండి.

(లేదా)

ఆగమ సంధులను ఉదాహరణలతో వివరించండి.

2. ఉత్పలమాల, శార్దూల పద్య పాదాలను లక్షణాలను రాసి, గణ విభజన చేసి, యతిప్రాసలు గుర్తించండి.

(లేదా)

తేటగీతి, కందపద్యాల లక్షణాలను రాసి సోదాహరణంగా గణవిభజన చేసి యతి ప్రాసలు గుర్తించండి.

3. స్వరయతి, గూఢస్వర యతులను ఉదాహరణ పూర్వకంగా విశ్లేషించండి.

(లేదా)

ఋవళి, ఋత్వసామ్యవళులను సోదాహరణంగా వివరించండి.

4. శబ్దాలంకారాలను సోదాహరణంగా వివరించండి.

(లేదా)

ఉత్ప్రేక్ష, ఉపమ, అర్థాంతరన్యాసాలంకారాలను సోదాహరణంగా వివరించండి.

5. ద్విప్రాస, త్రిపాసల గురించి సోదాహరణంగా రాయండి.

(లేదా)

సమ, అంత్య ప్రాసలను ఉదాహరణలతో వివరించండి.

SRI VENKATESWARA UNIVERSITY : TIRUPATI

B. A (ACCOUNTANCY) – SEMESTER V - SYLLABUS

1. ACCOUNTING

5.2 Goods and Services Tax Fundamentals

5.3 Advanced Corporate Accounting

2. CORPORATE ACCOUNTING

5.4. Accounting & Auditing Standards

5.5 Accounting for Govt. Entities

Note: ***Candidates can select any one of the above electives***

75 marks university examination and 25 marks internal

CORPORATE ACCOUNTING

DSC 5.4 ACCOUNTING & AUDITING STANDARDS

Unit-I: Introduction: Significance of Accounting Standards - National and International Accounting Standards - Accounting Standards in India.

Unit-II: Accounting Standards (AS-1 to AS-16): AS-1: Disclosure of Accounting policies – AS-2: Valuation of inventories –AS-3: Cash flow statement – AS-4: Contingencies in balance sheet – AS-5: Net profit or loss, prior period items and changes – AS-6: Depreciation Accounting – AS-7: Construction Contracts – AS-9: Revenue Recognition – AS 10: Accounting for Fixed assets - AS-11: Effects of changes in foreign exchange rates- AS-12: Accounting for government grants – **AS-13: Accounting for investments** – AS-14: Accounting for Amalgamation – AS-15: Employee benefits – AS-16: Borrowing costs .

Unit-III: Accounting Standards (AS17 to AS-32): – AS-17: Segment reporting – AS-18: Related party disclosures – AS-19: Leases – AS-20: Earning per share - AS-21: Consolidated financial statements – AS-22: Accounting for taxes – AS-23: Accounting for investments – AS-24: Discontinuing operations – AS-25: Interim Financial Reporting – AS-26: Intangible assets – AS-27: Financial reporting of interests in joint ventures – AS-28: Impairment of assets – AS-29: Provisions, Contingent liabilities and assets; AS-30: Financial Instruments: Recognition and Measurement; AS-31: Financial Instruments: Presentation – AS-32:Financial Instruments: Disclosures.

Unit-IV: Auditing Standards: Procedure - International Federation of Accountants - Auditing and Assurance Standards Board - Indian Auditing Standards (issued so far) Overview.

Unit-V: International Financial Reporting Standards (IFRS): Origin - Procedure - International Accounting Standards Board - Adoption in India.

REFERENCES:

1. Taxman's Students' Guide to Accounting Standards, D. S. Rawat, Taxman Publications.
2. Compendium of Statements and Standards on Accounting, The Institute of Chartered Accountants of India, New Delhi.
3. British Accounting Standards, Ronal Leach and Edward Stamp, Woodhead Faulkner Ltd, Cambridge.
4. T. P. Ghosh, Accounting Standards and Corporate Accounting Practices, Taxman Publications.

DSC 5.5 ACCOUNTING FOR GOVERNMENT ENTITIES

Unit-I: General Principles - Government Accounting System - Consolidated Fund of India - Comparison with Commercial Accounting system.

Unit-II: Role of Comptroller and Auditor General of India - Role of Public Accounts Committee, Review of Accounts - Civil and Commercial Entities.

Unit-III: Government Accounting Standards issued by Government Accounting Standards Advisory Board (GASAB) - Adoption and Review.

Unit-IV: Financial Reporting in Public Sector Undertakings and Government Companies.

Unit-V: Case Studies: Railway Accounts - Defense Accounts - CPWD Accounts, etc.

References:

1. Jain, S.P., Narang, K.L., Advanced Accountancy (Vol-1), Kalyani Publishers, Ludhiana.

2. Paul Marcus Fischer, William James Taylor & Rita Hartung Cheng, Advanced Accounting, Cengage Learning, USA.

3. K.K. Bhardwaj, Public Accounting and Auditing (office of the Comptroller and Auditor General of India), Mittal Publications, New Delhi.

4. Mortimer A. Dittenhofer, Applying Government Accounting Principles, LexisNexis.

5. Warren Ruppel, Governmental Accounting: Made Easy, John Wiley & Sons, INC., USA.

6. A Mukherjee & M. Hanif, Modern Accountancy, Tata McGraw Hill Publishing Company Limited, New Delhi.

7. K. B. Verma, Reading in Indian Railway Finance, Academic Foundation, Delhi.

ACCOUNTING

5.3 ADVANCED CORPORATE ACCOUNTING

Unit I : Accounting standards – Importance of accounting standards in the procedure of accounting – List of Indian accounting standards – objectives of accounting standards Board and scope of accounting standards. – Accounting Standard 1:Disclosure of Accounting policies Accounting Standard 9: Revenue Recognition – Accounting standard 10 : Fixed assets (Theory only)

Unit II – Amalgamation : meaning – calculation of purchase consideration – Methods – Accounting procedure in preparation of journal entries and Balance sheet (simple problems only)

Unit III – Internal Reconstruction - Necessity of internal Reconstruction – Importance – Procedure for reducing share capital – Journal entries and preparation of Revised Balance sheet.

Unit IV : Liquidation : Meaning and modes of Liquidation in corporate accounts – Voluntary Liquidation – Procedure for preparation of Liquidator's statement of account – calculation of liquidator's remuneration (Simple problems)

Unit V : Holding companies : Definition of Holding Company and subsidiary company – Preparation of consolidated Balance Sheet of Holding company having ONE subsidiary company only - with common

transactions, Minorities Interest, Capital Reserve, Revenue Profits Prior and post acquisition of shares by holding companies (Simple Problems)

Sri Venkateswara University
Model Question Paper
III B.Com / B.A
Semester – V, November, 2017
DSC 3E 5.3 – Advanced Corporate Accounting.

Time: 3 Hours Max. Marks: 75

Section A

Answer any **Five** of the following Questions

(5 x 3= 15 Marks)

Section-A

1 Answer any five of the following questions.

a) Define Accounting standards
b) Going concern concept
c) What do you mean by Amalgamation
d) Purchase consideration
e)Internal Reconstruction
f)Liquidators Remuneration
g)Subsidiary company
h) Minority share holders Interest

Section-B

2 Answer one questions from each unit.

Unit-1

2) Explain the importance / Objective of accounting standards? Name any 5 Accounting Standards?

(Or)

3) What is meant by Accounting concepts and conventions ? Explain any 5 concepts.

Unit-II

4) Godavari Ltd.. and Krishna Ltd. decided to Amalgamate and A new company is formed in the name of Go-Krishna Ltd. The new company is to take over both companies on 31-3-2017.

The balance sheet of both companies as follows.

Liability	Godavari Ltd. Rs.	Krishna Ltd. Rs.	Assets	Godavari Ltd. Rs.	Krishna Ltd. Rs
Share capital Rs.10 fully paid	5,00,000	3,00,000	Goodwill	1,00,000	80,000
Reserve funds	2,00,000	1,50,000	Land & Buildng	2,50,000	1,90,000

Profit & Loss a/c	30,000	50,000	Plant & Machinery	2,00,000	2,55,000
div. Equalisation	-	1,00,000	Patents &Trade	-	52,500
funds			Marks	2,00,000	1,50,000
Workman's	20,000	-	Stock	1,00,000	50,000
compensation fund	-	50,000	Sundry Debtors	-	20,000
Bank overdraft	1,00,000	1,20,000	Bills Receivable	50,000	2,500
Sundry Creditors	50,000	30,000	Cash at bank		
Bills Payable					
	9,00,000	8,00,000		9,00,000	8,00,000

Show how the amount payable to each company is arrived at and prepare the amalgamated Balance sheet of Godavari, Krishna Ltd.. Assuming amalgamation is done in the nature of purchase.

(Or)

5) Following is the Balance sheet of Mr. Venkatesh Ltd. as on 31 March 2017

Liabilities	Rs	Assets	Rs
Capital	42,500	Freehold Premises	25,000
Bank Loan	20,000	Furniture	3,500
Bills Payable	6,700	Motor van	12,800
Creditors	10,800	Stock	13,200
		Bills receivable	5,400
		Debtors	18,700
		cash	1,400
	80,000		80,000

On the above date the entire business was taken over by Deva Dhana Ltd.. The purchase consideration was paid as under.

1) 3,000 fully paid Rs.10 shares
2) The balance in cash

While recording the assets, the company valued the premises and stock at 10% and 20% above their book value respectively. Find out purchase consideration and pass necessary entries in the books of the Ding Dong Bell Ltd.. And show its Balance sheet after takeover of the business.

Unit-III

6) The following is the Balance sheet of Vikaash Ltd.. as at 31st March 2014.

Liabilities	Rs	Assets	Rs
Share Capital		Buildings	2,00,000
20,000 Equity shares of		Machinery	1,30,000
rs.10 each, fully paid up		Patents	40,000
10% Non-cumulative	2,00,000	Inventories	80,000
preference shares of		Debtors	55,000
Rs.100 each fully paid up		Preliminary expenses	10,000
8% Debentures		Profit and loss account	
trade creditors	50,000		1,85,000
Creditors for Expenses	1,00,000		
	3,30,000		
	20,000		
	7,00,000		7,00,000

With a view to reconstruct the company, it is proposed.

a) To reduce (i) Equity shares by Rs.9 each.(ii) 10% Preference shares by Rs.40 each.(iii) 8% Debentures by 10%,(iv) Trade Creditor's claims by one- third ,(v) Machinery to Rs.70,000 and (vi) Inventories by Rs. 10,000,
b) To provide Rs. 15,000 for bad debts
c) To write off all the intangible assets; and
d) To raise the rate of preference dividend to 13 % and the rate of debenture interest to 13.5%.

Assuming that the aforesaid proposals are duly approved and sanctioned, pass the journal entries to give effect to the above, and show the company's post reconstruction Balance sheet.

(Or)

7) The summarized Balance sheet of Anjana Company as at 31-3-2017 was as follows:

Liabilities	Rs	Assets	Rs
Authorized and issued capital:		Goodwill	2,00,000
20000 Equity shares of Rs. 10		Patents and Trade marks	1,00,000
each fully paid	20,00,000	Land and Buildings	15,00,000
10,000 6% cumulative		Plant and Machinery	10,00,000
Pref.shares of Rs. 100 each fully		Stocks (Investment)	4,00,000
paid	10,00,000	Sundry debtors	3,00,000
Bank overdraft	7,00,000	Issue and Preliminary	
Sundry creditors	5,00,000	expenses	1,00,000
(note : The cumulative		Profit and Loss a/c	6,00,000
Preference Dividend is three			
years in arrear)			
	42,00,000		42,00,000

A scheme for the reduction of capital was approved on the following terms:

(i) The preference shareholders agree that their shares be reduced to a fully paid value of Rs. 50 each and to accept equity shares of Rs.5 each fully paid in lieu of the dividends arrears.

(ii) The Equity shareholders agree that their shares be reduced to a fully paid value of Rs.5 each.

(iii) The authorized capital of the company is to remain at 30,00,000 divided into 4,00,000 Equity shares of Rs.5 each and 20,000.6% Cumulative preference shares of Rs.50 each.

(iv) All the intangible assets are to be eliminated and bad debts of Rs..50,000 and obsolete shares of Rs.80,000 are to be written off.

Give journal entries necessary to record the reduction of capital and draw up a new Balance sheet after the scheme has been carried through.

UNIT-IV

8) Trimoorthy Co. Ltd. was placed in voluntary liquidation on 31st December 2016. When its balance sheet was as follows.

Liabilities	Rs	Assets	Rs.
Issued share Capital:		Freehold factory	5,80,000
50.000 Equity shares of Rs.10		Plant and Machinery	2,89,000
each fully Paid less calls in	4,75,000	Motor Vehicles	57,500
arrear amounting to Rs.		Stock	1,86,000
25,000		Debtors	74,000
		Profit & Loss Account	2,14,000
6,000 5% cumulative			
preference shares ofRs.100			
each fully paid	6,00,000		
Share premium account			
5% Debenture account	50,000		
Interest on Debentures	1,00,000		
Bank Overdraft	2,500		
Creditors	58,000		
	1,15,000		
	14,00,500		14,00,500

The Preference dividends are in arrears from 2013 onwards.

The company's articles provide that on liquidation, out of the surplus assets remaining after payment of liquidation cost and outside liabilities, there shall be paid firstly all arrears of preference dividend, secondly the amount paid up on the Preference shares together with a premium thereon of Rs.10 per share, and thirdly any balance then remaining shall be paid to the equity share holders.

The Bank overdraft was guaranteed by the directors who were called upon by the Bank to discharge their liability under the guarantee. The directors paid the amount to the Bank

The liquidator realized the assets as follows

	Rs.
Freehold Factory	7,00,000
Plant and Machinery	2,40,000
Motor Vehicles	59,000
Stock	1,50,000
Debtors	60,000
Calls in Arrears	25,000

Creditors were paid less discount of 5 per cent. The debenture and accured interest were repaid on 31st march 2003.

Liquidation costs were Rs 3,820 and the Liquidator's remuneration was 2 per cent on the amounts realized.

Prepare the liquidator's statement of account

(Or)

9) Nagarjuna do.Ltd.. Went into liquidation with the following liabilities.

Secured creditors	Rs.40,000 (securities realized Rs.50,000)
Preferential creditors	Rs.1,200
Unsecured creditors	Rs.61,000
Liquidation expenses	Rs.500

The liquidator is entitled to a remuneration of 3% on the amount realilsed (including securities in the hands of secured creditors) and 1 ½% on the amount distributed to unsecured creditors. The various assets (excluding the securities in hand of the secured creditors) realized are Rs.52, 000.

Prepare the liquidator's statement of account showing the payment made to the unsecured creditors.

UNIT V

10) The following are the Balance sheet of Hemanth Ltd.. and its subsidiary Sabari Ltd.. as at 31st March 2017.

Liabilities	H Ltd. Rs.	S Ltd. Rs.	Assets	H Ltd.	S Ltd. Rs.
Fully paid equity shares of Rs.10 each	6,00,000	2,00,000	Machinery Furniture 80% shares in	3,90,000 80,000	1,35,000 40,000

			S Ltd., at cost	3,40,000	-
General reserve	3,40,000	80,000	Stock	1,80,000	1,20,000
Profit & Loss a/c	1,00,000	60,000	Debtors	50,000	30,000
Creditors	70,000	35,000	Cash in Bank	70,000	50,000
	11,10,000	3,75,000		11,10,000	3,75,000

The following additional information is provided to you:

(i) Profit & Loss account of Sabari Ltd. stood at Rs.30,000 on 1 st April 2016 whereas general reserve has remained unchanged since that date.

(ii) Hemanth Ltd.. acquired 80% shares in Sabari Ltd. on 1st October,2016 for Rs. 3,40,000 s mentioned above.

You are required to prepare consolidated balance sheet as at 31st march, 2017. Show all calculations clearly.

(Or)

11) From the Balance sheet given below prepare a consolidated balance sheet of Maruthi Ltd. and its subsidiary, Garuda Ltd.. as on 31-3-2017.

Liabilities	Maruthi Ltd.. Rs.	Garuda Ltd.. Rs	Assets	Maruthi Ltd.. Rs.	Garuda Ltd.. Rs
Share Capital of Rs. 10 each	1,20,000	30,000	Free hold Building at cost	72,000	25,000
Trade Creditors	15,000	5,000	Plant & Mach.	30,000	10,000
General Reserve	25,000	6,000	Stock at cost	18,000	3,000
Profit & Loss A/c	12,000	9,000	Trade Debtors	22,000	7,000
			Bank Balance	5,000	5,000
			Share in Garuda Ltd.. 2000 shares of Rs.10 each	25,000	-
	1,72,000	50,000		1,72,000	50,000

At the date of acquisition by Maruthi Ltd.. of its holding of 2000 shares in Garuda Ltd.. the latter company had undistributed profits and reserve amounting to Rs.5000, none of which has been distributed since the date of acquisition.

5.2 GOODS & SERVICE TAX FUNDAMENTALS

Unit I: Introduction: Overview of GST - Concepts – Limitations of VAT – Justification of GST Need for Tax Reforms - Advantages at the Central Level and State Level on introduction of GST

Unit II: GST:Principles – Models of GST: Austrlian, Candian, Kelkar-Shah – BagchiPoddar – Comprehensive structure of GST model in India: Single, Dual GST– Transactions covered under GST.

Unit-III:Taxes and Duties: Subsumed under GST - Taxes and Duties outside the purview of GST: Tax on items containing Alcohol – Tax on Petroleum products - Tax on Tobacco products - Taxation of Services

Unit-IV: Inter-State Goods and Services Tax: Major advantages of IGST Model – Interstate Goods and Service Tax: Transactions within a State under GST – Interstate Transactions under GST - Illustrations.

Unit-V: Time of Supply of Goods & Services: Value of Supply - Input Tax Credit – Distribution of Credit -Matching of Input Tax Credit - Availability of credit in special circumstances- Cross utilization of ITC between the Central GST and the State GST.

REFERENCES:

1. Goods and Services Tax in India – Notifications on different dates.
2. GST Bill 2012.
3. Background Material on Model GST Law, Sahitya Bhawan Publications, Hospital Road, Agra - 282 003.
4. The Central Goods and Services Tax Act, 2017, NO. 12 OF 2017 Published by Authority, Ministry of Law and Justice, New Delhi, the 12thApril, 2017.

SRI VENKATESWARA UNIVERSITY : TIRUPATI

B.A. / B.Sc., (COMPUTER APPLICATIONS)

SEMESTER V

Sl. No.	Course	Name of the Subject	Total Marks	Mid. Sem. Exam.	Sem. End Exam	Teaching Hours	Credits
5	Elective – DSC 1F/Inter-disp.	**1. Computer Applications** 5.4. Data Base Management System	100	25	75	4	4
6	Elective – DSC 2F/Inter-disp.	5.5 Web Technology	100	25	75	4	4
		Practical (5.4 =50marks)	100	-	100	2+2	4
		Practical (5.5 =50marks)					

ELECTIVE 2 - COMPUTER APPLICATIONS

DSC F 5.4 - DATABASE MANAGEMENT SYSTEM

Unit-I: Overview of Database Management System: Introduction, Data and Information, Database, Database Management System, Objectives of DBMS, Evolution of Database Management Systems, Classification of Database Management System.

Unit-II: File-Based System, Drawbacks of File-Based System , DBMS Approach, Advantages of DBMS, Data Models , Components of Database System, Database Architecture, DBMS Vendors and their Products.

Unit-III: Entity–Relationship Model: Introduction, The Building Blocks of an Entity–Relationship, Classification of Entity Sets , Attribute Classification, Relationship Degree, Relationship Classification, Generalization and Specialization, aggregation and composition, CODD'S Rules, Relational Data Model , Concept of key, Relational Integrity. Normalization (1NF,2NF,3NF & BCNF).

Unit-IV: Structured Query Language: Introduction, History of SQL Standard, Commands in SQL, Data types in SQL, Data Definition Language (DDL), Selection Operation Projection Operation, Aggregate Functions, Data Manipulation Language, Table Modification, Table Truncation, Imposition of Constraints, Set Operations.

Unit -V: PL/SQL: Introduction, Structure of PL/SQL, PL/SQL Language Elements ,Data Types, Control Structure,, Steps to Create a PL/SQL Program, Iterative Control ,Cursors , Steps to Create a Cursor , Procedure, Function ,Packages ,Exceptions Handling, Database Triggers, Types of Triggers.

Text Books:

1. S. Sumathi, S. Esakkirajan, Fundamentals of Relational Database Management Systems.
2. Ivan Bayross, SQL, PL/SQL The Programming Language of Oracle, BPB Publications.

Reference Books:

1. Paneerselvam: Database Management Systems, PHI.
2. Bipin C. Desai, "An Introduction to Database Systems", Galgotia Publications.
3. Korth, Database Management systems.
4. Navathe, Database Management systems.

DSC F 5.5 - WEB TECHNOLOGY

Unit-I:

Introduction: HTML, XML, and WWW, Topologies, Bus, Star, Ring, Hybrid, Tree, Lan,Wan,Man.
HTML: Basic HTML, Document body, Text, Hyper links, Adding more formatting, Lists, Tables using colors and images.

Unit-II:

More HTML: Multimedia objects, Frames, Forms towards interactive, HTML document heading.

Cascading Style Sheets: Introduction, using Styles, simple examples, your own styles, properties and values in styles, style sheet, formatting blocks of information, layers.

Unit-III:

Introduction to JavaScript: What is DHTML, JavaScript, basics, variables, string manipulations, mathematical functions, statements, operators, arrays, functions.

Unit-IV:

Objects in JavaScript: Data and objects in JavaScript, regular expressions, exception handling, built-in objects, events.

Unit-V:

DHTML with JavaScript: Data validation, opening a new window, messages and confirmations, the status bar, different frames, rollover buttons, moving images, multiple pages in single download, text only menu system.

Text Books

1. Web Technology, Chris Bates, Wiley Publications.

Reference Books

1. Uttam Kumar Roy, Web Technologies, Oxford University Press.
2. Black Book HTML 5.0
3. Complete reference HTML 5.

SRI VENKATESWSARA UNIVERSITY : TIRUPATI

STATISTICS SYLLABUS

Semester – V (CBCS With Non-Maths Combination Common to BA)

Paper – V : Statistical Application - 1

3 Hrs/Week

UNIT – I

Concepts of population, Sample, parameter, statistic, sampling distribution and standard error. Criteria of good estimator- Unbiasedness, Consistency, Efficiency and Sufficiency with examples (with out proofs). Fisher's Neyman factorization theorem Definition of Interval Estimation.

UNIT – II

Concepts of statistical hypotheses, Null and alternative hypothesis, Simple and Composite hypothesis, Critical region, One tailed and Two tailed tests, type-I and type-II errors, level of significance and power of a test, Statement of NP Lemma and uses.

UNIT – III

Large sample tests: Single sample mean and two sample means, single sample proportion and two sample proportions , Two sample standard deviations and simple problems.

UNIT – IV

Small sample Tests : Student t- test for single sample mean , two independent sample means , paired t -test , F – Test, $\chi 2$ test for single sample variance, independence of attributes and simple problems.

UNIT – V

Non-parametric tests: Definition, Advantages and Disadvantages, comparison with parametric tests. One and two sample sign test and run test, Two independent sample Median test

List of Reference Books :

1. Fundamental of Mathematical Statistics by S.C.Gupta and V.K.Kapur,

2. Fundamentals of Statistics by Goon AM, Gupta MK,Das Gupta B :Vol-II, the World Press Pvt.Ltd., Kolakota.

3. Anuvartita Sankhyaka sastram – Telugu Academy.

V Semester Practicals: Statistics

Semester – V (CBCS With Non-Maths Combination Common to BA)

Paper V: Statistical Applications - 1

2 Hrs/Week

1. Large sample test for single mean
2. Large sample test for two sample means
3. Large sample test for single proportion
4. Large sample test for two sample proportions
5. Student t-test for single mean
6. Student t- test for independent sample means
7. Paired Student t-test
8. F-test
9. Chi square($\chi 2$) test for attributes
10. Two sample Sign test
11. Two sample Run test
12. Two sample Median test

THREE YEAR B.A. DEGREE EXAMINATION

CBCS – FIFTH SEMESTER

Part - II - STATISTICS (NM)

Paper V : Statistical Applications - 1

New syllabus w.e.f. 2017 - 18

MODEL PAPER

Time : 3 Hours Max Marks : 75

PART - A

Answer any **FIVE** of the following questions.
Each question carries **5** marks **5X5 = 25 Marks**

1 Define sampling distribution and standard error?

2 Explain the concept of interval estimation?

3 Discuss about Null and alternative hypothesis?

4 Explain large sample test for testing significant difference between sample mean and population mean?

5 A cubic die was thrown 9000 times such that the digit 2 or 5 appears 3336 times. Was the die unbiased at 5% level?

6 Describe about Paired student t- Test ?

7 Explain χ^2 test for testing the significance of population variance?

8 A company produces both good and defective items. Is the production at random by verifying the following data.

G, D, D, G, G, G, D, G, D, D, D, G, G, D, G, D, G, D, D, G, G, G, D

PART – B

Answer **ONE** question from each unit.
Each question carries 10 marks. **5x10 = 50 Marks**

UNIT – I

9. Deduce sampling distribution of sample mean in Normal distribution?

(OR)

10. Describe various criteria to be satisfied by a good estimator?

UNIT – II

11. Explain the terms Simple ,Composite hypotheses and Critical region with examples?

(OR)

12. Explain the terms type-I and type-II errors with suitable examples?

UNIT – III

13. Describe a large sample test for testing equality between sample and population proportions?

(OR)

14. The average and SD marks of 45 BA and 53 B.Com students are given by 67.3, 64.8 and 10.2,12.6 respectively. Was the difference between sample means significant at 1% level?

UNIT – IV

15. Explain an exact sample χ^2 test for testing independence of two attributes?

(OR)

16.Describe about F- Test for equality of two variances?

UNIT - V

17. Explain about Parametric and Non-parametric tests and mention their Advantages and Disadvantages?

(OR)

18. Discuss about Two Sample Run test for testing randomness of the data?

SRI VENKATESWSARA UNIVERSITY : TIRUPATI

STATISTICS SYLLABUS

Semester – V (CBCS With Non-Maths Combination Common to BA)

Paper – VI : *Sampling Techniques*

3 Hrs/Week

UNIT – I

Sampling Theory: Population , Sample, Sampling versus census, sample survey meaning , Principle steps in a sample survey. limitations of sampling survey.

UNIT– II

Sampling Methods: sampling and Non-Sampling errors, Purpose sampling, Judgment sampling, Quota Sampling, Cluster sampling.

UNIT – III

Simple Random sampling: Definition, Merits and Demerits, SRSWOR, SRSWR, Distinguish SRSWOR and SRSWR, Lottery Method and Random number table method, Sample mean is an unbiased estimate of population mean, simple problems

UNIT – IV

Stratified random sampling: Meaning of stratified random sampling, merits and demerits. Allocation of sample sizes through proportional and Optimum allocations, simple problems

UNIT – V

Systemic random sampling: Definition, Advantages and Disadvantages of systematic random sampling, Comparison of variances in SRSWOR , Stratified and systematic samplings.

List of reference books :

1. Fundamentals of Applied Statistics. By S.C.Gupta and V.K.Kapoor. Sultan Chand
2. B.A/B.Sc III Year Paper-IV Statistics- applied Sttistics- Telugu Academic by Prof.K.Srinivasa RAo, Dr.D. Giri,Dr.A.Anand, Dr.V.Papaiah Sastry
3. B.A/B.Sc Statistics Paper-III by
4. Prayoga Rachana and Visleshana – Telugu Academy.
5. K.V.S. Sarma: Statistics made simple : do it yourself on PC. PHI
6. Anuvartita Sankhyaka sastram – Telugu Academy.

V Semester Practicals : Statistics

Semester – V (CBCS With Non-Maths Combination Common to BA)

Paper VI: Sampling Techniques

2 **Hrs/Week**

1. Estimation of population mean, Variance by SRSWOR and its verification.
2. Estimation of population mean, Variance by SRSWR and its verification
3. Variance of sample mean in stratified random sampling
4. Allocation of Sizes through Proportional allocation
5. Allocation of Sizes through optimal allocation
6. Showing of $V(Opt) \leq V(Prop) \leq V(Ran)$
7. showing of $V(sys) \leq V(st.rs) \leq V(Ran)$.

Note : The above practical are to be done using M S Excel Package where ever it is possible (Compulsory)

THREE YEAR B.A. DEGREE EXAMINATION

CBCS – FIFTH SEMESTER

Part - II - STATISTICS (NM)

Paper VI: Sampling Techniques

Revised syllabus w.e.f. 2017 - 18

MODEL PAPER

Time : 3 Hours Max Marks : 75

PART - A

Answer any **FIVE** of the following questions.
Each question carries **5** marks **5X5 = 25 Marks**

1 Explain the concepts (i) Population (ii) Parameter with examples?

2 Mention the limits of sampling?

3 Define purposive and Judgment sampling methods?

4 Describe about Pilot Survey ?

5 Explain about Random Number Tables method to draw simple random samples?

6 Give the properties of stratified random sampling method ?

7 Describe about proportional and optimum allocations?

8 Distinguish between simple random sampling and systematic sampling?

PART – B

Answer **ONE** question from each unit.

Each question carries 10 marks. **5x10 = 50 Marks**

UNIT – I

9. Discuss the steps involved in large scale sample survey?

(OR)

10. Give the advantages of sample survey over census survey?

UNIT – II

11. Describe about sampling and non-sampling errors and how do you control them?

(OR)

12. Explain about probabilistic and non probabilistic sampling methods

UNIT – III

13. Define simple random sampling with and without replacement methods and give their properties.

(OR)

14. A population has the values -5,10,3,-2, and 11. Then draw simple random samples of size 2 by without replacement method and show that $E(\bar{y}) = \bar{Y}$

UNIT – IV

15. Explain the terms stratum, stratification and stratified random sampling with an example?

(OR)

16. A sample of 300 units has been taken from the population of 1200 units. The sizes and S.D of different strata are as follows. Then find the variances of sample mean under proportional allocation.

Stratum No.	1	2	3	4	5	6
Stratum Size	90	410	150	250	200	100
S D	6.2	3.1	17.4	21.2	7.3	8.1

UNIT - V

17. Mention the advantages and disadvantages of systematic sampling?

(OR)

18.Explain the differences and relationships between simple random, stratified random and systematic sampling methods

SRI VENKATESWARA UNIVERSITY : TIRUPATI

TABLE 5 : B.COM (GEN.) / B.COM(TAX) – **SEMESTER V**

Sl. No.	Course	Name of the Subject	Total Marks	Mid. Sem. Exam.	Sem. End Exam	Teaching Hours	Credits
1	DSC 1 E	5.1 Cost Accounting	100	25	75	5	4
2	DSC 2 E	5.2 Goods and Services Tax – Fundamentals	100	25	75	5	4
3	DSC 3 E	5.3 Advanced Corporate Accounting	100	25	75	5	4
5	Elective – DSC 1F/Inter-disp.	**1. Retailing** 5.4. Purchase Management (5 hours) 5.5. Stores Management (5 hours) 5.6. Project Management	100	25	75	5	4
	Elective – DSC 2F/Inter-disp.	**2. Corporate Accounting** 5.4. Accounting & Auditing Standards(5 hours) 5.5. Accounting for Govt. Entities (5 hours) 5.6. Project Management	100	25	75	5	4
6	Elective – DSC 3F/Inter-disp.	**3. Security Market Operations** 5.4. Financial Markets (5 hours 5.5. Stock Market Operations (5 hours 5.6. Project Management **4. Banking & Financial Services** 5.4. Central Banking (5 hours 5.5. Rural and Farm Credit(5 hours 5.6. Project Management **5. Insurance** 5.4. Life Insurance 5.5. Non-Life Insurance 5.6. Project Management **6. Logistics & Supply Chain Mgt** 5.4. Logistics Management - Surfaces 5.5. Logistics Management – Air & Sea 5.6. Project Management **7. Advertising & Sales Promotion** 5.4. Advertising & Media Planning 5.5. Brand Management 5.6. Project Management					
TOTAL			**600**	**150**	**450**	**30**	**24**

Note. A candidate has to select O**ne Stream from Electives.**

DSC - 1E 5.1 COST ACCOUNTING

Unit-I: Introduction: Classification of Cost – Meaning of Cost, Costing, Cost Accounting and Cost Accountancy - Distinguish between Financial Accounting and Cost Accounting – Cost centre and cost unit - Preparation of Cost Sheet (including problems).

Unit-II: Elements of Cost: Materials: Material control - Methods of pricing issues – FIFO, LIFO, Weighted average, Simple average only (including problems)

Unit-III: Labour Cost : Labour: Control of labor costs - Methods of remuneration – labour incentives schemes – Time Rate Method, Piece Rate Method, Halsey Method, Rowan Method only (including problems).

Unit-IV: Contract Costing : Characteristic features of Contract costing – Preparation of Contract Accounts on incomplete contracts – Preparation of Contract account and Contractee Account (including problems)

Unit V : Costing Techniques – Marginal Costing)– BEP, P/V Ratio, Margin of Safety (including problems)

REFERENCES:

1. T.S. Reddy and Y. Hariprasad Reddy- Cost Accounting, Margham Publications, Chennai
2. S.P. Jain and K.L. Narang – Advanced Cost Accounting, Kalyani Publishers, Ludhiana.
3. M.N. Aurora – A test book of Cost Accounting, Vikas Publishing House Pvt. Ltd.
4. S.P. Iyengar – Cost Accounting, Sultan Chand & Sons.
5. Nigam & Sharma – Cost Accounting Principles and Applications, S.Chand & Sons.
6. S.N .Maheswari – Principles of Management Accounting.
7. I.M .Pandey – Management Accounting, Vikas Publishing House Pvt. Ltd.
8. Sharma & Shashi Gupta – Management Accounting, Kalyani Publishers. Ludhiana.

Sri Venkateswara University
Model Question Paper
III B.Com
Semester – V, November, 2017
DSC 1E 5.1 – Cost Accounting

Time: 3 Hours Max. Marks: 75

Section A

Answer any **Five** of the following Questions

(5 x 3= 15 Marks)

1. (a) Classification of Cost
   (b) Cost Centre
   (c) Material Control
   (d) LIFO
   (e) Idle Time
   (f) Labour Turnover
   (g) Profit on incomplete contracts
   (h) Work in Progress in contract accounts
   (i) Marginal Cost
   (j) Margin of Safety

Section - B

Answer any ONE Question from each unit.

(5 ×12 =60 Marks)

UNIT – I

2. During the year 2014, Raghava producers produced 50,000 units of a product. The following are the expenses:

	Rs.
Stock of raw materials on 1.1.2014	10,000
Stock of raw materials on 31.12.2014	20,000
Purchases	1,60,000
Direct wages	75,000
Factory expenses	25,000
Office expenses	37,500
Selling expenses	25,000
Selling Price for the sold 44,000 units	Rs.10

You are required to prepare a Cost sheet showing cost and profit per unit with total cost at each stage.

3. Anjaneya manufacturers furnishes the following data relating to the manufacture of itsproduct

During the month of April 2015:

Raw materials consumed	-	Rs. 55,000
Direct labour charges	-	Rs. 90,000
Machine hours worked	-	900
Machine hour rate	-	Rs. 25
Administrative overheads	-	20% on works cost
Selling overheads	-	Re. 12. per unit
Units produced	-	4260
Units sold	-	4,000 at Rs. 62 per unit

Find a) The cost per unit b) Profit for the period.

UNIT – II

4. From the following details prepare stores ledger using LIFO & Simple Average Method

Purchases : April 2015	**Issued for Production** : April 2015
2nd 5000 units at Rs. 120	6th 4000 units
4th 2500 units at Rs. 130	10th 1200 units
9th 4000 units at Rs. 136	11th 600 units
13th 3600 units at Rs. 132	15th 1000 units
	18th 2400 units & there is a shortage of 10 units Identified.

5. The Sri Rama Oil Company, a well known distributor of fuel oil closes its accounts at the end of each month.

The following information is available for the month of June, 2014:

	Rs.
Sales	4,00,000
Factory overheads	32,000
Administrative Expenses	35,000
Direct Labour	44,000
Inventory, June 1	
50 tons @ Rs.500 per ton	25,000
Purchases (including carriage inward):	
June, 10, 150 tons @ Rs.800 per ton	1,20,000
June, 20, 150 tons @ Rs.900 per ton	1,35,000
Inventory, June 30, 100 tons.	
Selling expenses (per ton of sold)	100

i) Inventory valuation on June 30. ii) Amount of cost of goods sold for June.
iii) Compute Profit or loss for June.2014 following the issue of materials on LIFO Method.

UNIT – III

6. During first week of April 2016 the workman Mr. Kalyanaram manufactured 300 articles. He receives wages for a guaranteed 48 hours week at the rate of Rs. 60 per hour. The estimated time to produce one article is 10 minutes and under incentive scheme the time allowed is increased by 40%. Calculate his gross wages according to:

a) Piece work with a guaranteed weekly wage.
b) Rowan premium bonus c) Halsey premium bonus 50% to workman.

7. Calculate the earnings of workers A and B under Straight Piece-rate system and time rate from
the following particulars:-

Normal rate per hour = Rs. 58
Standard time per unit = 20 seconds
Worker A produces 1,300 units per day and worker B produces 1,500 units per day (8 hours per day)

UNIT – IV

8. Sriramachandra contractors, having undertaken a building construction work at a contract price Rs. 12,00,000 and started the execution of work on 1st April, 2012. The following details are given below.

	Rs.
Materials issued	24,000
Materials purchased	2,42,000
Wages at the site	1,54,000
Plant	2,20,000
Indirect Expenses	56,000
Material returned to store	12,000
Material lost by fire	4,400
Material at the site on 31st March 2013	42,000
Plant at site on 31st March 2013	1,98,000

Cash received for Rs.3,60,000 against the 80% work certified. The work certified but not certified amounted to Rs. 22,000. Prepare Contract Account and calculate the profit to be transferred to Profit and loss account.

9. The following is Trial Balance of Seetharam contractors engaged a contract No. 62 for the year ended with 31st March 2014

Particulars	Debit (Rs.)	Credit (Rs.)
Contractee Account (Cash Received)		4,00,000
Land & Buildings	1,60,000	
Creditors		92,000
Bank Balance	1,35,000	
Capital Account		5,00,000
Expenses to contract Work		
Materials	2,50,000	
Wages	1,40,000	
Expenses	57,000	
Plant	2,50,000	
Total	9,92,000	9,92,000

The work of No.62 was commenced on 1st April 2013. Material issued to the work during the year is for Rs. 2,22,000. Out of this cost of material Rs.6,000 was destroyed by fire. Cash received is 80% of the work certified. Uncertified work is worth Rs.16,000. Material at site on 31st March 2014 is Rs. 12,000. Plant is used for this work only. It is to be depreciated at 10%. Prepare Contract No.62 account and the Balance Sheet as on 31.03.2014.

UNIT – V

10. Given:

Sales 10,000 units
Variable Cost Rs.1,00,000
Sales value Rs. 2,00,000
Fixed cost Rs.40,000

You are required to find out (a) Break even volume (b) Break even sales units (c) P/V Ratio and (d) Margin of Safety

11. From the following calculate (a) P/V Ration (b) BEP (c) Margin of Safety (d) Variable Cost in both years.

Year	Sales (Rs.)	Profit (Rs.)
2016	1,50,000	20,000
2017	1,70,000	25,000

786

DSC: 2E: 5.2: GOODS & SERVICE TAX FUNDAMENTALS

Unit I: Introduction: Overview of GST - Concepts – Limitations of VAT – Justification of GST Need for Tax Reforms - Advantages at the Central Level and State Level on introduction of GST.

Unit II: GST:Principles – Models of GST: Austrlian, Candian, Kelkar-Shah – BagchiPoddar – Comprehensive structure of GST model in India: Single, Dual GST– Transactions covered under GST.

Unit-III: Taxes and Duties: Subsumed under GST - Taxes and Duties outside the purview of GST: Tax on items containing Alcohol – Tax on Petroleum products - Tax on Tobacco products - Taxation of Services

Unit-IV: Inter-State Goods and Services Tax: Major advantages of IGST Model – Interstate Goods and Service Tax: Transactions within a State under GST – Interstate Transactions under GST - Illustrations.

Unit-V: Time of Supply of Goods & Services: Value of Supply - Input Tax Credit – Distribution of Credit -Matching of Input Tax Credit - Availability of credit in special circumstances- Cross utilization of ITC between the Central GST and the State GST.

REFERENCES:

1. Goods and Services Tax in India – Notifications on different dates.
2. GST Bill 2012.
3. Background Material on Model GST Law, Sahitya Bhawan Publications, Hospital Road, Agra - 282 003.
4. The Central Goods and Services Tax Act, 2017, NO. 12 OF 2017 Published by Authority, Ministry of Law and Justice, New Delhi, the 12thApril, 2017.

Sri Venkateswara University
Model Question Paper
III B.Com
Semester – V, November, 2017
DSC 2E 5.2 – Goods & Services Tax – Fundamentals.

Time: 3 Hours Max. Marks: 75

Section A

Answer any **Five** of the following Questions

(5 x 3= 15 Marks)

Q 1.a) What is GST b) write any 3 limitations of VAT c) Dual GST
d) Subsumed under GST e) Interstate Transaction f) Input ta Credit
g) State GST h) Service tax

Section - B

Answer any ONE Question from each unit.

(5 ×12 =60 Marks)

UNIT I

Q.2. Write advantages of Goods and Services Tax

OR

Q.3. What are the concepts of GST ? Give justification on imposing GST in India ?

UNIT II

Q.4. What is the comprehensive structure of GST in India ?

OR

Q.5. Give the brief note on Principles of GST.

UNIT III

Q.6 How do the levy of GST procedure on petroleum products and tobacco ?

OR

Q.7 Explain the taxes and duties outside the purview of GST

UNIT IV

Q.8. What are the advantages of IGST ?

OR

Q.9. Illustrate the Inter State transactions under GST

UNIT V

Q.10. What is Time supply of goods and services

OR

Q.11. What is input tax credit and explain it with suitable examples

DSC: 3E: 5.3: ADVANCED CORPORATE ACCOUNTING

Unit I : Accounting standards – Importance of accounting standards in the procedure of accounting – List of Indian accounting standards – objectives of accounting standards Board and scope of accounting standards. – Accounting Standard 1:Disclosure of Accounting policies Accounting Standard 9: Revenue Recognition – Accounting standard 10 : Fixed assets (Theory only)

Unit II – Amalgamation : meaning – calculation of purchase consideration – Methods – Accounting procedure in preparation of journal entries and Balance sheet (simple problems only)

Unit III – Internal Reconstruction - Necessity of internal Reconstruction – Importance – Procedure for reducing share capital – Journal entries and preparation of Revised Balance sheet.

Unit IV : Liquidation : Meaning and modes of Liquidation in corporate accounts – Voluntary Liquidation – Procedure for preparation of Liquidator's statement of account – calculation of liquidator's remuneration (Simple problems)

Unit V : Holding companies : Definition of Holding Company and subsidiary company – Preparation of consolidated Balance Sheet of Holding company having ONE subsidiary company only - with common transactions, Minorities Interest, Capital Reserve, Revenue Profits Prior and post acquisition of shares by holding companies (Simple Problems)

REFERENCES:

1. Advanced accounting – SP Jaian & K.L. Narang
2. Corporate accountancy – S.N. Maheshwari
3. Advanced accounting Vol.1 hanif & mukherjee – MC Grawhill
4. Advanced accounting Vol.2 hanif & mukherjee – MC Grawhill
5. Advanced accounting - T.S.Reddy & A. Murthy – Margam publications Chennai.

Sri Venkateswara University
Model Question Paper
III B.Com
Semester – V, November, 2017
DSC 3E 5.3 – Advanced Corporate Accounting.

Time: 3 Hours Max. Marks: 75

Section A

Answer any **Five** of the following Questions

(5 x 3= 15 Marks)

Section-A

1 Answer any five of the following questions.

a) Define Accounting standards
b) Going concern concept
c) What do you mean by Amalgamation
d) Purchase consideration
e)Internal Reconstruction
f)Liquidators Remuneration
g)Subsidiary company
h) Minority share holders Interest

Section-B

2 Answer one questions from each unit.

Unit-1

2) Explain the importance / Objective of accounting standards? Name any 5 Accounting Standards?

(Or)

3) What is meant by Accounting concepts and conventions ? Explain any 5 concepts.

Unit-II

4) Godavari Ltd.. and Krishna Ltd. decided to Amalgamate and A new company is formed in the name of Go-Krishna Ltd. The new company is to take over both companies on 31-3-2017.

The balance sheet of both companies as follows.

Liability	Godavari Ltd. Rs.	Krishna Ltd. Rs.	Assets	Godavari Ltd. Rs.	Krishna Ltd. Rs
Share capital Rs.10 fully paid	5,00,000	3,00,000	Goodwill	1,00,000	80,000
Reserve funds	2,00,000	1,50,000	Land & Buildng	2,50,000	1,90,000
Profit & Loss a/c	30,000	50,000	Plant & Machinery	2,00,000	2,55,000
div. Equalisation funds	-	1,00,000	Patents &Trade Marks	- 2,00,000	52,500 1,50,000
Workman's	20,000	-	Stock	1,00,000	50,000

compensation fund	-	50,000	Sundry Debtors	-	20,000
Bank overdraft	1,00,000	1,20,000	Bills Receivable	50,000	2,500
Sundry Creditors	50,000	30,000	Cash at bank		
Bills Payable					
	9,00,000	8,00,000		9,00,000	8,00,000

Show how the amount payable to each company is arrived at and prepare the amalgamated Balance sheet of Godavari, Krishna Ltd.. Assuming amalgamation is done in the nature of purchase.

(Or)

5) Following is the Balance sheet of Mr. Venkatesh Ltd. as on 31 March 2017

Liabilities	Rs	Assets	Rs
Capital	42,500	Freehold Premises	25,000
Bank Loan	20,000	Furniture	3,500
Bills Payable	6,700	Motor van	12,800
Creditors	10,800	Stock	13,200
		Bills receivable	5,400
		Debtors	18,700
		cash	1,400
	80,000		80,000

On the above date the entire business was taken over by Deva Dhana Ltd.. The purchase consideration was paid as under.

1) 3,000 fully paid Rs.10 shares
2) The balance in cash

While recording the assets, the company valued the premises and stock at 10% and 20% above their book value respectively. Find out purchase consideration and pass necessary entries in the books of the Ding Dong Bell Ltd.. And show its Balance sheet after takeover of the business.

Unit-III

6) The following is the Balance sheet of Vikaash Ltd.. as at 31st March 2014.

Liabilities	Rs	Assets	Rs
Share Capital		Buildings	2,00,000
20,000 Equity shares of		Machinery	1,30,000
rs.10 each, fully paid up		Patents	40,000
10% Non-cumulative	2,00,000	Inventories	80,000

preference shares of Rs.100 each fully paid up 8% Debentures trade creditors Creditors for Expenses	 50,000 1,00,000 3,30,000 20,000	Debtors Preliminary expenses Profit and loss account	55,000 10,000 1,85,000
	7,00,000		7,00,000

With a view to reconstruct the company, it is proposed.

a) To reduce (i) Equity shares by Rs.9 each.(ii) 10% Preference shares by Rs.40 each.(iii) 8% Debentures by 10%,(iv) Trade Creditor's claims by one- third ,(v) Machinery to Rs.70,000 and (vi) Inventories by Rs. 10,000,
b) To provide Rs. 15,000 for bad debts
c) To write off all the intangible assets; and
d) To raise the rate of preference dividend to 13 % and the rate of debenture interest to 13.5%.

Assuming that the aforesaid proposals are duly approved and sanctioned, pass the journal entries to give effect to the above, and show the company's post reconstruction Balance sheet.

(Or)

7) The summarized Balance sheet of Anjana Company as at 31-3-2017 was as follows:

Liabilities	Rs	Assets	Rs
Authorized and issued capital: 20000 Equity shares of Rs. 10 each fully paid 10,000 6% cumulative Pref.shares of Rs. 100 each fully paid Bank overdraft Sundry creditors (note : The cumulative Preference Dividend is three years in arrear)	 20,00,000 10,00,000 7,00,000 5,00,000	Goodwill Patents and Trade marks Land and Buildings Plant and Machinery Stocks (Investment) Sundry debtors Issue and Preliminary expenses Profit and Loss a/c	2,00,000 1,00,000 15,00,000 10,00,000 4,00,000 3,00,000 1,00,000 6,00,000
	42,00,000		42,00,000

A scheme for the reduction of capital was approved on the following terms:

(i) The preference shareholders agree that their shares be reduced to a fully paid value of Rs. 50 each and to accept equity shares of Rs.5 each fully paid in lieu of the dividends arrears.
(ii) The Equity shareholders agree that their shares be reduced to a fully paid value of Rs.5 each.

(iii) The authorized capital of the company is to remain at 30,00,000 divided into 4,00,000 Equity shares of Rs.5 each and 20,000.6% Cumulative preference shares of Rs.50 each.

(iv) All the intangible assets are to be eliminated and bad debts of Rs..50,000 and obsolete shares of Rs.80,000 are to be written off.

Give journal entries necessary to record the reduction of capital and draw up a new Balance sheet after the scheme has been carried through.

UNIT-IV

8) Trimoorthy Co. Ltd. was placed in voluntary liquidation on 31st December 2016. When its balance sheet was as follows.

Liabilities	Rs	Assets	Rs.
Issued share Capital:		Freehold factory	5,80,000
50.000 Equity shares of Rs.10		Plant and Machinery	2,89,000
each fully Paid less calls in	4,75,000	Motor Vehicles	57,500
arrear amounting to Rs.		Stock	1,86,000
25,000		Debtors	74,000
		Profit & Loss Account	2,14,000
6,000 5% cumulative			
preference shares ofRs.100			
each fully paid	6,00,000		
Share premium account			
5% Debenture account	50,000		
Interest on Debentures	1,00,000		
Bank Overdraft	2,500		
Creditors	58,000		
	1,15,000		
	14,00,500		14,00,500

The Preference dividends are in arrears from 2013 onwards.

The company's articles provide that on liquidation, out of the surplus assets remaining after payment of liquidation cost and outside liabilities, there shall be paid firstly all arrears of preference dividend, secondly the amount paid up on the Preference shares together with a premium thereon of Rs.10 per share, and thirdly any balance then remaining shall be paid to the equity share holders.

The Bank overdraft was guaranteed by the directors who were called upon by the Bank to discharge their liability under the guarantee. The directors paid the amount to the Bank

The liquidator realized the assets as follows

	Rs.
Freehold Factory	7,00,000
Plant and Machinery	2,40,000
Motor Vehicles	59,000
Stock	1,50,000
Debtors	60,000
Calls in Arrears	25,000

Creditors were paid less discount of 5 per cent. The debenture and accured interest were repaid on 31st march 2003.

Liquidation costs were Rs 3,820 and the Liquidator's remuneration was 2 per cent on the amounts realized.

Prepare the liquidator's statement of account

(Or)

9) Nagarjuna do.Ltd.. Went into liquidation with the following liabilities.

Secured creditors	Rs.40,000 (securities realized Rs.50,000)
Preferential creditors	Rs.1,200
Unsecured creditors	Rs.61,000
Liquidation expenses	Rs.500

The liquidator is entitled to a remuneration of 3% on the amount realilsed (including securities in the hands of secured creditors) and 1 ½% on the amount distributed to unsecured creditors. The various assets (excluding the securities in hand of the secured creditors) realized are Rs.52, 000.

Prepare the liquidator's statement of account showing the payment made to the unsecured creditors.

UNIT V

10) The following are the Balance sheet of Hemanth Ltd.. and its subsidiary Sabari Ltd.. as at 31st March 2017.

Liabilities	H Ltd. Rs.	S Ltd. Rs.	Assets	H Ltd.	S Ltd. Rs.
Fully paid equity shares of Rs.10 each	6,00,000	2,00,000	Machinery Furniture 80% shares in S Ltd., at cost	3,90,000 80,000 3,40,000	1,35,000 40,000 -

General reserve	3,40,000	80,000	Stock	1,80,000	1,20,000
Profit & Loss a/c	1,00,000	60,000	Debtors	50,000	30,000
Creditors	70,000	35,000	Cash in Bank	70,000	50,000
	11,10,000	3,75,000		11,10,000	3,75,000

The following additional information is provided to you:

(i) Profit & Loss account of Sabari Ltd. stood at Rs.30,000 on 1 st April 2016 whereas general reserve has remained unchanged since that date.

(ii) Hemanth Ltd.. acquired 80% shares in Sabari Ltd. on 1st October,2016 for Rs. 3,40,000 s mentioned above.

You are required to prepare consolidated balance sheet as at 31st march, 2017. Show all calculations clearly.

(Or)

11) From the Balance sheet given below prepare a consolidated balance sheet of Maruthi Ltd. and its subsidiary, Garuda Ltd.. as on 31-3-2017.

Liabilities	Maruthi Ltd.. Rs.	Garuda Ltd.. Rs	Assets	Maruthi Ltd.. Rs.	Garuda Ltd.. Rs
Share Capital of Rs. 10 each	1,20,000	30,000	Free hold Building at cost	72,000	25,000
Trade Creditors	15,000	5,000	Plant & Mach.	30,000	10,000
General Reserve	25,000	6,000	Stock at cost	18,000	3,000
Profit & Loss A/c	12,000	9,000	Trade Debtors	22,000	7,000
			Bank Balance	5,000	5,000
			Share in Garuda Ltd.. 2000 shares of Rs.10 each	25,000	-
	1,72,000	50,000		1,72,000	50,000

At the date of acquisition by Maruthi Ltd.. of its holding of 2000 shares in Garuda Ltd.. the latter company had undistributed profits and reserve amounting to Rs.5000, none of which has been distributed since the date of acquisition.

2-5-107

Elective 1 - Retailing

DSC F 5.4 PURCHASE MANAGEMENT

Unit-I: Introduction: Purchase Function - Supply Management – Sources of Purchase: Local vs. Global - Negotiation & Bargaining - Purchasing Methods - e-Procurement –DGS & D.

Unit-II: **Purchasing Function**: Right Quantity - Economic Order Quantity - Re-order Levels - ABC Analysis - Right Price, Time - Tendering: Single, Limited, Open, Global tenders.

Unit-III: **Vendor Analysis**: Identification of vendor – Selection - Criteria and Methodology of evaluation - Vendor Rating – Maintenance of Vendor relations.

Unit-IV: **Buyer-Supplier Relationships**: Transformation of buyer-supplier relationships -Developing and managing collaborative and alliance relationships – joint problem solving, Information sharing.

Unit-V: Supply Chain Management: JIT in the supply management - Cross-Functional Teams: Cross-functional teams and supply management - challenges of cross-functional teams, prerequisites to success.

REFERENCES:

1. Dobler & Burt, Purchasing and Supply Management, McGraw Hill.
2. P. Gopala Krishan, Purchasing and Materials Management, Tata McGraw-Hill Education.
3. L.N. Aggarwal & Parag Diwan, Management & Production Systems, National Publishing House.
4. N.G. Nair, Production and Operations Management, Tata McGraw Hill Publishing Co. Ltd.
5. Gopalakrishnan P. & Sundaresan. M., Materials Management-An Integrated Approach, PHI.

2-5-108

DSC F 5.5 STORES MANAGEMENT

Unit-I: Stores Function: Layout and Organization - Stores Responsibilities - Relationships with Other Departments - Logistics - Supply Chain - Coding of materials - Methods of Coding

Unit-II: Material Receipt and Issue: Receipts from Suppliers - Inspection - Authorization of issues - Methods of issue - Records and Systems **-** Manual Systems - Computerized Systems - Recent Developments.

Unit-III: Stock Control Techniques: Approaches to Control - ABC Analysis - Provision of Safety Stock - Stocktaking Procedure - Obsolescence and Redundancy - Prevention of Deterioration - Stock Checking.

Unit-IV: Stores Operations: Storehouse Location - Centralization of Storage - Measurement of Stores efficiency - Health and Safety directives on stores operations - Manual and Mechanical lifting - Control of Substances Hazardous to Health Regulations - Storage Equipment.

Unit-V: Procedure Manuals: Need for Manuals - Preparation of the Manual - Contents of the Manual - Publication and Distribution - Implementation of the Manuals.

References:

1. Jessop David & Morrison Alex, Storage and Supply of Materials, Pearson Education Ltd. England.

2. Saleemi N.A., Store keeping and Stock Control Simplified, Saleemi Publications Ltd., Nairobi.

3. Gopalakrishnan P. & Sundaresan. M., Materials Management-An Integrated Approach, PHI.

4. P. Gopala Krishan, Purchasing and Materials Management, Tata McGraw-Hill Education.

DSC F 5.6 - PROJECT MANAGEMENT

Unit I : Basics of Project Management : Project Identification Process, Project Initiation – Phases of Project Management – Project Management Processes.

Unit II Project Planning and Control : Project Planning, Responsibility and Team Work – Project planning Process – CPM , PERT

Unit III : Project Execution control and Close out : Project Control, Purpose of Execution and control – Project Close – out Project Termination, Project Follow-up

Unit IV : Project Performance Measurement and Evaluation : Performance Measurement – Performance Evaluation, Challenges of Performance Measurement and Evaluation (Theory).

Unit V : Project Cost estimation and Budget; project evaluation ; Case Studies

REFERENCES:

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2. S. Choudhury, Project Scheduling and Monitoring in Practice, South Asian Publishers Pvt. Ltd.
3. P. K. Joy, Total Project Management: The Indian Context, Macmillan India Ltd.
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SRI VENKATESWARA UNIVERSITY :: TIRUPATI

MODEL QUESTION PAPER

III B.Com., SEMESTER – V

DSC F 5.6 PROJECT MANAGEMENT

Time : 3 Hours **Max. Marks :75**

Section – A

Answer any five of the following questions

(5 x 3 = 15 Marks)

1.

a. Project initiation
b. Project
c. PERT
d. Team work
e. Performance measurement
f. Project cost estimation
g. Project follow-up
h. Project execution cycle
i. Traditional methods of evaluation
j. Project control

Section – B

Answer any One question from each unit

(5 x 12 = 60)

UNIT – I

2. Describe the process of project identification.

OR

3. Explain the different phases of Project Management.

UNIT – II

4. Define project planning. Explain the steps involved in project planning.

OR

5. What is CPM? How is it useful in project control?

UNIT – III

6. Discuss the Project Termination. Explain the various reasons for the termination of a project.

OR

7. Define project execution. Explain the process of project execution.

UNIT – IV

8. What is project evaluation? Explain various types of project evaluation.

OR

9. What are the challenges or problems of Project evaluation?

UNIT - V

10. A car manufacturer has decided to make a significant investment into expanding its operation in South Africa by setting up a large assembly unit. The estimations are as follows

Initial investment is Rs.`6,00,000.

Forecast net income from the project is detailed below:

Year	Cash inflows (Rs`)
Year 1	1,40,000
Year 2	1,45,000
Year 3	1,55,000
Year 4	1,62,500
Year 5	1,48,000

(i) Calculate the projected payback time for the project to the nearest month.

(ii) Calculate the Net Present Value of the project using a discount factor of 5% and comment on the attractiveness of the project.

Discount factors at 10 % are;

Year 1 = 0.909, Year 2 = 0.826, Year 3 = 0.751, Year 4 = 0.683, Year 5 = 0.62.

11. **Think about it**: Characteristics of a project involving the installation of a new server. The installation of a new server in an office is one example of a project. It involves a single, definable purpose, which is to set up a new server-based network for the office. It uses the skills of a number of different people, from individual company users to external specialist IT consultants. Different people will write the software, configure the hardware, install the system and test and commission it. As with many projects, the team itself is multidisciplinary. Installing the server and commissioning it is a unique process for the IT consultants, in that every office is different and the demands of any particular client will be specific to that client. The project will always be somewhat unfamiliar, because new hardware and software are coming onto the market all the time, and hence the resulting system requirements will be constantly changing. The project is highly interdependent, in that the input of each person in the multidisciplinary team must work properly in order for the overall new system to work. The installation team is also temporary. It works together on the server installation. As soon as the installation is complete and the system is commissioned, the team ceases to exist and each individual either moves onto new installation projects or moves back into their standard or normal functional roles. The installation may be interlinked, in that it may take place in conjunction with hardware or software upgrades. Most IT managers would take advantage of a server upgrade to carry out other network improvement works such as replacing PCs or upgrading software. The project is designed to bring about

change in the form of a new server that presumably will make the company more efficient. The overall level of change risk is high and some form of standby provision is obviously necessary. All obvious precautions such as backing up all data, running duplicate systems, phased commissioning and so on should be put in place to reduce the impact and magnitude of change risk.

Questions:

1. Where might the installation of a new server not be regarded as a project? How could project objectives (installation of the new server) be accurately coordinated with organisational objectives (general software and hardware upgrade)?

ELECTIVE 2 – CORPORATE ACCOUNTING

DSC F 5.4 ACCOUNTING & AUDITING STANDARDS

Unit-I: Introduction: Significance of Accounting Standards - National and International Accounting Standards - Accounting Standards in India.

Unit-II: Accounting Standards (AS-1 to AS-16): AS-1: Disclosure of Accounting policies – AS-2: Valuation of inventories –AS-3: Cash flow statement – AS-4: Contingencies in balance sheet – AS-5: Net profit or loss, prior period items and changes – AS-6: Depreciation Accounting – AS-7: Construction Contracts – AS-9: Revenue Recognition – AS 10: Accounting for Fixed assets - AS-11: Effects of changes in foreign exchange rates- AS-12: Accounting for government grants – **AS-13: Accounting for investments** – AS-14: Accounting for Amalgamation – AS-15: Employee benefits – AS-16: Borrowing costs .

Unit-III: Accounting Standards (AS17 to AS-32): – AS-17: Segment reporting – AS-18: Related party disclosures – AS-19: Leases – AS-20: Earning per share - AS-21: Consolidated financial statements – AS-22: Accounting for taxes – AS-23: Accounting for investments – AS-24: Discontinuing operations – AS-25: Interim Financial Reporting – AS-26: Intangible assets – AS-27: Financial reporting of interests in joint ventures – AS-28: Impairment of assets – AS-29: Provisions, Contingent liabilities and assets; AS-30: Financial Instruments: Recognition and Measurement; AS-31: Financial Instruments: Presentation – AS-32:Financial Instruments: Disclosures.

Unit-IV: Auditing Standards: Procedure - International Federation of Accountants - Auditing and Assurance Standards Board - Indian Auditing Standards (issued so far) Overview.

Unit-V: International Financial Reporting Standards (IFRS): Origin - Procedure - International Accounting Standards Board - Adoption in India.

REFERENCES:

1. Taxman's Students' Guide to Accounting Standards, D. S. Rawat, Taxman Publications.
2. Compendium of Statements and Standards on Accounting, The Institute of Chartered Accountants of India, New Delhi.
3. British Accounting Standards, Ronal Leach and Edward Stamp, Woodhead Faulkner Ltd, Cambridge.
4. T. P. Ghosh, Accounting Standards and Corporate Accounting Practices, Taxman Publications.

DSC F 5.5 ACCOUNTING FOR GOVERNMENT ENTITIES

Unit-I: General Principles - Government Accounting System - Consolidated Fund of India - Comparison with Commercial Accounting system.

Unit-II: Role of Comptroller and Auditor General of India - Role of Public Accounts Committee, Review of Accounts - Civil and Commercial Entities.

Unit-III: Government Accounting Standards issued by Government Accounting Standards Advisory Board (GASAB) - Adoption and Review.

Unit-IV: Financial Reporting in Public Sector Undertakings and Government Companies.

Unit-V: Case Studies: Railway Accounts - Defense Accounts - CPWD Accounts, etc.

REFERENCES:

1. Jain, S.P., Narang, K.L., Advanced Accountancy (Vol-1), Kalyani Publishers, Ludhiana.

2. Paul Marcus Fischer, William James Taylor & Rita Hartung Cheng, Advanced Accounting, Cengage Learning, USA.

3. K.K. Bhardwaj, Public Accounting and Auditing (office of the Comptroller and Auditor General of India), Mittal Publications, New Delhi.

4. Mortimer A. Dittenhofer, Applying Government Accounting Principles, LexisNexis.

5. Warren Ruppel, Governmental Accounting: Made Easy, John Wiley & Sons, INC., USA.

6. A Mukherjee & M. Hanif, Modern Accountancy, Tata McGraw Hill Publishing Company Limited, New Delhi.

7. K. B. Verma, Reading in Indian Railway Finance, Academic Foundation, Delhi.

DSC F 5.6 - PROJECT MANAGEMENT

Unit I : Basics of Project Management : Project Identification Process, Project Initiation – Phases of Project Management – Project Management Processes.

Unit II Project Planning and Control : Project Planning, Responsibility and Team Work – Project planning Process – CPM , PERT

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SRI VENKATESWARA UNIVERSITY :: TIRUPATI

MODEL QUESTION PAPER

III B.Com., SEMESTER – V

DSC F 5.6 PROJECT MANAGEMENT

Time : 3 Hours **Max. Marks :75**

Section – A

Answer any five of the following questions

(5x 3 = 15 Marks)

1.

a. Project initiation
b. Project
c. PERT
d. Team work
e. Performance measurement
f. Project cost estimation
g. Project follow-up
h. Project execution cycle
i. Traditional methods of evaluation
j. Project control

Section – B

Answer any One question from each unit

(5 x 12 = 60)

UNIT – I

2. Describe the process of project identification.

OR

3. Explain the different phases of Project Management.

UNIT – II

4. Define project planning. Explain the steps involved in project planning.

OR

5. What is CPM? How is it useful in project control?

UNIT – III

6. Discuss the Project Termination. Explain the various reasons for the termination of a project.

OR

7. Define project execution. Explain the process of project execution.

UNIT – IV

8. What is project evaluation? Explain various types of project evaluation.

OR

9.What are the challenges or problems of Project evaluation?

UNIT - V

10.A car manufacturer has decided to make a significant investment into expanding its operation in South Africa by setting up a large assembly unit. The estimations are as follows

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(iv) Calculate the Net Present Value of the project using a discount factor of 5% and comment on the attractiveness of the project.

Discount factors at 10 % are;

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level of change risk is high and some form of standby provision is obviously necessary. All obvious precautions such as backing up all data, running duplicate systems, phased commissioning and so on should be put in place to reduce the impact and magnitude of change risk.

Questions:

1. Where might the installation of a new server not be regarded as a project? How could project objectives (installation of the new server) be accurately coordinated with organisational objectives (general software and hardware upgrade)?

ELECTIVE 3 - SECURITY MARKET OPERATIONS

DSC F 5.4. FINANCIAL MARKETS

Unit-I: **Financial Markets**: Financial Instruments - Intermediaries - Services - Structure of Financial Market in India.

Unit-II: **Capital Market**: Role, Evolution in India - Future Trends - Primary Market - Issue of Capital: Process, Pricing, Methods of Issue, Book-building - Managing Shareholders Relations.

Unit-III: Secondary Market: Growth, Development, Regulation - Stock Exchange Mechanism: Trading, Settlement - Carry Forward, Badla system - Insider Trading, Price Rigging.

Unit-IV: **Players on Stock Exchange**: Investors, Speculators, Market Makers, Bulls, Bears, Stags - Stock Exchange Regulations - Stock Indices - Regulations and Regulatory Agencies (SEBI).

Unit-V: **Bond Market in India:** Bond Market and its Interface with Equity Market and Debt Market - Mutual Funds.

REFERENCES:

1. Gupta, L.C: Stock Exchange Trading in India; Society for Capital Market Research and Development, Delhi.

2. Bhole, I.M., Financial Institutions and Market, Tata McGraw Hill.

3. Vasant Desai, Indian Financial System, Himalaya Publishing House.

4. Pathak, Bharati V., Indian Financial System: Markets, Institutions and Services, Pearson Education (Singapore), New Delhi.

5. Gordon E. & K. Natarajan, “Financial Markets and Services”, Himalaya Publishing House, New Delhi.

DSC F 5.5. STOCK MARKET OPERATIONS

Unit-I: **Listing of Securities:** Merits and demerits - Listing requirements, Procedure, Fee - Listing of rights issue, bonus issue, further issue - Listing conditions of BSE and NSE- Delisting.

Unit-II: Indian Stock Exchanges: BSE – NSE - BOLT System – Demat and Electronic transfer of Securities – Institutional segment – RETDEBT market (RDM).

Unit-III: Trading System: Different trading systems - NEAT system, Market types, Order Types - Order management, Trade Management, Auction Internet Broking.

Unit-IV: Clearing and Settlement: Transaction cycle - Settlement process and agencies - Risks in settlement – Securities and Funds settlement - De-mat settlement – Shortages handling - Identification Number.

Unit-V: Stock Market Indices: Purpose and Considerations in developing index - Stock market indices in India - BSE Sensex - Scrip selection criteria - Construction – NSE indices – S&P CNX Nifty – OTCEI.

References:

1. Punithavathy Pandian, Security Analysis and Portfolio Management, Vikas Publishing House, New Delhi.
2. V. A. Avadhani, Investment and Securities Market in India, Himalaya Publishing House.
3. Prasanna Chandra, Security Analysis and Portfolio Management, Tata McGraw-Hill.
4. Sanjeev Agarwal, A Guide to Indian Capital Market, Bharat Publishers
5. Ravi Puliani and Mahesh Puliani, Manual of SEBI, Bharat Publication

DSC F 5.6 - PROJECT MANAGEMENT

Unit I : Basics of Project Management : Project Identification Process, Project Initiation – Phases of Project Management – Project Management Processes.

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MODEL QUESTION PAPER

III B.Com., SEMESTER – V

DSC F 5.6 PROJECT MANAGEMENT

Time : 3 Hours **Max. Marks :75**

Section – A

Answer any five of the following questions

(5x 3 = 15 Marks)

1.

a. Project initiation
b. Project
c. PERT
d. Team work
e. Performance measurement
f. Project cost estimation
g. Project follow-up
h. Project execution cycle
i. Traditional methods of evaluation
j. Project control

Section – B

Answer any One question from each unit

(5 x 12 = 60)

UNIT – I

2. Describe the process of project identification.

OR

3. Explain the different phases of Project Management.

UNIT – II

4. Define project planning. Explain the steps involved in project planning.

OR

5. What is CPM? How is it useful in project control?

UNIT – III

6. Discuss the Project Termination. Explain the various reasons for the termination of a project.

OR

7. Define project execution. Explain the process of project execution.

UNIT – IV

8. What is project evaluation? Explain various types of project evaluation.

OR

9.What are the challenges or problems of Project evaluation?

UNIT - V

10.A car manufacturer has decided to make a significant investment into expanding its operation in South Africa by setting up a large assembly unit. The estimations are as follows

Initial investment is Rs.`6,00,000.

Forecast net income from the project is detailed below:

Year	Cash inflows (Rs`)
Year 1	1,40,000
Year 2	1,45,000
Year 3	1,55,000
Year 4	1,62,500
Year 5	1,48,000

(v) Calculate the projected payback time for the project to the nearest month.

(vi) Calculate the Net Present Value of the project using a discount factor of 5% and comment on the attractiveness of the project.

Discount factors at 10 % are;

Year 1 = 0.909, Year 2 = 0.826, Year 3 = 0.751, Year 4 = 0.683, Year 5 = 0.62.

11. Think about it: Characteristics of a project involving the installation of a new server. The installation of a new server in an office is one example of a project. It involves a single, definable purpose, which is to set up a new server-based network for the office. It uses the skills of a number of different people, from individual company users to external specialist IT consultants. Different people will write the software, configure the hardware, install the system and test and commission it. As with many projects, the team itself is multidisciplinary. Installing the server and commissioning it is a unique process for the IT consultants, in that every office is different and the demands of any particular client will be specific to that client. The project will always be somewhat unfamiliar, because new hardware and software are coming onto the market all the time, and hence the resulting system requirements will be constantly changing. The project is highly interdependent, in that the input of each person in the multidisciplinary team must work properly in order for the overall new system to work. The installation team is also temporary. It works together on the server installation. As soon as the installation is complete and the system is commissioned, the team ceases to exist and each individual either moves onto new installation projects or moves back into their standard or normal functional roles. The installation may be interlinked, in that it may take place in conjunction with hardware or software upgrades. Most IT managers would take advantage of a server upgrade to carry out other network improvement works such as replacing PCs or upgrading software. The project is designed to bring about change in the form of a new server that presumably will make the company more efficient. The overall

level of change risk is high and some form of standby provision is obviously necessary. All obvious precautions such as backing up all data, running duplicate systems, phased commissioning and so on should be put in place to reduce the impact and magnitude of change risk.

Questions:

1. Where might the installation of a new server not be regarded as a project? How could project objectives (installation of the new server) be accurately coordinated with organisational objectives (general software and hardware upgrade)?

ELECTIVE 4 – BANKING & FINANCIAL SERVICES

DSC F 5.4. CENTRAL BANKING

Unit-I: Introduction: Evolution and Functions of Central Bank - Development of Central Banks in India - Trends in Central Bank Functions.

Unit-II: Central banking in India: Reserve Bank of India - Constitution and Governance, Recent Developments, RBI Act.

Unit-III: Monetary and Credit Policies: Monetary policy statements of RBI - CRR - SLR - Repo Rates - Reverse Repo Rates - Currency in circulation - Credit control measures.

Unit-IV: Inflation and price control by BRI: Intervention mechanisms - Exchange rate stability - Rupee value - Controlling measures.

Unit-V: **Supervision and Regulation**: Supervision of Banks - Basle Norms, Prudential Norms,

REFERENCES:

1. Reserve Bank of India Publication, Functions and Working of the RBI.
2. Vasant Desai, Central Banking and Economic Development, Himalaya Publishing.
3. S. Panandikar, Banking in India, Orient Longman.
4. Reserve Bank of India Publication, Report on Trends and Progress of Banking in India.
5. Annual Reports of Reserve Bank of India.
6. Rita Swami, Indian Banking System, International Publishing House Pt. Ltd..
7. S.V. Joshi, C.P. Rodrigues and Azhar Khan, Indian Banking System, MacMillan Publishing.

DSC F 5.5. RURAL AND FARM CREDIT

Unit-I: Rural Credit: Objectives and Significance of Rural credit - Classification of rural credit - General Credit Card (GCC) – Financial Inclusion - Rupay Card.

Unit-II: Rural Credit Agencies: Institutional and Non-institutional Agencies for financing agriculture and Rural development - Self-Help Groups (SHG) - Financing for Rural Industries.

Unit-III: Farm Credit: Scope - Importance of farm credit - Principles of Farm Credit - Cost of Credit - Types - problems and remedial measures - Kisan Credit Card (KCC) Scheme.

Unit-IV: Sources of Farm Credit: Cooperative Credit: PACS - APCOB - NABARD - Lead Bank Scheme - Role of Commercial and Regional Rural Banks - Problems of recovery and over dues.

Unit-V: Farm Credit Analysis: Eligibility Conditions - Analysis of 3 R's (Return, Repayment Capacity and Risk-bearing Capacity) - Analysis of 3 C's of Credit (Character, Capacity and Capital) - Crop index reflecting use and farm credit - Rural Credit Survey Reports..

References:

1. National Bank of Agricultural and Rural Development (NABARD) Annual report.

2. Economic Survey, Government of India.

3. Rural Development, Sundaram I.S., Himalaya Publishing House, Mumbai.

4. Rural Credit in India, C.S.Rayudu, Mittal Publications.

5. Farm Credit and Co-operatives in India, Tiruloati V., Naidu. V T Naidu, Vora & Co. Pub. Ltd.

DSC F 5.6 - PROJECT MANAGEMENT

Unit I : Basics of Project Management : Project Identification Process, Project Initiation – Phases of Project Management – Project Management Processes.

Unit II Project Planning and Control : Project Planning, Responsibility and Team Work – Project planning Process – CPM , PERT

Unit III : Project Execution control and Close out : Project Control, Purpose of Execution and control – Project Close – out Project Termination, Project Follow-up

Unit IV : Project Performance Measurement and Evaluation : Performance Measurement – Performance Evaluation, Challenges of Performance Measurement and Evaluation (Theory).

Unit V : Project Cost estimation and Budget; project evaluation ; Case Studies

REFERENCES:

1. Horald Kerzner, Project Management: A Systemic Approach to Planning, Scheduling and Controlling, CBS Publishers.

2. S. Choudhury, Project Scheduling and Monitoring in Practice, South Asian Publishers Pvt. Ltd.
3. P. K. Joy, Total Project Management: The Indian Context, Macmillan India Ltd.
4. John M Nicholas, Project Management for Business and Technology: Principles and Practice, Prentice Hall of India.

5. N. J. Smith (Ed), Project Management, Blackwell Publishing.

6. Jack R Meredith and Samuel J Mantel, Project Management: A Managerial Approach, John Wiley.

7. Vasanth Desai – Dynamics of Entrepreneurial Development.

SRI VENKATESWARA UNIVERSITY :: TIRUPATI

MODEL QUESTION PAPER

III B.Com., SEMESTER – V

DSC F 5.6 PROJECT MANAGEMENT

Time : 3 Hours **Max. Marks :75**

Section – A

Answer any five of the following questions

(5x 3 = 15 Marks)

1.

a. Project initiation
b. Project
c. PERT
d. Team work
e. Performance measurement
f. Project cost estimation
g. Project follow-up
h. Project execution cycle
i. Traditional methods of evaluation
j. Project control

Section – B

Answer any One question from each unit

(5 x 12 = 60)

UNIT – I

2. Describe the process of project identification.

OR

3. Explain the different phases of Project Management.

UNIT – II

4. Define project planning. Explain the steps involved in project planning.

OR

5. What is CPM? How is it useful in project control?

UNIT – III

6. Discuss the Project Termination. Explain the various reasons for the termination of a project.

OR

7. Define project execution. Explain the process of project execution.

UNIT – IV

8. What is project evaluation? Explain various types of project evaluation.

OR

9. What are the challenges or problems of Project evaluation?

UNIT - V

10. A car manufacturer has decided to make a significant investment into expanding its operation in South Africa by setting up a large assembly unit. The estimations are as follows

Initial investment is Rs.`6,00,000.

Forecast net income from the project is detailed below:

Year	Cash inflows (Rs`)
Year 1	1,40,000
Year 2	1,45,000
Year 3	1,55,000
Year 4	1,62,500
Year 5	1,48,000

(vii) Calculate the projected payback time for the project to the nearest month.

(viii) Calculate the Net Present Value of the project using a discount factor of 5% and comment on the attractiveness of the project.

Discount factors at 10 % are;

Year 1 = 0.909, Year 2 = 0.826, Year 3 = 0.751, Year 4 = 0.683, Year 5 = 0.62.

11. Think about it: Characteristics of a project involving the installation of a new server. The installation of a new server in an office is one example of a project. It involves a single, definable purpose, which is to set up a new server-based network for the office. It uses the skills of a number of different people, from individual company users to external specialist IT consultants. Different people will write the software, configure the hardware, install the system and test and commission it. As with many projects, the team itself is multidisciplinary. Installing the server and commissioning it is a unique process for the IT consultants, in that every office is different and the demands of any particular client will be specific to that client. The project will always be somewhat unfamiliar, because new hardware and software are coming onto the market all the time, and hence the resulting system requirements will be constantly changing. The project is highly interdependent, in that the input of each person in the multidisciplinary team must work properly in order for the overall new system to work. The installation team is also temporary. It works together on the server installation. As soon as the installation is complete and the system is commissioned, the team ceases to exist and each individual either moves onto new installation projects or moves back into their standard or normal functional roles. The installation may be interlinked, in that it may take place in conjunction with hardware or software upgrades. Most IT managers would take advantage of a server upgrade to carry out other network improvement works such as replacing PCs or upgrading software. The project is designed to bring about change in the form of a new server that presumably will make the company more efficient. The overall

level of change risk is high and some form of standby provision is obviously necessary. All obvious precautions such as backing up all data, running duplicate systems, phased commissioning and so on should be put in place to reduce the impact and magnitude of change risk.

Questions:

1. Where might the installation of a new server not be regarded as a project? How could project objectives (installation of the new server) be accurately coordinated with organisational objectives (general software and hardware upgrade)?

ELECTIVE 5 – INSURANCE

DSC F 5.4 LIFE INSURANCE

Unit-I: Principles of Life Insurance: Life Insurance Products - Pensions and Annuities - Risk Assessment and Underwriting - Premium Setting- Product Development - Tax planning.

Unit-II: Principal of Utmost Good Faith: Insurable Interest, Medical Examination - Age proof, Special reports - Premium payment - Lapse and revival – Premium, Surrender Value, Non-Forfeiture Option - Assignment Nomination Loans – Surrenders - Foreclosure.

Unit-III: Features of Life insurance contract: Types of Policies – Investment of funds – Bonus option – Annuity Contracts - Group Insurance – Group Gratuity Schemes - Group Superannuation Schemes, Social Security Schemes, etc.

.

Unit-IV: Plans of Life Insurance: Types of Plans: Basic - Popular Plans - Convertible - Joint Life Policies - Children's Plans - Educational Annuity Plans - Variable Insurance Plans – Riders - For Handicapped, etc.

Unit-V: Policy Claims: Maturity claims, Survival Benefits, Death Claims, Claim concession - Procedures - Problems in claim settlement - Consumer Protection Act relating to life insurance and insurance claims.

References:

1. G. S. Pande, Insurance – Principles and Practices of Insurance, Himalaya Publishing.

2. C. Gopalkrishna, Insurance – Principles and Practices, Sterling Publishers Private Ltd.

3. G. R. Desai, Life Insurance in India, MacMillan India.

4. M. N. Mishra, Insurance Principles and Practices, Chand & Co, NewDelhi.

5. M.N.Mishra, Modern Concepts of Insurance, S.Chand & Co.

6. P.S. Palandi, Insurance in India, Response Books – Sagar Publications.

7. Taxman, Insurance Law Manual.

DSC F 5.5. NON-LIFE INSURANCE

Unit-I: Introduction: General Insurance Corporation Act - Areas of General Insurance - Structure - Classification - Salient features of Indian general insurance market.

Unit-II: **Motor Insurance**: Motor Vehicles Act 1988 - Requirements for compulsory third party insurance - Certificate of insurance – Liability without fault – Compensation on structure formula basis - Hit and Run Accidents.

Unit-III: **Fire Insurance**: Features – Kinds of policies – Policy conditions – Payment of claims – Standard Fire and Special peril Policy - Documentation - Cover Note - Calculation of premium.

Unit-IV: Marine Insurance: Contract of Marine Insurance – Classes of policies – Function of Marine insurance - Policy conditions – Marine Losses - Insurance intermediaries.

Unit-V: **Agriculture Insurance**: Types of agricultural insurances - Crop insurance - Problems of crop insurance - Crop Insurance vs Agricultural relief - Considerations in Crop insurance - Live Stock Insurance.

References:

1. M. N. Mishra, Insurance Principles and Practices, Chand & Co, NewDelhi.

2. M.N.Mishra, Modern Concepts of Insurance, S.Chand & Co.

3. P.S. Palandi, Insurance in India, Response Books – Sagar Publications.

4. C. Gopalkrishna, Insurance – Principles and Practices, Sterling Publishers Private Ltd.

5. G. R. Desai, Life Insurance in India, MacMillan India.

DSC F 5.6 - PROJECT MANAGEMENT

Unit I : Basics of Project Management : Project Identification Process, Project Initiation – Phases of Project Management – Project Management Processes.

Unit II Project Planning and Control : Project Planning, Responsibility and Team Work – Project planning Process – CPM , PERT

Unit III : Project Execution control and Close out : Project Control, Purpose of Execution and control – Project Close – out Project Termination, Project Follow-up

Unit IV : Project Performance Measurement and Evaluation : Performance Measurement – Performance Evaluation, Challenges of Performance Measurement and Evaluation (Theory).

Unit V : Project Cost estimation and Budget; project evaluation ; Case Studies

REFERENCES:

1. Horald Kerzner, Project Management: A Systemic Approach to Planning, Scheduling and Controlling, CBS Publishers.

2. S. Choudhury, Project Scheduling and Monitoring in Practice, South Asian Publishers Pvt. Ltd.
3. P. K. Joy, Total Project Management: The Indian Context, Macmillan India Ltd.
4. John M Nicholas, Project Management for Business and Technology: Principles and Practice, Prentice Hall of India.

5. N. J. Smith (Ed), Project Management, Blackwell Publishing.

6. Jack R Meredith and Samuel J Mantel, Project Management: A Managerial Approach, John Wiley.

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SRI VENKATESWARA UNIVERSITY :: TIRUPATI

MODEL QUESTION PAPER

III B.Com., SEMESTER – V

DSC F 5.6 PROJECT MANAGEMENT

Time : 3 Hours **Max. Marks :75**

Section – A

Answer any five of the following questions

(5x 3 = 15 Marks)

1.

a. Project initiation
b. Project
c. PERT
d. Team work
e. Performance measurement
f. Project cost estimation
g. Project follow-up
h. Project execution cycle
i. Traditional methods of evaluation
j. Project control

Section – B

Answer any One question from each unit

(5 x 12 = 60)

UNIT – I

2. Describe the process of project identification.

OR

3. Explain the different phases of Project Management.

UNIT – II

4. Define project planning. Explain the steps involved in project planning.

OR

5. What is CPM? How is it useful in project control?

UNIT – III

6. Discuss the Project Termination. Explain the various reasons for the termination of a project.

OR

7. Define project execution. Explain the process of project execution.

UNIT – IV

8. What is project evaluation? Explain various types of project evaluation.

OR

9.What are the challenges or problems of Project evaluation?

UNIT - V

10.A car manufacturer has decided to make a significant investment into expanding its operation in South Africa by setting up a large assembly unit. The estimations are as follows

Initial investment is Rs.`6,00,000.

Forecast net income from the project is detailed below:

Year	Cash inflows (Rs`)
Year 1	1,40,000
Year 2	1,45,000
Year 3	1,55,000
Year 4	1,62,500
Year 5	1,48,000

(ix) Calculate the projected payback time for the project to the nearest month.

(x) Calculate the Net Present Value of the project using a discount factor of 5% and comment on the attractiveness of the project.

Discount factors at 10 % are;

Year 1 = 0.909, Year 2 = 0.826, Year 3 = 0.751, Year 4 = 0.683, Year 5 = 0.62.

11.Think about it: Characteristics of a project involving the installation of a new server. The installation of a new server in an office is one example of a project. It involves a single, definable purpose, which is to set up a new server-based network for the office. It uses the skills of a number of different people, from individual company users to external specialist IT consultants. Different people will write the software, configure the hardware, install the system and test and commission it. As with many projects, the team itself is multidisciplinary. Installing the server and commissioning it is a unique process for the IT consultants, in that every office is different and the demands of any particular client will be specific to that client. The project will always be somewhat unfamiliar, because new hardware and software are coming onto the market all the time, and hence the resulting system requirements will be constantly changing. The project is highly interdependent, in that the input of each person in the multidisciplinary team must work properly in order for the overall new system to work. The installation team is also temporary. It works together on the server installation. As soon as the installation is complete and the system is commissioned, the team ceases to exist and each individual either moves onto new installation projects or moves back into their standard or normal functional roles. The installation may be interlinked, in that it may take place in conjunction with hardware or software upgrades. Most IT managers would take advantage of a server upgrade to carry out other network improvement works such as replacing PCs or upgrading software. The project is designed to bring about change in the form of a new server that presumably will make the company more efficient. The overall

level of change risk is high and some form of standby provision is obviously necessary. All obvious precautions such as backing up all data, running duplicate systems, phased commissioning and so on should be put in place to reduce the impact and magnitude of change risk.

Questions:

1. Where might the installation of a new server not be regarded as a project? How could project objectives (installation of the new server) be accurately coordinated with organisational objectives (general software and hardware upgrade)?

ELECTIVE 6 – LOGISTICS & SUPPLY CHAIN MANAGEMENT

DSC F 5.4. LOGISTICS MANAGEMENT - SURFACE

Unit-1: Logistics: Logistics and Physical Distribution - Functions of Logistics Management - Structure of logistics - Logistics Costs - Customer Service –Logistics in 21st Century.

Unit-II: Logistics and Customer Relationship Management: Customer Service as a Link between Logistics and Marketing - Customer Service and Customer Retention – Integrating Logistics and Customer Relationship Management.

Unit-Ill: Managing the Lead Time: Role of Time in Competitive Advantage - P:D Ratios and Lead Time Gap - Time-based Mapping - Managing Timeliness in the Logistics Pipeline -Methods for implementing Time based practices.

Unit-IV: Transport Operations: Means of Surface Transport: Rail – Road – Network connections – Problems of Surface transport.

Unit-V: Logistics International Scenario: Drivers and Logistics implications of Internationalization - Trend towards Internationalization - Organizing for International Logistics - Challenges of International Logistics - General Tendencies.

References:

1. Shailesh Kasande, Materials and logistics Management, Nirali Prakashan
2. L. C. Jhamb, Materials and logistics Management, Everest Publishing House.
3. Purchasing and Supply Management - Dobler and Burt, McGraw Hill Company
4. Purchasing and Inventory Management - K S Menon, Shroff Publishers.
4. Introduction to Materials Management – J R Tony Arnold, Prentice Hall
7. Logistics & Supply Chain Management – Martin Christopher, Prentice Hall.

DSC F 5.5 LOGISTICS MANAGEMENT - AIR AND SEA

Unit 1: Airline Logistics: History - Regulatory Bodies - Navigation systems - Air Transport System - Operations - Civil Aviation - Safety and Security - Industry regulations.

Unit II: Air Cargo: Air freight - Exports and Imports - Documentation - Cargo Operations Process - Air-way bill - Consignee controlled cargo - Customs clearance - Routing Instructions - Future trends.

Unit -III: Sea Cargo: Shipping Liners - Advices - Booking - Containerization -Container Numbering - Process flow - Shipping Sales - Leads - Quotations - Customer Service.

Unit IV: Shipping Operations: Volume/Weight calculations - Shipment Planning - Preparing and loading containers- Types of Container services - FCL - LCL - Container de-stuffing.

Unit V: Documentation: Bill of Lading - MBL - HBL - CY - CFS - Sea Way bill - Multimodel Transport Document (MTD) - Invoicing - Release of cargo - Consortium.

References:

1. Peter S. Smith (Faber), Air freight: Operations, Marketing and Economics, Research and Development Bureau, Illinois Central System.

2. P.S.Senguttavan, Fundamental of Air Transport Management, Excel Books.

3. John F. Wilson (Harlow: Longman), Carriage of goods by Sea, Longman

4. Yuen Ha Lun, Kee Hung Lai, Tai Chiu Edwin Cheng (Springer), Shipping and Logistics Management, Springer

5. Alan Rushton, Phil Croucher & Peter Baker (CILT), Logistics and Distribution Management, Kogan Page Ltd.

DSC F 5.6 - PROJECT MANAGEMENT

Unit I : Basics of Project Management : Project Identification Process, Project Initiation – Phases of Project Management – Project Management Processes.

Unit II Project Planning and Control : Project Planning, Responsibility and Team Work – Project planning Process – CPM , PERT

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SRI VENKATESWARA UNIVERSITY :: TIRUPATI

MODEL QUESTION PAPER

III B.Com., SEMESTER – V

DSC F 5.6 PROJECT MANAGEMENT

Time : 3 Hours **Max. Marks :75**

Section – A

Answer any five of the following questions

(5x 3 = 15 Marks)

1.

a. Project initiation
b. Project
c. PERT
d. Team work
e. Performance measurement
f. Project cost estimation
g. Project follow-up
h. Project execution cycle
i. Traditional methods of evaluation
j. Project control

Section – B

Answer any One question from each unit

(5 x 12 = 60)

UNIT – I

2. Describe the process of project identification.

OR

3. Explain the different phases of Project Management.

UNIT – II

4. Define project planning. Explain the steps involved in project planning.

OR

5. What is CPM? How is it useful in project control?

UNIT – III

6. Discuss the Project Termination. Explain the various reasons for the termination of a project.

OR

7. Define project execution. Explain the process of project execution.

UNIT – IV

8. What is project evaluation? Explain various types of project evaluation.

OR

9.What are the challenges or problems of Project evaluation?

UNIT - V

10.A car manufacturer has decided to make a significant investment into expanding its operation in South Africa by setting up a large assembly unit. The estimations are as follows

Initial investment is Rs.`6,00,000.

Forecast net income from the project is detailed below:

Year	Cash inflows (Rs`)
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Year 4	1,62,500
Year 5	1,48,000

(xi) Calculate the projected payback time for the project to the nearest month.

(xii) Calculate the Net Present Value of the project using a discount factor of 5% and comment on the attractiveness of the project.

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change in the form of a new server that presumably will make the company more efficient. The overall level of change risk is high and some form of standby provision is obviously necessary. All obvious precautions such as backing up all data, running duplicate systems, phased commissioning and so on should be put in place to reduce the impact and magnitude of change risk.

Questions:

1. Where might the installation of a new server not be regarded as a project? How could project objectives (installation of the new server) be accurately coordinated with organisational objectives (general software and hardware upgrade)?

ELECTIVE 7 - ADVERTISING AND SALES PROMOTION

DSC F 5.4. ADVERTISING AND MEDIA PLANNING

Unit-I: **Advertising Functions:** Types of Advertising - Economic and Social aspects of advertising - Advertising process - Advertising objectives and Budget.

Unit- II: **Consumer Behaviour:** Consumer decision making process – Consumer perception process - Consumer Choices - Consumer surplus.

Unit- III: **Creativity Advertising:** Creative thinking – Process – Appeals – Copy Writing – Print Copy elements, Headlines – body Copy – Slogan elements of design and principles of design.

Unit- IV: **Media Planning and Strategy**: Market Analysis - Development of Media Plan - Implementing Media Strategies, Media Mix and Target Market Coverage - Media Reach and Frequency - Scheduling.

Unit-V: Designing Print Advertisement: Print Format Lay-out – Designing page – Working with visuals – Print and Electronic Media - Present trends - Class Vs. Mass media.

References:

1. Chunawalla & K.C.Sethia, Foundation of Advertising Theory & Practice, Himalaya Publishing House, New Delhi.
2. William H. Bolew, Advertising, John Wiley & Sons, New York.
3. Asker, David and Myers John G., Advertising Management, Prentice Hall of India, New Delhi.
4. Aaker David A, Batra Rajeev, Myers G., Advertising Management, PHI, New Delhi.
5. Sundage, Fryburger, Rotzoll, Advertising Theory and Practice, AITBS, New Delhi.

DSC F 5.5. BRAND MANAGEMENT

Unit-I:Brand Concept: Brands vs. Products, Benefits of branding; Brand attributes, Significance of branding to consumers and Firms, selecting brand names - Brand life cycle - Brand loyalty.

Unit-II: Brand Equity: Cost, Price and Consumer Based methods - Sustaining Brand Equity - Brand Personality - Formulation - Brand Image vs. Brand Personality - Brand Reinforcement, Brand Revitalization.

Unit-III: **Brand Building and Positioning**: Brand Positioning vs. Brand Building - Brand knowledge, Brand hierarchy, Strategy, Extension and Transfer, Managing brand over time.

Unit-IV: Brand Portfolios and Segmentation: Identifying and establishing brand portfolio - Brand Segmentation - Portfolio and Brand values - Evaluation and Revision.

Unit-V: Branding in Different Sectors: Agriculture - Education - Health - Tourism - Hospitality and other services - Role of e-Communities in Brand Management.

References:

1. Aaker, David, Managing Brand Equity, Prentice Hall of India.

2. Brand Positioning Strategies for Competitive Advantage -Subrato Sen Gupta

3. Kumar, Ramesh, Managing Indian Brands, Vikas Publishing House, Delhi.

4. Keller K. L., Strategic Brand Management, 2nd Edition, Pearson Education.

5. Strategic Brand Management - Kevin Lane Keller, Prentice Hall.

6. Branding Concepts and Process - Debashish Pati, McMillan Publishers.

7. Successful Branding - Pran K Choudhary, University Press, New Delhi.

DSC F 5.6 - PROJECT MANAGEMENT

Unit I : Basics of Project Management : Project Identification Process, Project Initiation – Phases of Project Management – Project Management Processes.

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SRI VENKATESWARA UNIVERSITY :: TIRUPATI

MODEL QUESTION PAPER

III B.Com., SEMESTER – V

DSC F 5.6 PROJECT MANAGEMENT

Time : 3 Hours **Max. Marks :75**

Section – A

Answer any five of the following questions

(5X 3 = 15 Marks)

1. P
   a. Project initiation
   b. Project
   c. PERT
   d. Team work
   e. Performance measurement
   f. Project cost estimation
   g. Project follow-up
   h. Project execution cycle
   i. Traditional methods of evaluation
   j. Project control

Section – B

Answer any One question from each unit

(5 x 12 = 60)

UNIT – I

2. Describe the process of project identification.

OR

3. Explain the different phases of Project Management.

UNIT – II

4. Define project planning. Explain the steps involved in project planning.

OR

5. What is CPM? How is it useful in project control?

UNIT – III

6. Discuss the Project Termination. Explain the various reasons for the termination of a project.

OR

7. Define project execution. Explain the process of project execution.

UNIT – IV

8. What is project evaluation? Explain various types of project evaluation.

OR

9.What are the challenges or problems of Project evaluation?

UNIT - V

10.A car manufacturer has decided to make a significant investment into expanding its operation in South Africa by setting up a large assembly unit. The estimations are as follows

Initial investment is Rs.`6,00,000.

Forecast net income from the project is detailed below:

Year	Cash inflows (Rs`)
Year 1	1,40,000
Year 2	1,45,000
Year 3	1,55,000
Year 4	1,62,500
Year 5	1,48,000

(xiii) Calculate the projected payback time for the project to the nearest month.

(xiv) Calculate the Net Present Value of the project using a discount factor of 5% and comment on the attractiveness of the project.

Discount factors at 10 % are;

Year 1 = 0.909, Year 2 = 0.826, Year 3 = 0.751, Year 4 = 0.683, Year 5 = 0.62.

11. **Think about it**: Characteristics of a project involving the installation of a new server. The installation of a new server in an office is one example of a project. It involves a single, definable purpose, which is to set up a new server-based network for the office. It uses the skills of a number of different people, from individual company users to external specialist IT consultants. Different people will write the software, configure the hardware, install the system and test and commission it. As with many projects, the team itself is multidisciplinary. Installing the server and commissioning it is a unique process for the IT consultants, in that every office is different and the demands of any particular client will be specific to that client. The project will always be somewhat unfamiliar, because new hardware and software are coming onto the market all the time, and hence the resulting system requirements will be constantly changing. The project is highly interdependent, in that the input of each person in the multidisciplinary team must work properly in order for the overall new system to work. The installation team is also temporary. It works together on the server installation. As soon as the installation is complete and the system is commissioned, the team ceases to exist and each individual either moves onto new installation projects or moves back into their standard or normal functional roles. The installation may be interlinked, in that it may take place in conjunction with hardware or software upgrades. Most IT managers would take advantage of a server upgrade to carry out other network improvement works such as replacing PCs or upgrading software. The project is designed to bring about

change in the form of a new server that presumably will make the company more efficient. The overall level of change risk is high and some form of standby provision is obviously necessary. All obvious precautions such as backing up all data, running duplicate systems, phased commissioning and so on should be put in place to reduce the impact and magnitude of change risk.

Questions:

1. Where might the installation of a new server not be regarded as a project? How could project objectives (installation of the new server) be accurately coordinated with organisational objectives (general software and hardware upgrade)?

SRI VENKATESWARA UNIVERSITY : TIRUPATI

B.Com (COMPUTER APPLICATIONS)

W.E.F. 2017-18

SEMESTER V

Sl. No.	Course	Name of the Subject	Total Marks	Mid. Sem. Exam.	Sem. End Exam	Teaching Hours	Credits
1.	DSC 1 E	5.1 Cost Accounting	100	25	75	5	4
2.	DSC 2 E	5.2 Goods and Services Tax – Fundamentals	100	25	75	5	4
3.	DSC 3 E	5.3 Advanced Corporate Accounting	100	25	75	5	4
4.	Elective – DSC 1F/Inter-disp.	**1. E-Commerce** 5.4. e-Commerce Practical (5.4 =50marks)	 100 50	 25	 75 50	 4 2	 4 2
5.	Elective – DSC 2F/Inter-disp.	5.5. Business Networks Practical (5.5 =50marks)	100 50	25 -	75 50	4 2	4 2
		5.6. Project Management	100	25	75	5	4
		2. Computer Applications 5.4. Data Base Management System Practical (5.4 =50marks) 5.5 Web Technology Practical (5.5 =50marks) 5.6. Project Management					
TOTAL			**700**	**150**	**550**	**32**	**28**

Note 1 : Practical Examination in each Paper of Elective 1 and 2 for 50 marks.

2. A candidate has to select **One Stream of Elective only.**

DSC - 1E 5.1 - COST ACCOUNTING

Unit-I: Introduction: Classification of Cost – Meaning of Cost, Costing, Cost Accounting and Cost Accountancy - Distinguish between Financial Accounting and Cost Accounting – Cost centre and cost unit - Preparation of Cost Sheet (including problems).

Unit-II: Elements of Cost: Materials: Material control - Methods of pricing issues – FIFO, LIFO, Weighted average, Simple average only (including problems)

Unit-III: Labour Cost : Labour: Control of labor costs - Methods of remuneration – labour incentives schemes – Time Rate Method, Piece Rate Method, Halsey Method, Rowan Method only (including problems).

Unit-IV: Contract Costing : Characteristic features of Contract costing – Preparation of Contract Accounts on incomplete contracts – Preparation of Contract account and Contractee Account (including problems)

Unit V : Costing Techniques – Marginal Costing)– BEP, P/V Ratio, Margin of Safety (including problems)

References:

1. T.S. Reddy and Y. Hariprasad Reddy- Cost Accounting, Margham Publications, Chennai
2. S.P. Jain and K.L. Narang – Advanced Cost Accounting, Kalyani Publishers, Ludhiana.
3. M.N. Aurora – A test book of Cost Accounting, Vikas Publishing House Pvt. Ltd.
4. S.P. Iyengar – Cost Accounting, Sultan Chand & Sons.
5. Nigam & Sharma – Cost Accounting Principles and Applications, S.Chand & Sons.
6. S.N .Maheswari – Principles of Management Accounting.
7. I.M .Pandey – Management Accounting, Vikas Publishing House Pvt. Ltd.
8. Sharma & Shashi Gupta – Management Accounting, Kalyani Publishers. Ludhiana.

Sri Venkateswara University
Model Question Paper
III B.Com
Semester – V, November, 2017
DSC 1E 5.1 – Cost Accounting

Time: 3 Hours Max. Marks: 75

Section A

Answer any **Five** of the following Questions

(5 x 3= 15 Marks)

1. (a) Classification of Cost
   (b) Cost Centre
   (c) Material Control
   (d) LIFO
   (e) Idle Time
   (f) Labour Turnover
   (g) Profit on incomplete contracts
   (h) Work in Progress in contract accounts
   (i) Marginal Cost
   (j) Margin of Safety

Section - B

Answer any ONE Question from each unit.

(5 ×12 =60 Marks)

UNIT – I

2. During the year 2014, Raghava producers produced 50,000 units of a product. The following are the expenses:

	Rs.
Stock of raw materials on 1.1.2014	10,000
Stock of raw materials on 31.12.2014	20,000
Purchases	1,60,000
Direct wages	75,000
Factory expenses	25,000
Office expenses	37,500
Selling expenses	25,000
Selling Price for the sold 44,000 units	Rs.10

You are required to prepare a Cost sheet showing cost and profit per unit with total cost at each stage.

3. Anjaneya manufacturers furnishes the following data relating to the manufacture of itsproduct

During the month of April 2015:

Raw materials consumed	-	Rs. 55,000
Direct labour charges	-	Rs. 90,000
Machine hours worked	-	900
Machine hour rate	-	Rs. 25
Administrative overheads	-	20% on works cost
Selling overheads	-	Re. 12. per unit
Units produced	-	4260
Units sold	-	4,000 at Rs. 62 per unit

Find a) The cost per unit b) Profit for the period.

UNIT – II

4. From the following details prepare stores ledger using LIFO & Simple Average Method

Purchases : April 2015	**Issued for Production** : April 2015
2nd 5000 units at Rs. 120	6th 4000 units
4th 2500 units at Rs. 130	10th 1200 units
9th 4000 units at Rs. 136	11th 600 units
13th 3600 units at Rs. 132	15th 1000 units
	18th 2400 units & there is a shortage of 10 units Identified.

5. The Sri Rama Oil Company, a well known distributor of fuel oil closes its accounts at the end of each month.

The following information is available for the month of June, 2014:

	Rs.
Sales	4,00,000
Factory overheads	32,000
Administrative Expenses	35,000
Direct Labour	44,000
Inventory, June 1	
50 tons @ Rs.500 per ton	25,000
Purchases (including carriage inward):	
June, 10, 150 tons @ Rs.800 per ton	1,20,000
June, 20, 150 tons @ Rs.900 per ton	1,35,000
Inventory, June 30, 100 tons.	
Selling expenses (per ton of sold)	100

i) Inventory valuation on June 30. ii) Amount of cost of goods sold for June.
iii) Compute Profit or loss for June.2014 following the issue of materials on LIFO Method.

UNIT – III

6. During first week of April 2016 the workman Mr. Kalyanaram manufactured 300 articles. He receives wages for a guaranteed 48 hours week at the rate of Rs. 60 per hour. The estimated time to produce one article is 10 minutes and under incentive scheme the time allowed is increased by 40%. Calculate his gross wages according to:

a) Piece work with a guaranteed weekly wage.
b) Rowan premium bonus c) Halsey premium bonus 50% to workman.

7. Calculate the earnings of workers A and B under Straight Piece-rate system and time rate from
the following particulars:-

Normal rate per hour = Rs. 58
Standard time per unit = 20 seconds
Worker A produces 1,300 units per day and worker B produces 1,500 units per day (8 hours per day)

UNIT – IV

8. Sriramachandra contractors, having undertaken a building construction work at a contract price Rs. 12,00,000 and started the execution of work on 1st April, 2012. The following details are given below.

	Rs.
Materials issued	24,000
Materials purchased	2,42,000
Wages at the site	1,54,000
Plant	2,20,000
Indirect Expenses	56,000
Material returned to store	12,000
Material lost by fire	4,400
Material at the site on 31st March 2013	42,000
Plant at site on 31st March 2013	1,98,000

Cash received for Rs.3,60,000 against the 80% work certified. The work certified but not certified amounted to Rs. 22,000. Prepare Contract Account and calculate the profit to be transferred to Profit and loss account.

9. The following is Trial Balance of Seetharam contractors engaged a contract No. 62 for the year ended with 31st March 2014

Particulars	Debit (Rs.)	Credit (Rs.)
Contractee Account (Cash Received)		4,00,000
Land & Buildings	1,60,000	
Creditors		92,000
Bank Balance	1,35,000	
Capital Account		5,00,000
Expenses to contract Work		
Materials	2,50,000	
Wages	1,40,000	
Expenses	57,000	
Plant	2,50,000	
Total	9,92,000	9,92,000

The work of No.62 was commenced on 1st April 2013. Material issued to the work during the year is for Rs. 2,22,000. Out of this cost of material Rs.6,000 was destroyed by fire. Cash received is 80% of the work certified. Uncertified work is worth Rs.16,000. Material at site on 31st March 2014 is Rs. 12,000. Plant is used for this work only. It is to be depreciated at 10%. Prepare Contract No.62 account and the Balance Sheet as on 31.03.2014.

UNIT – V

10. Given:

Sales 10,000 units
Variable Cost Rs.1,00,000
Sales value Rs. 2,00,000
Fixed cost Rs.40,000

You are required to find out (a) Break even volume (b) Break even sales units (c) P/V Ratio and (d) Margin of Safety

11. From the following calculate (a) P/V Ration (b) BEP (c) Margin of Safety (d) Variable Cost in both years.

Year	Sales (Rs.)	Profit (Rs.)
2016	1,50,000	20,000
2017	1,70,000	25,000

DSC: 2E: 5.2 - GOODS & SERVICE TAX FUNDAMENTALS

Unit I: Introduction: Overview of GST - Concepts – Limitations of VAT – Justification of GST Need for Tax Reforms - Advantages at the Central Level and State Level on introduction of GST

Unit II: GST:Principles – Models of GST: Austrlian, Candian, Kelkar-Shah – BagchiPoddar – Comprehensive structure of GST model in India: Single, Dual GST– Transactions covered under GST.

Unit-III:Taxes and Duties: Subsumed under GST - Taxes and Duties outside the purview of GST: Tax on items containing Alcohol – Tax on Petroleum products - Tax on Tobacco products - Taxation of Services

Unit-IV: Inter-State Goods and Services Tax: Major advantages of IGST Model – Interstate Goods and Service Tax: Transactions within a State under GST – Interstate Transactions under GST - Illustrations.

Unit-V: Time of Supply of Goods & Services: Value of Supply - Input Tax Credit – Distribution of Credit -Matching of Input Tax Credit - Availability of credit in special circumstances- Cross utilization of ITC between the Central GST and the State GST.

References:

1. Goods and Services Tax in India – Notifications on different dates.
2. GST Bill 2012.
3. Background Material on Model GST Law, Sahitya Bhawan Publications, Hospital Road, Agra - 282 003.
4. The Central Goods and Services Tax Act, 2017, NO. 12 OF 2017 Published by Authority, Ministry of Law and Justice, New Delhi, the 12thApril, 2017.

Sri Venkateswara University
Model Question Paper
III B.Com
Semester – V, November, 2017
DSC 2E 5.2 – Goods & Services Tax – Fundamentals.

Time: 3 Hours Max. Marks: 75

Section A

Answer any **Five** of the following Questions

(5 x 3= 15 Marks)

Q 1.a) What is GST b) write any 3 limitations of VAT c) Dual GST
d) Subsumed under GST e) Interstate Transaction f) Input ta Credit
g) State GST h) Service tax

Section - B

Answer any ONE Question from each unit.

(5 ×12 =60 Marks)

UNIT I

Q.2. Write advantages of Goods and Services Tax

OR

Q.3. What are the concepts of GST ? Give justification on imposing GST in India ?

UNIT II

Q.4. What is the comprehensive structure of GST in India ?

OR

Q.5. Give the brief note on Principles of GST.

UNIT III

Q.6 How do the levy of GST procedure on petroleum products and tobacco ?

OR

Q.7 Explain the taxes and duties outside the purview of GST

UNIT IV

Q.8. What are the advantages of IGST ?

OR

Q.9. Illustrate the Inter State transactions under GST

UNIT V

Q.10. What is Time supply of goods and services

OR

Q.11. What is input tax credit and explain it with suitable examples

1-5-102

DSC: 3E: 5.3 - ADVANCED CORPORATE ACCOUNTING

Unit I : Accounting standards – Importance of accounting standards in the procedure of accounting – List of Indian accounting standards – objectives of accounting standards Board and scope of accounting standards. – Accounting Standard 1:Disclosure of Accounting policies Accounting Standard 9: Revenue Recognition – Accounting standard 10 : Fixed assets (Theory only)

Unit II – Amalgamation : meaning – calculation of purchase consideration – Methods – Accounting procedure in preparation of journal entries and Balance sheet (simple problems only)

Unit III – Internal Reconstruction - Necessity of internal Reconstruction – Importance – Procedure for reducing share capital – Journal entries and preparation of Revised Balance sheet.

Unit IV : Liquidation : Meaning and modes of Liquidation in corporate accounts – Voluntary Liquidation – Procedure for preparation of Liquidator's statement of account – calculation of liquidator's remuneration (Simple problems)

Unit V : Holding companies : Definition of Holding Company and subsidiary company – Preparation of consolidated Balance Sheet of Holding company having ONE subsidiary company only - with common transactions, Minorities Interest, Capital Reserve, Revenue Profits Prior and post acquisition of shares by holding companies (Simple Problems)

REFERENCES:

1. Advanced accounting – SP Jaian & K.L. Narang
2. Corporate accountancy – S.N. Maheshwari
3. Advanced accounting Vol.1 hanif & mukherjee – MC Grawhill
4. Advanced accounting Vol.2 hanif & mukherjee – MC Grawhill
5. Advanced accounting - T.S.Reddy & A. Murthy – Margam publications Chennai.

Sri Venkateswara University
Model Question Paper
III B.Com
Semester – V, November, 2017
DSC 3E 5.3 – Advanced Corporate Accounting.

Time: 3 Hours Max. Marks: 75

Section A

Answer any **Five** of the following Questions

(5 x 3= 15 Marks)

Section-A

1 Answer any five of the following questions.

a) Define Accounting standards
b) Going concern concept
c) What do you mean by Amalgamation
d) Purchase consideration
e)Internal Reconstruction
f)Liquidators Remuneration
g)Subsidiary company
h) Minority share holders Interest

Section-B

2 Answer one questions from each unit.

Unit-1

2) Explain the importance / Objective of accounting standards? Name any 5 Accounting

Standards?

(Or)

3) What is meant by Accounting concepts and conventions ? Explain any 5 concepts.

Unit-II

4) Godavari Ltd.. and Krishna Ltd. decided to Amalgamate and A new company is formed in the name of Go-Krishna Ltd. The new company is to take over both companies on 31-3-2017.

The balance sheet of both companies as follows.

Liability	Godavari Ltd. Rs.	Krishna Ltd. Rs.	Assets	Godavari Ltd. Rs.	Krishna Ltd. Rs
Share capital Rs.10 fully paid	5,00,000	3,00,000	Goodwill	1,00,000	80,000
Reserve funds	2,00,000	1,50,000	Land & Buildng	2,50,000	1,90,000
Profit & Loss a/c	30,000	50,000	Plant & Machinery	2,00,000	2,55,000
div. Equalisation funds	-	1,00,000	Patents &Trade Marks	- 2,00,000	52,500 1,50,000
Workman's compensation fund	20,000 -	- 50,000	Stock Sundry Debtors	1,00,000 -	50,000 20,000
Bank overdraft	1,00,000	1,20,000	Bills Receivable	50,000	2,500
Sundry Creditors	50,000	30,000	Cash at bank		
Bills Payable					
	9,00,000	8,00,000		9,00,000	8,00,000

Show how the amount payable to each company is arrived at and prepare the amalgamated Balance sheet of Godavari, Krishna Ltd.. Assuming amalgamation is done in the nature of purchase.

(Or)

5) Following is the Balance sheet of Mr. Venkatesh Ltd. as on 31 March 2017

Liabilities	Rs	Assets	Rs
Capital	42,500	Freehold Premises	25,000
Bank Loan	20,000	Furniture	3,500
Bills Payable	6,700	Motor van	12,800
Creditors	10,800	Stock	13,200
		Bills receivable	5,400
		Debtors	18,700

		cash	1,400
	80,000		80,000

On the above date the entire business was taken over by Deva Dhana Ltd.. The purchase consideration was paid as under.

1) 3,000 fully paid Rs.10 shares
2) The balance in cash

While recording the assets, the company valued the premises and stock at 10% and 20% above their book value respectively. Find out purchase consideration and pass necessary entries in the books of the Ding Dong Bell Ltd.. And show its Balance sheet after takeover of the business.

Unit-III

6) The following is the Balance sheet of Vikaash Ltd.. as at 31st March 2014.

Liabilities	Rs	Assets	Rs
Share Capital		Buildings	2,00,000
20,000 Equity shares of		Machinery	1,30,000
rs.10 each, fully paid up		Patents	40,000
10% Non-cumulative	2,00,000	Inventories	80,000
preference shares of		Debtors	55,000
Rs.100 each fully paid up		Preliminary expenses	10,000
8% Debentures		Profit and loss account	
trade creditors	50,000		1,85,000
Creditors for Expenses	1,00,000		
	3,30,000		
	20,000		
	7,00,000		7,00,000

With a view to reconstruct the company, it is proposed.

a) To reduce (i) Equity shares by Rs.9 each.(ii) 10% Preference shares by Rs.40 each.(iii) 8% Debentures by 10%,(iv) Trade Creditor's claims by one- third ,(v) Machinery to Rs.70,000 and (vi) Inventories by Rs. 10,000,
b) To provide Rs. 15,000 for bad debts
c) To write off all the intangible assets; and
d) To raise the rate of preference dividend to 13 % and the rate of debenture interest to 13.5%.

Assuming that the aforesaid proposals are duly approved and sanctioned, pass the journal entries to give effect to the above, and show the company's post reconstruction Balance sheet.

(Or)

7) The summarized Balance sheet of Anjana Company as at 31-3-2017 was as follows:

Liabilities	Rs	Assets	Rs
Authorized and issued capital:		Goodwill	2,00,000
20000 Equity shares of Rs. 10		Patents and Trade marks	1,00,000
each fully paid	20,00,000	Land and Buildings	15,00,000
10,000 6% cumulative		Plant and Machinery	10,00,000
Pref.shares of Rs. 100 each fully		Stocks (Investment)	4,00,000
paid	10,00,000	Sundry debtors	3,00,000
Bank overdraft	7,00,000	Issue and Preliminary	
Sundry creditors	5,00,000	expenses	1,00,000
(note : The cumulative		Profit and Loss a/c	6,00,000
Preference Dividend is three			
years in arrear)			
	42,00,000		42,00,000

A scheme for the reduction of capital was approved on the following terms:

(i) The preference shareholders agree that their shares be reduced to a fully paid value of Rs. 50 each and to accept equity shares of Rs.5 each fully paid in lieu of the dividends arrears.

(ii) The Equity shareholders agree that their shares be reduced to a fully paid value of Rs.5 each.

(iii) The authorized capital of the company is to remain at 30,00,000 divided into 4,00,000 Equity shares of Rs.5 each and 20,000.6% Cumulative preference shares of Rs.50 each.

(iv) All the intangible assets are to be eliminated and bad debts of Rs..50,000 and obsolete shares of Rs.80,000 are to be written off.

Give journal entries necessary to record the reduction of capital and draw up a new Balance sheet after the scheme has been carried through.

UNIT-IV

8) Trimoorthy Co. Ltd. was placed in voluntary liquidation on 31st December 2016. When its balance sheet was as follows.

Liabilities	Rs	Assets	Rs.
Issued share Capital:		Freehold factory	5,80,000
50.000 Equity shares of Rs.10		Plant and Machinery	2,89,000
each fully Paid less calls in	4,75,000	Motor Vehicles	57,500
arrear amounting to Rs.		Stock	1,86,000
25,000		Debtors	74,000
		Profit & Loss Account	2,14,000
6,000 5% cumulative			
preference shares ofRs.100			
each fully paid	6,00,000		
Share premium account			
5% Debenture account	50,000		
Interest on Debentures	1,00,000		
Bank Overdraft	2,500		
Creditors	58,000		
	1,15,000		
	14,00,500		14,00,500

The Preference dividends are in arrears from 2013 onwards.

The company's articles provide that on liquidation, out of the surplus assets remaining after payment of liquidation cost and outside liabilities, there shall be paid firstly all arrears of preference dividend, secondly the amount paid up on the Preference shares together with a premium thereon of Rs.10 per share, and thirdly any balance then remaining shall be paid to the equity share holders.

The Bank overdraft was guaranteed by the directors who were called upon by the Bank to discharge their liability under the guarantee. The directors paid the amount to the Bank

The liquidator realized the assets as follows

	Rs.
Freehold Factory	7,00,000
Plant and Machinery	2,40,000
Motor Vehicles	59,000
Stock	1,50,000
Debtors	60,000
Calls in Arrears	25,000

Creditors were paid less discount of 5 per cent. The debenture and accured interest were repaid on 31st march 2003.

Liquidation costs were Rs 3,820 and the Liquidator's remuneration was 2 per cent on the amounts realized.

Prepare the liquidator's statement of account

(Or)

9) Nagarjuna do.Ltd.. Went into liquidation with the following liabilities.

Secured creditors	Rs.40,000 (securities realized Rs.50,000)
Preferential creditors	Rs.1,200
Unsecured creditors	Rs.61,000
Liquidation expenses	Rs.500

The liquidator is entitled to a remuneration of 3% on the amount realilsed (including securities in the hands of secured creditors) and 1 ½% on the amount distributed to unsecured creditors. The various assets (excluding the securities in hand of the secured creditors) realized are Rs.52, 000.

Prepare the liquidator's statement of account showing the payment made to the unsecured creditors.

UNIT V

10) The following are the Balance sheet of Hemanth Ltd.. and its subsidiary Sabari Ltd.. as at 31st March 2017.

Liabilities	H Ltd. Rs.	S Ltd. Rs.	Assets	H Ltd.	S Ltd. Rs.
Fully paid equity shares of Rs.10 each	6,00,000	2,00,000	Machinery	3,90,000	1,35,000
			Furniture	80,000	40,000
			80% shares in S Ltd., at cost	3,40,000	-
General reserve	3,40,000	80,000	Stock	1,80,000	1,20,000
Profit & Loss a/c	1,00,000	60,000	Debtors	50,000	30,000
Creditors	70,000	35,000	Cash in Bank	70,000	50,000
	11,10,000	3,75,000		11,10,000	3,75,000

The following additional information is provided to you:

(i) Profit & Loss account of Sabari Ltd. stood at Rs.30,000 on 1 st April 2016 whereas general reserve has remained unchanged since that date.

(ii) Hemanth Ltd.. acquired 80% shares in Sabari Ltd. on 1st October,2016 for Rs. 3,40,000 s mentioned above.

You are required to prepare consolidated balance sheet as at 31st march, 2017. Show all calculations clearly.

(Or)

11) From the Balance sheet given below prepare a consolidated balance sheet of Maruthi Ltd. and its subsidiary, Garuda Ltd.. as on 31-3-2017.

Liabilities	Maruthi Ltd.. Rs.	Garuda Ltd.. Rs	Assets	Maruthi Ltd.. Rs.	Garuda Ltd.. Rs
Share Capital of Rs. 10 each	1,20,000	30,000	Free hold Building at cost	72,000	25,000
Trade Creditors	15,000	5,000	Plant & Mach.	30,000	10,000
General Reserve	25,000	6,000	Stock at cost	18,000	3,000
Profit & Loss A/c	12,000	9,000	Trade Debtors	22,000	7,000
			Bank Balance	5,000	5,000
			Share in Garuda Ltd.. 2000 shares of Rs.10 each	25,000	-
	1,72,000	50,000		1,72,000	50,000

At the date of acquisition by Maruthi Ltd.. of its holding of 2000 shares in Garuda Ltd.. the latter company had undistributed profits and reserve amounting to Rs.5000, none of which has been distributed since the date of acquisition.

ELECTIVE I : E-COMMERCE

DSC F 5.4 E-COMMERCE

Unit-I: e-Commerce: Features of Electronic Commerce - Distinction between e-Commerce and e-Business - Types of Business Models: B2B, B2C, C2C - Benefits and Limitations of e-Commerce - Apps.

Unit-II: **e-Business Applications:** Integration and e-Business suits - ERP, e-SCM, e-CRM - Methods and benefits of e-Payment Systems –e-Marketing – Applications and issues

Unit-III: **e-Business on different Fields**: e-Tourism – e-Recruitment – e-Real Estate – e-Stock Market – e-Music/Movies - e-Publishing and e-Books.

Unit-IV: **Concept of Online Education:** Process - Methods - e-Content development and Deliveries - Major technologies used in e-Education - Online Testing - Methods - Future Trends.

Unit-V: Mobile Commerce: Ticketing - Me-Seva; Government and Consumer Services – e-Retailing - e-Groceries – Security challenges - Case Studies.

References:

1. Turban E. Lee J., King D. and Chung H.M: Electronic commerce-a Managerial Perspective, Prentice-Hall International, Inc.
2. Bhatia V., E-commerce, Khanna Book Pub. Co. (P) Ltd., Delhi.
3. Daniel Amor, E Business R (Evolution), Pearson Education.
4. Krishnamurthy, E-Commerce Management, Vikas Publishing House.
5. David Whiteley, E-Commerce: Strategy, Technologies and Applications, Tata McGraw Hill.
6. P. T. Joseph, E-Commerce: A Managerial Perspectives, Tata McGraw Hill.

DSC F 5.5 BUSINESS NETWORKS

Unit-I: Business Forms: Interrelation among Stakeholders – Business and Government – Business and Society: Social Network and Facebook.

Unit-II: Business Networking through ICT: Basic concepts – Uses and Application of Business Networks – Different Layers of Business Networks – Internet and Business Networks – Network Security.

Unit-III: Business Networking Systems and Devices: Communication Satellites – Servers – Cloud Computing – Sharing – Spectrum – Commercial issues.

Unit-IV: Customer Relationship Management: Establishing Network connection with customers – Forward and Backward Integration – Customer Data Base – Creation and Maintenance – Legal and Ethical Issues.

Unit-V: Business Analytics: Master Data Management – Data Warehousing and Mining – Data Integration – OLTP and OLAP.

References:

1. Jerry, FitzGerald and Alan Dennis, Business Data Communications and Networking, John Wiley & Sons.
2. Tanenbaum, A. S., Computer Networks, Pearson Education.
3. David A Stamper, Business Data Communications. Addison Wesley.
4. Business Analytics – Methods, Models and Decisions, James R. Evans, Prentice Hall.
5. Business Analytics - An Application Focus, Purba Halady Rao, PHI learning
6. R.N Prasad and Seema Acharya, Fundaments of Business Analytics, Wiley India.

DSC F 5.6 - PROJECT MANAGEMENT

Unit I : Basics of Project Management : Project Identification Process, Project Initiation – Phases of Project Management – Project Management Processes.

Unit II Project Planning and Control : Project Planning, Responsibility and Team Work – Project planning Process – CPM , PERT

Unit III : Project Execution control and Close out : Project Control, Purpose of Execution and control – Project Close – out Project Termination, Project Follow-up

Unit IV : Project Performance Measurement and Evaluation : Performance Measurement – Performance Evaluation, Challenges of Performance Measurement and Evaluation (Theory).

Unit V : Project Cost estimation and Budget; project evaluation ; Case Studies

REFERENCES:

1. Horald Kerzner, Project Management: A Systemic Approach to Planning, Scheduling and Controlling, CBS Publishers.

2. S. Choudhury, Project Scheduling and Monitoring in Practice, South Asian Publishers Pvt. Ltd.
3. P. K. Joy, Total Project Management: The Indian Context, Macmillan India Ltd.
4. John M Nicholas, Project Management for Business and Technology: Principles and Practice, Prentice Hall of India.

5. N. J. Smith (Ed), Project Management, Blackwell Publishing.

6. Jack R Meredith and Samuel J Mantel, Project Management: A Managerial Approach, John Wiley.

7. Vasanth Desai – Dynamics of Entrepreneurial Development.

SRI VENKATESWARA UNIVERSITY :: TIRUPATI

MODEL QUESTION PAPER

III B.Com., SEMESTER – V

DSC F 5.6 PROJECT MANAGEMENT

Time : 3 Hours **Max. Marks :75**

Section – A

Answer any five of the following questions

(5 x 3 = 15 Marks)

1.

a. Project initiation
b. Project
c. PERT
d. Team work
e. Performance measurement
f. Project cost estimation
g. Project follow-up
h. Project execution cycle
i. Traditional methods of evaluation
j. Project control

Section – B

Answer any One question from each unit

(5 x 12 = 60)

UNIT – I

2. Describe the process of project identification.

OR

3. Explain the different phases of Project Management.

UNIT – II

4. Define project planning. Explain the steps involved in project planning.

OR

5. What is CPM? How is it useful in project control?

UNIT – III

6. Discuss the Project Termination. Explain the various reasons for the termination of a project.

OR

7. Define project execution. Explain the process of project execution.

UNIT – IV

8. What is project evaluation? Explain various types of project evaluation.

OR

9.What are the challenges or problems of Project evaluation?

UNIT - V

10.A car manufacturer has decided to make a significant investment into expanding its operation in South Africa by setting up a large assembly unit. The estimations are as follows

Initial investment is Rs.`6,00,000.

Forecast net income from the project is detailed below:

Year	Cash inflows (Rs`)
Year 1	1,40,000
Year 2	1,45,000
Year 3	1,55,000
Year 4	1,62,500
Year 5	1,48,000

(i) Calculate the projected payback time for the project to the nearest month.

(ii) Calculate the Net Present Value of the project using a discount factor of 5% and comment on the attractiveness of the project.

Discount factors at 10 % are;

Year 1 = 0.909, Year 2 = 0.826, Year 3 = 0.751, Year 4 = 0.683, Year 5 = 0.62.

11.Think about it: Characteristics of a project involving the installation of a new server. The installation of a new server in an office is one example of a project. It involves a single, definable purpose, which is to set up a new server-based network for the office. It uses the skills of a number of different people, from individual company users to external specialist IT consultants. Different people will write the software, configure the hardware, install the system and test and commission it. As with many projects, the team itself is multidisciplinary. Installing the server and commissioning it is a unique process for the IT consultants, in that every office is different and the demands of any particular client will be specific to that client. The project will always be somewhat unfamiliar, because new hardware and software are coming onto the market all the time, and hence the resulting system requirements will be constantly changing. The project is highly interdependent, in that the input of each person in the multidisciplinary team must work properly in order for the overall new system to work. The installation team is also temporary. It works together on the server installation. As soon as the installation is complete and the system is commissioned, the team ceases to exist and each individual either moves onto new installation projects or moves back into their standard or normal functional roles. The installation may be interlinked, in that it may take place in conjunction with hardware or software upgrades. Most IT managers would take advantage of a server upgrade to carry out other network improvement works such as replacing PCs or upgrading software. The project is designed to bring about change in the form of a new server that presumably will make the company more efficient. The overall

level of change risk is high and some form of standby provision is obviously necessary. All obvious precautions such as backing up all data, running duplicate systems, phased commissioning and so on should be put in place to reduce the impact and magnitude of change risk.

Questions:

1. Where might the installation of a new server not be regarded as a project? How could project objectives (installation of the new server) be accurately coordinated with organisational objectives (general software and hardware upgrade)?

ELECTIVE 2 - COMPUTER APPLICATIONS

DSC F 5.4 - DATABASE MANAGEMENT SYSTEM

Unit-I: Overview of Database Management System: Introduction, Data and Information, Database, Database Management System, Objectives of DBMS, Evolution of Database Management Systems, Classification of Database Management System.

Unit-II: File-Based System, Drawbacks of File-Based System , DBMS Approach, Advantages of DBMS, Data Models , Components of Database System, Database Architecture, DBMS Vendors and their Products.

Unit-III: Entity–Relationship Model: Introduction, The Building Blocks of an Entity–Relationship, Classification of Entity Sets , Attribute Classification, Relationship Degree, Relationship Classification, Generalization and Specialization, aggregation and composition, CODD'S Rules, Relational Data Model , Concept of key, Relational Integrity. Normalization (1NF,2NF,3NF & BCNF).

Unit-IV: Structured Query Language: Introduction, History of SQL Standard, Commands in SQL, Data types in SQL, Data Definition Language (DDL), Selection Operation Projection Operation, Aggregate Functions, Data Manipulation Language, Table Modification, Table Truncation, Imposition of Constraints, Set Operations.

Unit -V: PL/SQL: Introduction, Structure of PL/SQL, PL/SQL Language Elements ,Data Types, Control Structure,, Steps to Create a PL/SQL Program, Iterative Control ,Cursors , Steps to Create a Cursor , Procedure, Function ,Packages ,Exceptions Handling, Database Triggers, Types of Triggers.

Text Books:

1. S. Sumathi, S. Esakkirajan, Fundamentals of Relational Database Management Systems.
2. Ivan Bayross, SQL, PL/SQL The Programming Language of Oracle, BPB Publications.

Reference Books:

1. Paneerselvam: Database Management Systems, PHI.
2. Bipin C. Desai, "An Introduction to Database Systems", Galgotia Publications.
3. Korth, Database Management systems.
4. Navathe, Database Management systems.

SRI VENKATESWARA UNIVERSITY :TIRUPATI

THIRD YEAR BA / B.Com (CA) / B.Sc- 5th SEMESTER EXAMINATIONS

DSC F 5.4 - DATABASE MANAGEMENT SYSTEM

Time: 3Hrs **Max. Marks:75**

Section - A

Answer any Five of the following. All Questions carry equal marks. 5x3=15 Marks

1.

a) What is DBMS? Objectives of DBMS.
b) Write about Data types in SQL.
c) Describe classification of entity sets.
d) What is a procedure? Explain the steps to create a procedure.
e) Write about primary key and foreign key constraints.
f) Briefly explain Embedded SQL.
g) Write about Data Models.
h) Write about Relationship Classification.
i) Write about exceptions in PL/SQL
j) What is view and how to create a view in SQL.

Section - B

Answer one question from each unit. All Questions carry equal marks. 5×12=60 Marks

UNIT-1

2. Explain about file system.

(OR)

3. Explain classification of DBMS**.**

UNIT-2

4. Explain the process of converting ER Diagram to Tables.

(OR)

5. Define Specialization and Generalization. Explain the constraints on Generalization and Specialization with examples.

UNIT-3

6. Explain 1NF, 2NF,3NF and BCNF.

(OR)

7. Explain CODD's rules.

UNIT-4

8. Explain DDL Commands with Syntax and examples.

(OR)

9. a) Explain join operations in SQL.
   b) Explain Aggregate functions in SQL.

UNIT-5

10. Explain PL/SQL Structure with suitable example

(OR)

11. What is a Trigger? Explain the creation of different types of triggers with syntax.

DSC F 5.5 - WEB TECHNOLOGY

Unit-I:

Introduction: HTML, XML, and WWW, Topologies, Bus, Star, Ring, Hybrid, Tree, Lan,Wan,Man.
HTML: Basic HTML, Document body, Text, Hyper links, Adding more formatting, Lists, Tables using colors and images.

Unit-II:

More HTML: Multimedia objects, Frames, Forms towards interactive, HTML document heading.

Cascading Style Sheets: Introduction, using Styles, simple examples, your own styles, properties and values in styles, style sheet, formatting blocks of information, layers.

Unit-III:

Introduction to JavaScript: What is DHTML, JavaScript, basics, variables, string manipulations, mathematical functions, statements, operators, arrays, functions.

Unit-IV:

Objects in JavaScript: Data and objects in JavaScript, regular expressions, exception handling, built-in objects, events.

Unit-V:

DHTML with JavaScript: Data validation, opening a new window, messages and confirmations, the status bar, different frames, rollover buttons, moving images, multiple pages in single download, text only menu system.

Text Books

1. Web Technology, Chris Bates, Wiley Publications.

Reference Books

1. Uttam Kumar Roy, Web Technologies, Oxford University Press.
2. Black Book HTML 5.0
3. Complete reference HTML 5.

SRI VENKATESWARA UNIVERSITY :TIRUPATI

THIRD YEAR BA / B.COM(CA) / B.Sc - 5TH SEMESTER EXAMINATIONS

DSC F 5.5 – WEB TECHNOLOGY

Time: 3Hrs **Max. Marks:75**

Section - A

Answer any Five of the following. All Questions carry equal marks. 5×3=15 Marks

1.

k) What is internet? And applications of Internet.
l) What is network topology and types of topologies?
m) Describe <HR> Tag.
n) What is a frame? Explain the steps to create a frame in HTML.
o) Write about box and color properties.
p) Briefly explain string manipulations.
q) Write about document object model.
r) How to create new window in DHTML.
s) How to create message and confirmation window in javascript.
t) Write about status bar.

Section - B

Answer one question from each unit. All Questions carry equal marks. 5×12=60 Marks

UNIT-1

2. What is HTML? Explain structure of HTML and give suitable example.

(OR)

3. Explain about hyperlinks in HTML.

UNIT-2

4. What is style sheet? How to create a table with style sheets.

(OR)

5. Define different styles is CSS with examples.

UNIT-3

6. Explain javascript functions with suitable example.

(OR)

7. A). Write a program to demonstrate the radio buttons in javascript.

   B). How to handle a list in javascript with proper example.

UNIT-4

8. A). Describe regular expressions in javascript.

   B). How to handle errors in javascript.

(OR)

9. a) Explain join operations in SQL.

   b) Explain Aggregate functions in SQL.

UNIT-5

10. Explain rollover buttons with suitable example.

(OR)

11. Explain about text only menu system with suitable example.

DSC F 5.6 - PROJECT MANAGEMENT

Unit I : Basics of Project Management : Project Identification Process, Project Initiation – Phases of Project Management – Project Management Processes.

Unit II Project Planning and Control : Project Planning, Responsibility and Team Work – Project planning Process – CPM , PERT

Unit III : Project Execution control and Close out : Project Control, Purpose of Execution and control – Project Close – out Project Termination, Project Follow-up

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7. Vasanth Desai – Dynamics of Entrepreneurial Development.

SRI VENKATESWARA UNIVERSITY :: TIRUPATI

MODEL QUESTION PAPER

III B.Com., SEMESTER – V

DSC F 5.6 PROJECT MANAGEMENT

Time : 3 Hours **Max. Marks :75**

Section – A

Answer any five of the following questions

(5x 3 = 15 Marks)

1.

a. Project initiation
b. Project
c. PERT
d. Team work
e. Performance measurement
f. Project cost estimation
g. Project follow-up
h. Project execution cycle
i. Traditional methods of evaluation
j. Project control

Section – B

Answer any One question from each unit

(5 x 12 = 60)

UNIT – I

2. Describe the process of project identification.

OR

3. Explain the different phases of Project Management.

UNIT – II

4. Define project planning. Explain the steps involved in project planning.

OR

5. What is CPM? How is it useful in project control?

UNIT – III

6. Discuss the Project Termination. Explain the various reasons for the termination of a project.

OR

7. Define project execution. Explain the process of project execution.

UNIT – IV

8. What is project evaluation? Explain various types of project evaluation.

OR

9.What are the challenges or problems of Project evaluation?

UNIT - V

10.A car manufacturer has decided to make a significant investment into expanding its operation in South Africa by setting up a large assembly unit. The estimations are as follows

Initial investment is Rs.`6,00,000.

Forecast net income from the project is detailed below:

Year	Cash inflows (Rs`)
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(iii) Calculate the projected payback time for the project to the nearest month.

(iv) Calculate the Net Present Value of the project using a discount factor of 5% and comment on the attractiveness of the project.

Discount factors at 10 % are;

Year 1 = 0.909, Year 2 = 0.826, Year 3 = 0.751, Year 4 = 0.683, Year 5 = 0.62.

12.Think about it: Characteristics of a project involving the installation of a new server. The installation of a new server in an office is one example of a project. It involves a single, definable purpose, which is to set up a new server-based network for the office. It uses the skills of a number of different people, from individual company users to external specialist IT consultants. Different people will write the software, configure the hardware, install the system and test and commission it. As with many projects, the team itself is multidisciplinary. Installing the server and commissioning it is a unique process for the IT consultants, in that every office is different and the demands of any particular client will be specific to that client. The project will always be somewhat unfamiliar, because new hardware and software are coming onto the market all the time, and hence the resulting system requirements will be constantly changing. The project is highly interdependent, in that the input of each person in the multidisciplinary team must work properly in order for the overall new system to work. The installation team is also temporary. It works together on the server installation. As soon as the installation is complete and the system is commissioned, the team ceases to exist and each individual either moves onto new installation projects or moves back into their standard or normal functional roles. The installation may be interlinked, in that it may take place in conjunction with hardware or software upgrades. Most IT managers would take advantage of a server upgrade to carry out other network improvement works such as replacing PCs or upgrading software. The project is designed to bring about change in the form of a new server that presumably will make the company more efficient. The overall

level of change risk is high and some form of standby provision is obviously necessary. All obvious precautions such as backing up all data, running duplicate systems, phased commissioning and so on should be put in place to reduce the impact and magnitude of change risk.

Questions:

2. Where might the installation of a new server not be regarded as a project? How could project objectives (installation of the new server) be accurately coordinated with organisational objectives (general software and hardware upgrade)?

B. Sc. III – SEMESTER V
BTT- 501: MOLECULAR BIOLOGY (CORE 1)

Unit I:

Genome Structure: Watson and Crick model of DNA; Genome organization with specific reference to prokaryotic and eukaryotic genomes; Genome size. Concepts of Genetic Material, Gene, Chromosome and Genome. Experiments to prove DNA as genetic material (Griffith experiment, Hershey- Chase experiment)

Unit II

DNA Replication:Enzymology of replication (DNA polymerase I, pol II and III, helicases, topoisomerases, single strand binding proteins, DNA melting proteins, primase. Proof of semiconservative replication, Replication origins, initiation, elongation, and termination. Rolling circle replication of DNA

Unit III

Transcription : Enzymatic synthesis of RNA: Basic features of transcription, structure of prokaryotic RNA polymerase (core enzyme and holo enzyme, sigma factor), concept of promoter (Pribnow box, -10 and -35 sequences), Four steps of transcription (promoter binding and activation, RNA chain initiation, chain elongation, termination and release). Reverse transcription.

Unit IV

Gene Expression and regulation

Regulation of gene expression; Clustered genes and the operon concepts - Negative and positive control of the Lac Operon, trp operon, Control of gene expression. Poly and Mono cistronic m-RNA,

Unit V:

Genetic Code and Protein Synthesis

Genetic code: Features of genetic code, Structure of m RNA, brief structure of tRNA, the adaptor hypothesis, attachment of amino acids to tRNA. Codon-anticodon interaction - the wobble hypothesis. Initiation, elongation, termination of protein.

PRACTICALS BTP: 502-MOLECULAR BIOLOGY

1. Effect of UV radiations on the growth of microorganisms.
2. Determination of absorption maxima of DNA and RNA and their quantification
3. Quantitative estimation of RNA
4. Quantitative estimation of DNA
5. Isolation of plasmid DNA from bacteria
6. Isolation of genomic DNA from *E.coli*
7. Isolation of DNA from sheep liver
8. Isolation of DNA from plant leaves (Rice or Tobacco or any other plant)
9. Separation of DNA by Agarose gel Electrophoresis
10. Purity analysis of the Nucleic acids

B. Sc. III – SEMESTER V
BTT- 503: rDNA TECHNOLOGY (Core - 2)

Unit I:
Restriction and Modification. Classification of restriction endonucleases. Enzymes used in molecular cloning; Polymerases, ligases, phosphatases, kinases and nucleases; Advanced Molecular biology techniques, Electrophoresis and Blotting techniques.

Unit II
Cutting and joining DNA (cohesive end ligation, methods of blunt end ligation). Transfection and transformation. Selection of transformed cells. Screening methods (Genetic marker and blue white screening)

Unit III:
Cloning vehicles - Plasmid, Bacteriophage, Construction of genomic and cDNA libraries. Advantages of cDNA libraries.

Unit IV.
Methods of gene sequencing – Maxam - Gilberts and Sanger's dideoxy chain termination methods; Polymerase chain reaction technique (Components in PCR and PCR conditions)
Methods of gene transfer in fungi, yeast and higher plants using microinjection, microprojectile bombardment (gene gun method, Electroporation and Agrobacterium mediated transformation

Unit V:
Applications of recombinant DNA technology in Agriculture (Transgenic Plants) Medicine (production of Insulin, Growth harmone, Tissue plasmogen activator and HBsAg vaccine)

PRACTICALS BTP 504: rDNA TECHNOLOGY

1. Problem in Genetic engineering.
2. Transformation in Bacteria using plasmid.
3. Restriction digestion of DNA and its electrophoretic separation.
4. Ligation of DNA molecules and their testing using electrophoresis.
5. Activity of DNAase and RNAse on DNA and RNA.
6. Isolation of Plasmid DNA.
7. Demonstration of PCR

Note: the candidate has to take 2 core papers compulsory.

S.V. University Degree examinations 2017

B.Sc (Biotechnology) ~~III year~~ V semester

BTT-501 : Molecular Biology

Time: 3h Marks: 75

SECTION-A

~~Any~~ Answer Any five of the following 5x3 = 15 marks

1). Concept of Gene
2) Giant chromosome
3) Origin of Replication
4) Promoter
5) Reverse transcription
6) cistronic mRNA
7) t-RNA
8) Wobble Hypothesis

SECTION-B

Answer all the Questions 5x12 = 60 Marks

9)a) Explain in detail about watson and crick model of DNA

(or)

b) List and discuss in brief about the experiments which proved DNA as the Genetic Material.

10) a) write in detail about the DNA replication process.

(or)

b) Explain in detail about the enzymes and proteins involved in DNA replication.

[P.T.O]

11) a) Define Transcription. Explain the process of transcription in detail.

(or)

b) write a short notes on RNA polymerases.

12) a) what is Gene Regulation; Explain Lac operon?

(or)

b) write an ~~short notes~~ essay on control of Gene expression.

13) a) Explain in detail about Genetic code and its importance.

(or)

b) write in detail about Protein synthesis.

S.V. University Degree Examinations

B.Sc Biotechnology V- Semester

BTT: 503 r DNA Technology [Elective]

Time: 3hrs

Marks : 75

SECTION-A

Answer any five of the following Questions 5×3 = 15 marks.

1) Norther blotting.
2) DNA Ligases
3) Cohesive end Ligation.
4) Bacteriophages
5) PCR
6) Transgenic plants
7) Gene Gun
8) Vaccines

SECTION-B

Answer all the Questions 5×12 = 60 Marks

9) a) Define Restriction endonucleases. Explain different types with suitable examples.

(or)

b) Explain the Separation of DNA using Agarose gel Electrophoresis.

10) a) Explain Transfection and Transformation.

(or)

b) write in detail about the Screening methods for transformed cells.

PTO

11) a) what are plasmids? Mention various types and explain their role in as cloning vehicle.

(or)

b) Construct the cDNA Library and explain the process of importance of cDNA Library.

12) a) Explain in detail about PCR.

(or)

b) Explain various Gene transfer techniques.

13) a) what are Transgenic plants? Explain the importance with a suitable example.

(or)

b) Explain the process of Insulin production with the help of rDNA technology.

III B. Sc - SEMESTER- V: BOTANY SYLLABUS
THEORY PAPER – V
Paper-V: Cell Biology, Genetics and Plant Breeding

Total hours of teaching 60 hrs @ 3 hrs per week

UNIT – I Cell Biology:

(12hrs)

1. Cell, the unit of life- Cell theory, Prokaryotic and eukaryotic cells; Eukaryotic cell components.
2. Ultra structure and functions of cell wall and cell membranes.
3. Chromosomes**:** morphology, organization of DNA in a chromosome (nucleosome model), Euchromatin and heterochromatin.

UNIT – II Genetic Material:

(12hrs)

1. DNA as the genetic material: Griffith's and Avery's transformation experiment, Hershey – Chase bacteriophage experiment.
2. DNA structure (Watson & Crick model) and replication of DNA (semi-conservative)
3. Types of RNA (mRNA, tRNA, rRNA), their structure and function.

UNIT – III Mendelian Inheritance: (12 hrs)

1. Mendel's laws of Inheritance (Mono- and Di- hybrid crosses); backcross and test cross.
2. Chromosome theory of Inheritance.
3. Linkage: concept, complete and incomplete linkage, coupling and repulsion; linkage maps based on two and three factor crosses.
4. Crossing Over: concept & significance.

UNIT – IV Plant Breeding: (12 hrs)

1. Introduction and Objectives of plant breeding.
2. Methods of crop improvement: Procedure, advantages and limitations of Introduction, Selection, and Hybridization (outlines only).

UNIT – V Breeding, Crop Improvement and Biotechnology: (12 hrs)

1. Role of mutations in crop improvement.
2. Role of somaclonal variations in crop improvement.
3. Molecular breeding – use of DNA markers in plant breeding and crop improvement (RAPD, RFLP).

Suggested activity: Seminar, Debate, Quiz, observation of live cells and nucleus in Onion peels, observation of Meiotic nuclei in Maize pollen. Solving Genetics problems.

Books for Reference:

1. Old, R.W. and Primrose S.B. 1994, Principles of Gene Manipulation Blackwell Science, London 2. Grierson, D. and Convey S.N. 1989, Plant Molecular Biology, Blackie Publishers, New York.
2. Lea, P.J. and Leegood R.C. 1999, Plant Biochemistry and Molecular Biology, John Wiley and Sons, London.
3. Power C.B., 1984, Cell Biology, Himalaya Publishing Co. Mumbai
4. De. Robertis and De Robertis, 1998, Cell and Moleceular Biology, K.M. Verghese and Company .
5. Sinnott, E.W., L.C. Dunn & J. Dobshansky (1958) : Principles of Genetics (5th Edition) McGraw Hill Publishing Co., N.Y. Toronto, London.
6. Winchester, A.M. (1958) : Genetics(3rd Edition) Oxford & IBH Publishing House, Calcutta, Bombay, New Delhi.
7. Singleton, R.(1963) : Elementary Genetics, D. Van Nostrand Co., Ltd., Inc., N.Y. & Affiliated East West Press (P) Ltd., New Delhi.
8. Strickberger, M.W. (1976): Genetics(2nd Edition) MacMillan Publishing Co., Inc., N.Y., London
9. Watson, J.D. (1977): Molecular Biology of the Gene, W.A. Benjamin, Inc., Menlo Park-California, Reading-Massachusetts, London, Amsterdam, Don Mills, Ontario, Sydney.
10. Gardner,E.J & Snusted, D.P.(1984): Principles of Genetics (7thedition) John Wiley & Sons, N.Y. Chichester, Brisbane, Toronto, Singapore.
11. Lewin, B. (1985) Genes VII Wiley Eastern Ltd., New Delhi, Bombay, Calcutta, Madras, Hydrabad.
12. Allard R.W(1999): The Principles of Plant Breeding, John & Wiley and Sons.
13. Poelman J.M: Breeding Field Crops, Springer.
14. George Acquaah(2012):Principles of Plant Genetics & Breeding: Wiley-Blackwell.

III B. Sc - BOTANY SYLLABUS SEMESTER- V

Practical Paper-V: CELL BIOLOGY, GENETICS AND PLANT BREEDING

Total hours of teaching 30hrs @ 2hrs per week

Suggested Laboratory Exercises:

1. Study of the structure of cell organelles through photomicrographs.
2. Study of structure of plant cell through temporary mounts.
3. Study of various stages of mitosis using cytological preparation of Onion root tips.
4. Study of DNA packing by micrographs.
5. Study of effect of temperature & organic solvent on permeability of cell membrane.
6. Numerical problems solving Mendel' Laws of inheritance
7. Chromosome mapping using 3 point test cross data.
8. Hybridization techniques – emasculation, bagging (for demonstration only).
9. Field visit to a plant breeding research station.
10. Calorimetric estimation of DNA by diphenylamine method.

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III B. Sc – SEMESTER- V, BOTANY PRACTICAL MODEL PAPER

PAPER-V: CELL BIOLOGY, GENETICS AND PLANT BREEDING

1. Perform the Experiment **A** .Perform squash on onion root tip, prepare the slide, identify at least one division stage. Write the procedure and draw the diagram of reported stage. 1 x 15 = 15marks

2. Give the experimental protocol of the experiments **B** 1 x 10 = 10 marks

3. Solving numerical problems on Mendelian in heritance **C,D** 2x7 1/2 =15 marks

4. Record & Viva = 10 marks

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50 marks

A-Onion root squash technique
B- Estimation of DNA by diphenylamine method
C&D Numerical problems on Mendelian Inheritance.

III B. Sc - SEMESTER- V: BOTANY THEORY SYLLABUS
PAPER-VI: PLANT ECOLOGY& PHYTOGEOGRAPHY

Total hours of teaching 60 hrs @ 3 hrs per week

UNIT – I. Elements of Ecology **(12 hrs)**

1. Ecology: definition, branches and significance of ecology.
2. Climatic Factors: Light, Temperature, precipitation.
3. Edaphic Factor: Origin, formation, composition and soil profile.
4. Biotic Factor: Interactions between plants and animals.

UNIT– II. Ecosystem Ecology **(12 hrs)**

1. Ecosystem: Concept and components, energy flow, Food chain, Food web, Ecological pyramids.
2. Productivity of ecosystem-Primary, Secondary and Net productivity.
3. Biogeochemical cycles- Carbon, Nitrogen and Phosphorous.

UNIT – II Population &Community Ecology **(12 hrs)**

1. Population -definition, characteristics and importance, outlines –ecotypes.
2. Plant communities- characters of a community, outlines – Frequency, density, cover,
   life forms, competition.
3. Interaction between plants growing in a community.

UNIT – IV Phytogeography **(12 hrs)**

1. Principles of Phytogeography, Distribution (wides, endemic, discontinuous species)
2. Phytogeographic regions of India.
3. Phytogeographic regions of World.
4. Endemism – types and causes

UNIT- V: Plant Biodiversity and its importance **(12 hrs)**

1. Definition, levels of biodiversity-genetic, species and ecosystem.
2. Biodiversity hotspots- Criteria, Biodiversity hotspots of India.
3. Loss of biodiversity – causes and conservation (*In-situ* and *ex-situ* methods).
4. Seed banks - conservation of genetic resources and their importance

Suggested activity :Collection of different soils, studying their texture, observing polluted water bodies, student study projects, debates on man's activity on ecosystem and biodiversity conservation methods, visiting a nearest natural vegetation area. Visit to NGO, working in the field of biodiversity and report writing; to study Honey Bees and plants yielding honey.

Books for Reference:

1. Daubenmire, R.F. ( ): Plants & Environment (2nd Edn.,) John Wiley & Sons., New York
2. Puri, .G.S. (1960): Indian Forest Ecology (Vol.I & II) Oxford Book Co., New Delhi & Calcutta.
3. Billings, W.B. (1965): Plants and the Ecosystem Wadsworth Publishing Co., Inc., Belmont.
4. Misra, R. (1968): The Ecology work Book Oxford & INH Publishing Co., Calcutta
5. Odum E.P. (1971): Fundamentals of Ecology (2nd Edn.,) Saunders & Co., Philadelphia & Natraj Publishers, Dehradun.
6. Odum E.P. (1975): Ecology By Holt, Rinert & Winston.
7. Oosting, H.G. (1978): Plants and Ecosystem Wadworth Belmont.
8. Kochhar, P.L. (1975): Plant Ecology. (9th Edn.,) New Delhi, Bombay, Calcutta-226pp.,
9. Kumar, H.D. (1992): Modern Concepts of Ecology (7th Edn.,) Vikas Publishing Co., New Delhi.
10. Kumar H.D. (2000): Biodiversity & Sustainable Conservation Oxford & IBH Publishing 10. Co Ltd. New Delhi.
11. Newman, E.I. (2000): Applied Ecology Blackwell Scientific Publisher, U.K.
12. Chapman, J.L&M.J. Reiss (1992): ecology (Principles & Applications). Cambridge University Press, U.K.
13. Cain, S.A . (1944): Foundations of Plant Geography Harper & Brothers, N.Y.
14. Mani, M.S (1974): Ecology & Biogeography of India Dr. W. Junk Publishers, The Haque
15. Good, R. (1997): The Geography of flowering Plants (2nd Edn.) Longmans, Green & Co., Inc., London & Allied Science Publishers, New Delhi

III B. Sc - SEMESTER- V: BOTANY PRACTICAL
PRACTICAL PAPER-VI: PLANT ECOLOGY& PHYTOGEOGRAPHY

Total hours of teaching 30 hrs @ 3 hrs per week

1. Study of instruments used to measure microclimatic variables; soil thermometer, maximum and minimum thermometer, anemometer, psychrometer, rain gauze, and lux meter.
2. Permeability (percolation; total capacity as well as rate of movement) of different soil samples.
3. Determination of soil pH
4. Study of morphological and anatomical adaptations of hydrophytes and xerophytes (4 each)
5. Determination of minimal quadrat size for the study of herbaceous vegetation in the college campus by species area curve method
6. Study of Phytoplankton and macrophytes from water bodies.
6. Study of species diversity index of vegetation.
7. Estimation of Primary Productivity of an ecosystem
8. To study field vegetation with respect to stratification, canopy cover and composition.
9. Study of plants included in agro forestry and social forestry.
10. To locate the hotspots, phyto geographical regions and distribution of endemic plants in the map of India.
11. The following practical should be conducted in the Field/lab with the help of photographs, herbarium, Floras, Red data book- Study of endangered plants species, critically endangered plants species, vulnerable plant species and monotypic endemic genera of India.

III B. Sc - SEMESTER- V: BOTANY PRACTICAL MODEL PAPER
PAPER–VI: PLANT ECOLOGY & PHYTOGEOGRAPHY

1. Study Project under supervision	=	15 Marks
2. Record & Viva-Voce	=	10 Marks
3. Experiment **A**	=	10 Marks
4. Anatomical adaptations of **B** (Section cutting)	=	10 Marks
5. Spotters **C&D** (2x2 1/2)	=	5 Marks
	Total =	50 Marks

1. Study Project of a surrounding Ecosystem (terrestrial or aquatic)(plant diversity, animal diversity, human activity, pollution levels, restoration efforts under supervision.
2. Presentation of the project work in Q & A session.
3. **A** -determination of soil porosity/PH/percolation/retaining capacity.
4. **B**- Xerophyte/Hydrophyte anatomical adaptations.
5. **C & D**-anemometer/rain gauze/lux meter.

BOTANY

Model Theory Question Paper

III B.Sc SEMESTER –V

Paper –V (Cell Biology, Genetics and Plant Breeding)

Time : 3 Hrs **Max.Marks : 75 Marks**

Section- A : సెక్షన్: ఏ **5x5=25 Marks**

Answer any five of the following:
Draw neat and labeled diagrams wherever necessary.
ఏవైనా ఐదు ప్రశ్నలకు జవాబులు వ్రాయండి.

1. Enumerate Eukaryotic cell Components.
నిజకేంద్రక కణము యొక్క కణాంగాలను గుర్తించండి.

2. Write Short notes on types of Chromosomes.
వివిధరకాల క్రోమోజోమ్ లను గుర్తించి లక్షణాలు రాయండి.

3. Write about the structure and function of m-R.N.A.
m-R.N.A. నిర్మాణము, విధులను గుర్తించి వ్రాయండి.

4. Discuss about the Griffith and Avery Experiment.
గ్రిఫిత్ మరియు ఎవేరి ప్రయోగమును గుర్తించి వ్రాయండి.

5. Test cross : పరీక్షా సంకరణము

6. Complete Linkage : సంపూర్ణ సహలగ్నత

7. Plant Hybridization : మొక్కల ప్రజననము

8. Molecular Plant Breeding : అణు ప్రజననము

K. Sujatha
Dr. K. Sujatha
BOS chairperson

1. (D. GOVINDARAJULU)
BOS Member

2. B. Lakshmi
Dr. B. LAKSHMI
B.O.S. Member

Section-B

5x10=50 Marks

Answer all Questions:
Draw neat and labeled diagrams wherever necessary.

అన్ని ప్రశ్నలకు సమాధానములు క్రమములో అవసరమైన చోట పటములు గీయుము.

9.(a) Write an essay on structure and function of Plasma membrane.

ప్లాస్మా పొరయొక్క నిర్మాణము, విధులను గూర్చి వ్రాయండి

(or)

(b) Describe the Ultra structure of Chromosomes.

క్రోమోజోమ్ల సూక్ష్మ నిర్మాణమును వర్ణించండి.

10.(a) Describe Hershey- Chase Bacteria Phage Experiment.

హెర్షే - చేజ్ బాక్టీరియా ఫేజ్ ప్రయోగమును వర్ణించండి

(or)

(b) Write an essay on DNA replication.

D. N. A- ప్రతికృతిని గూర్చి వ్యాసము వ్రాయండి.

11.(a) Discuss about Chromosomal theory of Inheritance .

క్రోమోజోమ్ల అనువంశిక సిద్ధాంతమును గూర్చి చర్చించండి.

(or)

(b) Write about Crossing over Concept and its Significance.

పారగతి సిద్ధాంత భావన మరియు ప్రాముఖ్యతను వివరించండి.

K. Sujatha
Dr. K. Sujatha
BOS Chairperson

1. (D. GOVINDARAJULU)
BOS Member

2. B. Lakshmi
Dr. B. LAKSHMI
B.O.S. Member

12.(a) Write an essay on objectives of Plant Breeding.
వృక్ష ప్రజనన ముఖ్య లక్ష్యాలను గూర్చిన వ్యాసము వ్రాయండి.

(or)

(b)Describe about advantages and limitations of Plant Selection.
మొక్కల ఎంపికలో కలిగే ప్రయోజనాలు మరియు పరిమితులను గూర్చి వర్ణించండి.

13.(a) Explain the role of Mutations in Crop-Improvement.
పండిల అభివృద్ధిలో ఉత్పరివర్తనాల యొక్క పాత్రను వివరించండి.

(or)

(b) Describe the uses of DNA markers in Plant Breeding.
వృక్ష ప్రజననములో DNA markers ల పాత్రను వివరించండి.

K. Sujatha
Dr. K. Sujatha
BOS chairperson.

1. [signature]
(D. GOVINDA RATULU)
BOS member

2. B. Lakshmi
Dr. B. LAKSHMI
B.O.S. Member

BOTANY

Model Theory Question Paper

III B.Sc SEMESTER –V

Paper –VI (Plant Ecology & Phyto Geography)

Time : 3 Hrs **Max.Marks : 75 Marks**

Section- A 5x5=25 Marks

Answer any five of the following: : ఏవేని ఐదుప్రశ్నలకు సమాధానములు వ్రాయుము.
Draw neat and labeled diagrams wherever necessary. అవసరమైనచోట పటములు గీయుము

1. Origin of soil : మృత్తికా ఆవిర్భావము.
2. Food Chain : ఆహార శృంఖలము
3. Significance of Ecology : ఆవరణశాస్త్ర ప్రాముఖ్యత
4. Ecotype : ఇకో టైప్
5. Energy Flow : శక్తి ప్రవాహము
6. Plant Distribution : మొక్కల వ్యాప్తి.
7. *In-Situ* Conservation : స్వస్థానీయ సంరక్షణ
8. Net Productivity : నికర ఉత్పత్తి.

K. Sujatha
Dr. K. Sujatha
BOS Chairperson

1.
(Dr. NOVINDARAJULU)
BOS Member

2. B. Laksh
Dr. B. LAKSHMI
B.O.S. Member

Section-B

5x10=50 Marks

Answer all Questions:
Draw neat and labeled diagrams wherever necessary.

అన్నిప్రశ్నలకు సమాధానములు వ్రాయుము
అవసరమైన చోట పటములు గీయుము

9. (a) Describe the role of Temperature and Light in Ecology.
ఆవరణ శాస్త్రములో ఉష్ణోగ్రత మరియు కాంతి పాత్రను వర్ణించండి.

(Or)

(b) Discuss about the interactions between Plants and Animals in Ecology.
ఆవరణశాస్త్రములో మొక్కలు మరియు మానవుల మధ్య సంబంధాలను వివరించుము.

10. (a) Explain the significance of Ecological Pyramids.
ఇకో గుణకవ పిరమిడ్ల ప్రాముఖ్యతను వివరించండి.

(Or)

(b) Write an essay on Nitrogen Cycle.
నత్రజని చక్రము మీద వ్యాసము వ్రాయండి

11. (a) Describe the role of Plant Communities in Ecology.
ఆవరణ శాస్త్రములో వృక్ష సంఘాల పాత్రను గుర్తించండి.

(Or)

(b) Write about the importance of Plant Population.
వృక్ష జనాభా యొక్క ప్రాముఖ్యతను వివరించండి

K. Sujatha
Dr. K. Sujatha
BOS Chairperson

(D. GOVINDARAJULU)
BOS member

Dr. B. LAKSHMI
B.O.S. member

12. (a) Write an essay on Phyto geographic regions of India .

భారత దేశములోని మూ మొక్కల ప్రాంతాలను గుర్తించి వ్రాయుము

(Or)

(b)What is Endemism? Describe types and causes of Endemism.

స్థానికత అనగానేమి? స్థానికత రకాలు మరియు కారణాలను వర్ణించండి.

13. (a) Describe the Bio- Diversity Hot-Spots of India.

భారత దేశములోని జీవ వైవిధ్య హాట్- స్పాట్ లను గుర్తించి వర్ణించండి

(Or)

(b) Write about the role of Seed Banks, Conservation of genetic resources and their importance.

విత్తన బ్యాంకుల పాత్ర మొక్కల, పరిరక్షణ మరియు జన్యు వనరులను గురించి వ్రాయండి.

K. Sujatha
Dr. K. Sujatha
BOS chairperson.

1. D. Govindalatulu
D. GOVINDALATULU
BOS member

2. B. Lakshmi
Dr. B. LAKSHMI
B.O.S. member

Academic Year 2017-2018

SEMESTER-V

Paper - V (INORGANIC, PHYSICAL & ORGANIC CHEMISTRY)
45 hrs (3 h / w)

INORGANIC CHEMISTRY

UNIT – I

Coordination Chemistry: **8h**

IUPAC nomenclature - bonding theories - Review of Werner's theory and Sidgwick's concept of coordination - Valence bond theory - geometries of coordination numbers 4-tetrahedral and square planar and 6-octahedral and its limitations, crystal filed theory - splitting of d-orbitals in octahedral, tetrahedral and square-planar complexes - low spin and high spin complexes - factors affecting crystal-field splitting energy, merits and demerits of crystal-field theory. Isomerism in coordination compounds - structural isomerism and stereo isomerism, stereochemistry of complexes with 4 and 6 coordination numbers.

UNIT-II

1. Spectral and magnetic properties of metal complexes: **4h**

Types of magnetic behavior, spin-only formula, calculation of magnetic moments, experimental determination of magnetic susceptibility-Gouymethod.

2. Stability of metal complexes: **3h**

Thermodynamic stability and kinetic stability, factors affecting the stability of metal complexes, chelate effect, determination of composition of complex by Job's method and mole ratio method.

ORGANIC CHEMISTRY

UNIT- III

Nitro hydrocarbons: **3h**

Nomenclature and classification-nitro hydrocarbons, structure -Tautomerism of nitroalkanes leading to aci and keto form, Preparation of Nitroalkanes, reactivity - halogenation, reaction with HONO (Nitrous acid),Nef reaction and Mannich reaction leading to Micheal addition and reduction.

UNIT – IV

Nitrogen compounds: **12h**

Amines (Aliphatic and Aromatic): Nomenclature, Classification into 1°, 2°, 3° Amines and Quarternary ammonium compounds. Preparative methods –

1. Ammonolysis of alkyl halides 2. Gabriel synthesis 3. Hoffman's bromamide reaction (mechanism).

Reduction of Amides and Schmidt reaction. Physical properties and basic character - Comparative basic strength of Ammonia, methyl amine, dimethyl amine, trimethyl amine and aniline - comparative basic strength of aniline, N-methylaniline and N,N-dimethyl aniline (in aqueous and non-aqueous medium), steric effects and substituent effects.

10/5/2017 10/5/2017

Chemical properties: a) Alkylation b) Acylation c) Carbylamine reaction d) Hinsberg separation e) Reaction with Nitrous acid of 1°, 2°, 3° (Aliphatic and aromatic amines). Electrophillic substitution of Aromatic amines – Bromination and Nitration. Oxidation of aryl and Tertiary amines, Diazotization.

PHYSICAL CHEMISTRY

UNIT- V

Thermodynamics **15h**

The first law of thermodynamics-statement, definition of internal energy and enthalpy. Heat capacities and their relationship. Joule-Thomson effect- coefficient. Calculation of w, for the expansion of perfect gas under isothermal and adiabatic conditions for reversible processes. State function. Temperature dependence of enthalpy of formation-Kirchoff s equation. Second law of thermodynamics. Different Statements of the law. Carnot cycle and its efficiency. Carnot theorem. Concept of entropy, entropy as a state function, entropy changes in reversible and irreversible processes. Entropy changes in spontaneous and equilibrium processes.

Students Reference Books

1. Concise coordination chemistry by Gopalan and Ramalingam
2. Advanced physical chemistry by puri and sharma
3. Advanced Inorganic chemistry Vol I by Satyaprakash, Tuli, Basu and madan
4. A Text book of Organic chemistry by Bahl and Arun Bahl.

10/5/2017

10/5/2017

SEMESTER-V

Paper - VI (INORGANIC, ORGANIC & PHYSICAL CHEMISTRY)

45 hrs (3 h / w)

INORGANIC CHEMISTRY

UNIT-I

1. Reactivity of metal complexes: **4h**

Labile and inert complexes, ligand substitution reactions - SN^1 and SN^2,substitution reactions of square planar complexes - Trans effect and applications of trans effect.

2.Bioinorganic chemistry: **4h**

Essential elements, biological significance of Na, K, Mg, Ca, Fe, Co, Ni, Cu, Zn and Cl^-. Metalloporphyrins – Structure and functions of hemoglobin, Myoglobin and Chlorophyll.

PHYSICAL CHEMISTRY

UNIT-II

1. Chemical kinetics **8h**

Rate of reaction - Definition of order and molecularity. Derivation of rate constants for first, second, third and zero order reactions and examples. Derivation for time half change. Methods to determine the order of reactions. Effect of temperature on rate of reaction, Arrhenius equation, concept of activation energy.

2. Photochemistry **5h**

Difference between thermal and photochemical processes. Laws of photochemistry-Grothus-Draper's law and Stark-Einstein's law of photochemical equivalence. Quantum yield-Photochemical reaction mechanism- hydrogen- chlorine, hydrogen- bromine reaction. Qualitative description of fluorescence, phosphorescence, Photosensitized reactions- energy transfer processes (simple example)

ORGANIC CHEMISTRY

UNIT- III

Heterocyclic Compounds **7h**

Introduction and definition: Simple five membered ring compounds with one hetero atom Ex. Furan. Thiophene and pyrrole - Aromatic character – Preparation from 1,4,-dicarbonyl compounds, Paul-Knorr synthesis.

Properties : Acidic character of pyrrole - electrophillic substitution at 2 or 5 position, Halogenation, Nitration and Sulphonation under mild conditions - Diels Alder reaction in furan.

Pyridine – Structure - Basicity - Aromaticity - Comparison with pyrrole - one method of preparation and properties - Reactivity towards Nucleophilic substitution reaction.

10/5/2017 10/5/2017 Page (2) of (3)

UNIT-IV

Carbohydrates **8h**

Monosaccharides: (+) Glucose (aldo hexose) - Evidence for cyclic structure of glucose (some negative aldehydes tests and mutarotation) - Proof for the ring size (methylation, hydrolysis and oxidation reactions) - Pyranose structure (Haworth formula and chair conformational formula).

(-) Fructose (ketohexose) - Evidence of 2 - ketohexose structure (formation of pentaacetate, formation of cyanohydrin its hydrolysis and reduction by HI). Cyclic structure for fructose (Furanose structure and Haworth formula) - osazone formation from glucose and fructose – Definition of anomers with examples.

Interconversion of Monosaccharides: Aldopentose to Aldohexose (Arabinose to D- Glucose, D-Mannose) (Kiliani - Fischer method). Epimers, Epimerisation - Lobry de bruyn van Ekenstein rearrangement. Aldohexose to Aldopentose (D-Glucose to D- Arabinose) by Ruff degradation. Aldohexose to Ketohexose [(+) Glucose to (-) Fructose] and Ketohexose to Aldohexose (Fructose to Glucose)

UNIT- V

Amino acids and proteins **7h**

Introduction: Definition of Amino acids, classification of Amino acids into alpha, beta, and gamma amino acids. Natural and essential amino acids - definition and examples, classification of alpha amino acids into acidic, basic and neutral amino acids with examples. Methods of synthesis: General methods of synthesis of alpha amino acids (specific examples - Glycine, Alanine, valine and leucine) by following methods: a) from halogenated carboxylic acid b) Malonic ester synthesis c) strecker's synthesis.

Physical properties: Zwitter ion structure - salt like character - solubility, melting points, amphoteric character, definition of isoelectric point.

Chemical properties: General reactions due to amino and carboxyl groups - lactams from gamma and delta amino acids by heating peptide bond (amide linkage). Structure and nomenclature of peptides and proteins.

Students reference books

1. Concise coordination chemistry by Gopalan and Ramalingam.
2. Advanced physical chemistry by puri and sharma
3. Advanced Inorganic chemistry vol I by Satyaprakash, Tuli, Basu and Madan
4. A Text book of organic chemistry by Bahl and Arun Bahl.

page (3) of (3)

10/5/2017

10/5/2017

Academic year 2017-2018

LABORATORY COURSE – V
Practical Paper – V Organic Chemistry
(at the end of semester V) **30 hrs (2 h / W)**

Organic Qualitative Analysis: **50M**

Analysis of an organic compound through systematic qualitative procedure for functional group identification including the determination of melting point and boiling point with suitable derivatives.

Alcohols, Phenols, Aldehydes, Ketones, Carboxylic acids, Aromatic Primary Amines, Amides and Simple sugars.

For Record – 10 Marks
Experiment – 40 Marks } 50 Marks

LABORATORY COURSE – VI
Practical Paper – VI Physical Chemistry
(at the end of semester V) **30 hrs (2 h/W)**

1. Determination of rate constant for acid catalyzed ester hydrolysis.
2. Determination of molecular status and partition coefficient of benzoicacid in Benzene and water.
3. Determination of Surface tension of liquid
4. Determination of Viscosity of liquid.
5. Adsorption of acetic acid on animal charcoal, verification of Freundlisch isotherm.

For Records – 10 marks
Experiments – 40 Marks } 50 Marks

Model Question Paper
III B.Sc. (V SEMISTER) Chemistry
Paper V - Inorganic, Physical and Organic Chemistry

Time: 3 hrs. **Max. Marks: 75**

Section A

Answer any Five **5 x 5 = 25 Marks**

1. Explain Sidgwick's EAN rule with examples.
2. Explain Werner's theory of co-ordination compounds.
3. Write short notes on basicity of amines.
4. Explain the following reactions. a) Nef reaction b) Mannich reaction.
5. Explain Kirchoff's equation.
6. Define and explain the first law of thermodynamics.
7. Explain the second law of thermodynamics using entropy.
8. Name the following compounds using IUPAC nomenclature.
   i) K_4 $[Fe(CN)_6]$ ii) $[Co(NH_3)_6]Cl_3$

Section B

Answer all questions **5 x 10 = 50 Marks**

9. (a). Explain Valence bond theory with examples.

OR

(b). Describe the geometrical isomerism in compounds with co- ordination number 4 & 6.

10. (a). Explain the determination of ,magnetic susceptibility of a compound using Guoy's method.

OR

(b) Explain the determination of composition of a complex using Job's method.

11. (a) Give any two methods of preparation of nitro alkanes and explain the reactions of nitro alkanes with nitrous acid.

OR

(b) Explain Hinsberg method of separation of primary, secondary and tertiary amines.

10/5/2017

12 (a). Explain the following reactions.

1. Gabriel synthesis
2. Carbylamine reaction.
3. Schmidt reaction.

OR

(b) Derive PV^{γ} = Constant using adiabatic process in ideal gases.

13 (a) Explain Carnot theorem and its efficiency

OR

(b) Explain Joule – Thomson effect.

-----END ----

Model question paper prepared by BOS Chairman and members of Chemistry.

10/5/2017

10/5/2017

Model Question paper

Semester - V Subject: chemistry.

Paper - V: Inorganic, physical and organic chemistry

Time: 3h. max marks: 75

Section - I. 5 x 5 = 25 m.

క్రింది వానిలో ఏవేని 5 ప్రశ్నలకు సమాధానాలు వ్రాయండి.

1. సిడ్గ్విక్ EAN నియమాన్ని ఉదాహరణలతో వివరించండి.
2. సమన్వయ సమ్మేళనాల వెర్నర్ సిద్ధాంతాన్ని వివరించండి.
3. అమైనుల క్లోరుల్ని సంగ్రహంగా తెలపండి.
4. క్రింది చర్యలను వివరించండి.
   a) వెల్ఫ్. చర్య b) మనిచ్ చర్య
5. కిర్చ్‌హాఫ్ సమీకరణాన్ని వివరించండి.
6. ఉష్ణగతిక శాస్త్ర మొదటి నియమాన్ని నిర్వచించి వివరించండి.
7. ఎంట్రోపి ఆధారంగా ఉష్ణగతిక శాస్త్ర రెండవ నియమాన్ని వివరించండి.
8. క్రింది సమ్మేళనాల IUPAC నామీకరణను తెలపండి.
   i) $K_4[Fe(CN)_6]$ ii) $[Co(NH_3)_6]Cl_3$.

Section - II 5 x 10 = 50 m

9. a) వేలన్సీ బంధ సిద్ధాంతాన్ని ఉదాహరణలతో వివరించండి (OR)
   b) సమన్వయ సంఖ్య 4 మరియు 6 గల సమన్వయ సమ్మేళనాలలో జ్యామితీయ సాధుకాన్ని వివరించండి.
10. a) గయ్ పద్ధతి ద్వారా సమ్మేళనాల అయస్కాంత సహేద్యాంతటి ని నిర్ధారించే పద్ధతిని వివరించండి. (OR)
    b) మోచ్ పద్ధతి ద్వారా సమన్వయ సమ్మేళనాల సంఘటను నిర్ధారించు పద్ధతిని వివరించండి.
11. a) వైట్ట్) ఆతళనులను తయారు చేయు రెండు పద్ధతులను వివరించండి.
    · వైట్టస్ ఆమ్లంలో వైట్ట్) ఆతళనుల చర్యను తెలపండి (OR)
    b) ప్రైమరి, సెకండరి మరియు టెర్షరి అమైనులను హిన్స్‌బర్గ్ పద్ధతిలో వేరుచేసే విధానాన్ని వివరించండి.
12. a) క్రింది చర్యలను వివరించండి.
    i) గాబ్రియల్ సంశ్లేషణ ii) కార్బిలమైన్ చర్య iii) వీట్ట్ చర్య
    (OR)
    b) ఆదర్శ వాయువుల స్థిరోష్ణ ప్రక్రియలో PV^γ = స్థిరాంకము సమీకరణాన్ని ఉత్పాదించండి.
13. a) కార్నాట్ సిద్ధాంతాన్ని మరియు దక్షతను వివరించండి.
    (OR)
    b) జౌల్-థామ్సన్ ప్రభావాన్ని వివరించండి.

- ENd -

10/5/2017

P.T.O

Model Question Paper
III B.Sc. (V SEMISTER) Chemistry
Paper VI - Inorganic, Physical and Organic Chemistry

Time: 3 hrs. **Max. Marks: 75**

Section A

Answer any Five **5 x 5 = 25 Marks**

1). Explain the Biological significance of Na & K.

2). Define quantum yield, give explanation for abnormal quantum yield.

3). Describe the effect of temperature on rate of reaction.

4). Explain the reason for acidic nature of pyrrole.

5). Define anomers and explain with examples.

6). Define amino acids and give their classification.

7). Write short notes on polypeptides.

8). Describe the preparation of osazone from glucose.

Section B

Answer all questions **5 x 10 = 50 Marks**

9. (a). Explain the structure and functions of haemoglobin.

OR

(b). Explain SN^1 & SN^2 reaction mechanisms.

10. (a) Explain the methods of determination of order of reaction.

OR

(b) Define order of reaction, derive an expression for the rate constant of first order reaction.

11. (a). Write photo chemical reaction mechanism for the following reactions.
1. Hydrogen-Chlorine 2. Hydrogen-Bromine

OR

(b) 1. Describe the preparation of pyrrole, furan and thiopene from 1,4 dicarbonyl compounds.
2. Explain Diels-alder reaction in furan.

10/5/2017

12 (a). Explain the structural elucidation of chain structure of glucose.

OR

(b) Explain following reactions.
1. Aldohexose to Aldopentose
2. Aldohexose to Ketohexose.

13 (a) Write short notes on 1). Zwitter ion 2). Isoelectric point.

OR

(b) Write any three methods of preparation of aminoacids.

-----END ----

Model question paper prepared by BOS Chairman and members of Chemistry.

10/5/2017

10/5/2017

Model Question paper

Semester - II Subject: Chemistry

Paper VII: Inorganic, physical & organic chemistry

Time: 3 hours: max marks: 75

Section - I 5×5 = 25 m

ఏవైనా 5 ప్రశ్నలకు సమాధానము రాయండి.

1. Na మరియు K యొక్క జీవ ప్రాముఖ్యతను తెలపండి.
2. కాంప్లెక్సులు ఏర్పడే ని నిర్వచించండి. ఉపసంగత కాంప్లెక్సులు ఏర్పడని వివరించండి.
3. చక్రవేటు పై ఉష్ణోగ్రత ప్రభావాన్ని వివరించండి.
4. పెట్రోల్ ఆమ్ల స్వభావానికి కారణాలు తెలపండి.
5. అనామర్లను నిర్వచించి, ఉదాహరణలతో వివరించండి.
6. ఉపైనో ఆమ్లాలను నిర్వచించి, వర్గీకరణను తెలపండి.
7. పాలిపెప్టైడుల సరించి లఘు వ్యాఖ్య రాయండి.
8. గ్లూకోజ్ నుండి ఒసజోన్ ను తయారు చేయు విధానాన్ని వివరించండి.

Section - II 5×10 = 50 m.

క్రింది ప్రశ్నలకు సమాధానాలు రాయండి.

9. a) హోమోలైటిక్ విచ్ఛిన్నము మరియు విధులను వివరించండి. (OR)
   b) S_N1 మరియు S_N2 చర్యల సంవిధానాలను వివరించండి.

10. a) చర్య క్రమాంకాన్ని నిర్ణయించే పద్ధతులను వివరించండి. (OR)
    b) చర్య క్రమాంకాన్ని నిర్వచించండి. ప్రథమ క్రమాంక చర్య యొక్క కేటు స్థిరాంకానికి సమీకరణాన్ని ఉత్పాదించండి.

11. a) క్రింది చర్యలకు కొంత రసాయన సంవిధానాన్ని వివరించండి.
    i) హైడ్రోజన్ - క్లోరిన్. ii) హైడ్రోజన్ - బ్రోమిన్

    (OR)

    b) i) 1,4 డై కార్బొనిల్ సమ్మేళనాల నుండి పిరోల్, ఫ్యురాన్ మరియు థయోఫీన్ తయారీని వివరించండి.
    ii) ఫ్యురాన్ యొక్క డీల్స్ - ఆల్డర్ చర్యను వివరించండి.

12. a) గ్లూకోజ్ యొక్క శృంఖల నిర్మాణాన్ని వివరించండి. (OR)
    b) క్రింది చర్యలను వివరించండి.
    i) ఆల్డోహెక్సోజ్ నుండి ఆల్డోపెంటోజ్
    ii) ఆల్డోహెక్సోజ్ నుండి కీటోహెక్సోజ్

13. a) క్రింది వాటి సరించి లఘు వ్యాఖ్య రాయండి.
    i) జ్విట్టర్ అయాన్ ii) సమ విద్యుత్ స్థానము.

    (OR)

    b) ఉపైనో ఆమ్లాల ఏవైనా మూడు తయారీ పద్ధతులను వివరించండి.

10/5/2017 10/5/2017

END

SRI VENKATESWARA UNIVERSITY :TIRUPATI

B.Sc (COMPUTER SCIENCE)

Fifth Semester Examinations

III YEAR V SEMESTER

3-5-111

DATA BASE MANAGEMENT SYSTEM

Course Objective:

Design & develop database for large volumes & varieties of data with optimized data processing techniques.

Course Outcomes

On completing the subject, students will be able to:
1. Design and model of data in database.
2. Store, Retrieve data in database.

UNIT I

Overview of Database Management System: Introduction, Data and information, Database, Database management System, Objectives of DBMS, Evolution of Database management System, Classification of Database Management System, file-based system, Drawbacks of file-Based System ,DBMS Approach,, advantages of DBMS, Ansi/spark Data Model, Data models, Components and Interfaces of Database Management System. Database Architecture, Situations where DBMS is not Necessary, DBMS Vendors and Their Products.

UNIT II

Entity-Relationship Model: Introduction, The Building blocks of an Entity Relationship Diagram, classification of entity sets, attribute classification, relationship degree, relationship classification, reducing ER diagram to tables, enhanced entity-relationship model (EER model), generalization and specialization, ISA relationship and attribute inheritance, multiple inheritance, constraints on specialization and generalization, aggregation and composition, entity clusters, connection traps, advantages of ER modeling.

UNIT III

Relational Model: Introduction, CODD Rules, relational data model, concept of key, relational integrity, relational algebra, relational algebra operations, advantages of relational algebra, limitations of relational algebra, Database Design-Introduction, Objectives of the Database Design, Redundancy and data anamoly, Functional Dependency, Normalization, Steps in Normalization, Unnormal form to 1NF, 1NF to 2NF, 2NF to 3NF, BCNF.

UNIT IV

Structured Query Language: Introduction, History of SQL Standard, Commands in SQL, Data Types in SQL, Data Definition Language, Selection Operation, Projection Operation, Aggregate functions, Data Manipulation Language, Table Modification Commands, Table Truncation, Imposition of Constraints, Join Operation, Set Operation,View, Sub Query, Embedded SQL,

UNIT V

PL/SQL: Introduction, Shortcoming in SQL, Structure of PL/SQL, PL/SQL Language Elements, Data Types, Operators Precedence, Control Structure, Steps to Create a PL/SQL, Program, Iterative Control, Cursors, Steps to create a Cursors, Procedure, Function, Packages, Exceptions Handling, Database Triggers, Types of Triggers.

Text Book:

1. Fundamentals of Relational Database Management Systems by S. Sumathi, S. Esakkirajan, Springer Publications

Reference Books

1. "Database System Concepts" by Abraham Silberschatz, Henry Korth, and S. Sudarshan, McGrawhill, 2010,
2. "Database Management Systems" by Raghu Ramakrishnan, McGrawhill, 2002.
3. "An Introduction to Database Systems" by Bipin Desai.
4. "Principles of Database Systems" by J. D. Ullman.
5. "Fundamentals of Database Systems" by R. Elmasri and S. Navathe.

III YEAR V SEMESTER

DATABASE MANAGEMENT SYSTEMS LAB

1. Creation of college database and establish relationships between tables
2. Write a view to extract details from two or more tables
3. Write a stored procedure to process students results
4. Demonstration of a function
5. Demonstration of blocks, cursors & database triggers.
6. Demonstration of a Joins
7. Demonstration of a Aggregate functions
8. Creation of Reports based on different queries
9. Usage of file locking table locking, facilities in applications.

SRI VENKATESWARA UNIVERSITY :TIRUPATI
B.Sc(Computer Science)
Fifth Semester Examinations
DATABASE MANAGEMENT SYSTEM

Time: 3Hrs **Max. Marks:75**

PART-A

Answer any Five of the following. All Questions carry equal marks. 5×5=25 Marks

1. **Explain the operations of Relational Algebra.**
2. **Write about Data types in SQL.**
3. **Describe how to handle exceptions in SQL.**
4. **What is a Cursor? Explain the steps to create a Explicit Cursor.**
5. **Write about Components and Interfaces of DBMS.**
6. **Briefly explain Embedded SQL.**
7. **Write about Data Models.**
8. **Write about Relationship Classification.**

PART-B

Answer one question from each unit. All Questions carry equal marks. 5×10=50 Marks

UNIT-1

9. **Explain Drawbacks of file based system.**

(OR)

10. **Explain about Data Independence.**

UNIT-2

11. **Explain the process of converting ER Diagram to Tables.**

(OR)

12. **Define Specialization and Generalization. Explain the constraints on Generalization and Specialization with examples.**

UNIT-3

13. **Explain Codd Rules.**

(OR)

14. **Explain the normal forms-1NF,2NF and 3NF.**

UNIT-4

15. **Explain DML Commands with Syntax and examples.**

(OR)

16. **a) Explain join operations in SQL. 5M**
    b) Explain Aggregate functions in SQL. 5M

UNIT-5

17. **What is a Trigger? Explain the creation of different types of triggers with syntax.**

(OR)

18. **Explain Control Structures of PL/SQL.**

3-5-112

SRI VENKATESWARA UNIVERSITY :TIRUPATI
B.Sc(Computer Science)
Fifth Semester
Software Engineering

Course Objectives

The Objective of the course is to assist the student in understanding the basic theory of software engineering, and to apply these basic theoretical principles to a group software development project.

Course outcomes

1. Ability to gather and specify requirements of the software projects.
2. Ability to analyze software requirements with existing tools
3. Able to differentiate different testing methodologies
4. Able to understand and apply the basic project management practices in real life projects
5. Ability to work in a team as well as independently on software projects

UNIT I

INTRODUCTION: Software Engineering Definition, Process paradigms, Software Metrics, software project planning.

UNIT II

REQUIREMENTS ANALYSIS: Requirement Engineering, Requirements Elicitation, Requirements Analysis, Requirements Documentation, Student Result Management System Example.

UNIT III

SOFTWARE DESIGN: What is Design?, Modularity, Strategy of Design, Function Oriented Design, Object Oriented Design.

UNIT IV

USER INTERFACE DESIGN : User interface Analysis and Design,.

QUALITY MANAGEMENT: Software Quality Assurance, Quality metrics, Software Reliability.

UNIT V

SOFTWARE TESTING : - Software testing Fundamentals, Basis Path testing , Control Structure testing , Black Box testing **.**

TESTING STRATAGIES- Integration, Validation and system testing

REENGINEERING- Reverse Engineering , Re-engineering.

Text Books:

1. K.K. Aggarwal and Yogesh Singh**,"** Software Engineering", New Age International, 01 Jan-2005.
2. **Roger Pressman S., "Software Engineering: A Practitioner's Approach", 5th Edition, McGraw Hill, 2010.**

REFERENCE BOOKS:

1. Sommerville, "Software Engineering", Eighth Edition, Pearson Education, 2007 .
2. Pfleeger, "Software Engineering-Theory & Practice", 3rd Edition, Pearson Education, 2009.
3. Carlo Ghazi, Mehdi Jazayari, Dino Mandrioli, "Fundamentals of Software Engineering", Pearson Education, 2003.

Code No:

SRI VENKATESWARA UNIVERSITY: TIRUPATI
B.Sc Computer Scinece
Fifth Semester
Software Engineering

Time: 3 Hours **Max. Marks: 75**

Note: This question paper contains two parts A and B.
Part A is compulsory which carries 25 marks. Answer any five of the following Questions in Part A.
Part B consists of 5 Units. Answer any one full question from each unit.
Each question carries 10 marks

PART - A

Answer any Five of the following. All questions carry equal marks

5 x 5 = 25 Marks

1. What is software?
2. Write about Software architecture.
3. Write about Data flow.
4. Explain Interface design.
5. Write about software design
6. Define Coupling.
7. Write about SQA.
8. Explain Quality metrics?

PART - B

Answer one question from each Unit. All questions carry equal marks

5 x 10 = 50 Marks

UNIT – I

9. Explain in detail about Empirical estimation models.

OR

10. Explain the Software project scheduling?

UNIT-II

11. Explain the Requirement Engineering Processes?

OR

12. Explain Analysis Model in detail?

UNIT-III

13. Explain in detail about architectural styles and patterns?

OR

14. Write about Software Architecture.

UNIT-IV

15. Explain briefly about User interface design?

OR

16.Describe about Computer Interface design and its standards.

UNIT-V

17. Explain different methods involve in Software Quality Assurance.

OR

18.Explain different types of software testing with its advantages

SRI VENKATESWARA UNIVERSITY

DEPARTMENT OF CT& HM (Catering Tourism & Hotel Management)

Choice Based Credit System (C.B.C.S) Syllabus and Scheme Of Examination

Coursee: (WITH EFFECT FROM THE ACADEMIC YEAR 2015 -2016) Subject: CT&HM

FIRST YEAR

Semester	Part	Paper Code	Title of the Paper	No. of Hours T	No. of Hours P	Credits	IA	EE	Total Marks (100)
Semester I	Part 1		Language 1	4	0	3	25	75	100
			Language 2	4	0	3	25	75	100
	SK/FC		Human values and professional ethics(HVPE)	2	0	2	-	50	50
			Communiction &Soft Skills -1	2	0	2	-	50	50
	Part 2	CTHM 101	Principles of Tourism - I	4	-	4	25	75	100
			Practicals	-	3	2	-	50	50
		CTHM 102	Food production -I	4	-	4	25	75	100
			Practicals	-	3	2	-	50	50
		CTHM 103	Food Beverage Service - I	4	-	4	25	75	100
			Practicals	-	3	2	-	50	50
			Total Marks	**24**	**09**	28			**750**
Semester II	Part 1		Language 1	4	0	3	25	75	100
			Language 2	4	0	3	25	75	100
	SK/FC		Foundation course-3 Enviromental Education	2	0	2	-	50	50
			Foundation course -4 A ICT-1(Informantion & CommunicationTechnology)	2	0	2	-	50	50
	Part 2	CTHM 201	Bakery	4	-	4	25	75	100
			Practicals	-	3	2	-	50	50
		CTHM 202	Front office - I	4	-	4	25	75	100
			Practicals	-	3	2	-	50	50
		CTHM 203	Accommodation Operation - I	4	-	4	25	75	100
			Practicals	-	3	2	-	50	50
			Total Marks	**24**	**09**	28			**750**

DEPARTMENT OF CT& HM (Catering Tourism & Hotel Management)
Choice Based Credit System (C.B.C.S) Syllabus and Scheme Of Examination

Course: BSc (WITH EFFECT FROM THE ACADEMIC YEAR 2016 -2017) **Subject: CT&HM**

FIRST YEAR

Semester	Part	Paper Code	Title of the Paper	No. of Hours T	No. of Hours P	Credits	IA	EE	Total Marks (100)
Semester I	Part 1		Language 1	4	0	3	25	75	100
			Language 2	4	0	3	25	75	100
	SK/FC		Foundation Course -1Human values & professional ethics(HVPE)	2	0	2	-	50	50
			Foundation Course –2 Enviromental Studies	2	0	2	-	50	50
	Part 2	CTHM 101	Principles of Tourism - I	4	-	4	25	75	100
			Practicals	-	3	2	-	50	50
		CTHM 102	Food production -I	4	-	4	25	75	100
			Practicals	-	3	2	-	50	50
		CTHM 103	Food Beverage Service - I	4	-	4	25	75	100
			Practicals	-	3	2	-	50	50
			Total Marks	**24**	**09**	28			**750**
Semester II	Part 1		Language 1	4	0	3	25	75	100
			Language 2	4	0	3	25	75	100
	SK/FC		Foundation course-3 ICT- I	2	0	2	-	50	50
			Foundation course -4 CSS-I	2	0	2	-	50	50
	Part 2	CTHM 201	Bakery	4	-	4	25	75	100
			Practicals	-	3	2	-	50	50
		CTHM 202	Front office - I	4	-	4	25	75	100
			Practicals	-	3	2	-	50	50
		CTHM 203	Accommodation Operation - I	4	-	4	25	75	100
			Practicals	-	3	2	-	50	50
			Total Marks	**24**	**09**	28			**750**

SECOND YEAR

Semester	Part	Paper Code	Title of the Paper	No. of Hours		Credits	IA	ES	Total Marks (100)
				T	P				
Semester III	Part 1		Language 1	4	0	3	25	75	100
			Language 2	4	0	3	25	75	100
	SK/FC		Foundation course-5 Entrepreneurship	2	0	2	-	50	50
			Foundation course-6 CSS-II	2	0	2	-	50	50
	Part 2	CTHM 301	Pilgrimage Tourism and Hospitality Management - II	4	-	4	25	75	100
			Practicals	-	3	2	-	50	50
		CTHM 302	Food production -II	4	-	4	25	75	100
			Practicals	-	3	2	-	50	50
		CTHM 303	Food Beverage Service - II	4	-	4	25	75	100
			Practicals	-	3	2	-	50	50
			Total Marks	**24**	**9**	28			**750**
Semester IV	Part 1		Foundation course-7 CSS-3	2	0	2	-	50	50
			Foundation course-8 Analytical Skills	2	0	2	-	50	50
	SK/FC		Foundation course-9 ICT-II	2	0	2	-	50	50
			Foundation course-10 Leadership Education	2	0	2	-	50	50
	Part 2	CTHM 401	Tourism Marketing -III	4	-	4	25	75	100
			Seminar	-	3	2	-	50	50
		CTHM 402	Front office - II	4	-	4	25	75	100
			Practicals	-	3	2	-	50	50
		CTHM 403	Accommodation Operation - II	4	-	4	25	75	100
			Practicals	-	3	2	-	50	50
			Total Marks	**20**	**09**	**26**			**650**

THIRD YEAR

BSC(CT&HM)

V -SEMESTER

SGS ARTS COLLEGE THIRUPATHI

DURATION

6MONTHS

TOTAL

950 MARKS

Semester	Part	Paper Code	Title of the Paper INTERNSHIP/PROJECT WORK	No. of Hours		Credits	IA	ES	Total Marks (100)
				T	P				
Semester V	Part 2		Evaluation by Hotels & Exams						
		CTHM 501	Food Production			8	100	100	200
		CTHM 502	Food & beverage Services			8	100	100	200
		CTHM 503	Front office			8	100	100	200
		CTHM 504	Accommodation Operation			8	100	100	200
		CTHM505	Seminars + Log Book			4	100	-	100
			Total Marks			36	500		900

NOTE:-

1.The students need to undergo industrial training for a duration of six months .

2.They need to submit their log book and project work after the completion of industrial training.

3. The students need to report in college on 1st November with out fail .

CHAIRPERSON, BOS
Dept. of Homescience
S.V.U College of Biological and Earth Sciences
S.V. University, Tirupati - 517 502

SRI VENKATESWARA UNIVERSITY

DEPARTMENT OF CT& HM (Catering Tourism & Hotel Management)

Choice Based Credit System (C.B.C.S) Syllabus and Scheme Of Examination

Course: BSc Subject: CT&HM

W.E.F. 2017-18

				No. of Hours		Credits	IA	ES	TOTAL
Semester VI	Part 2	CTHM 601	Food production -III	4	-	4	25	75	100
			Practicals	-	3	2	-	50	50
		CTHM 602	Food Beverage Service - III	4	-	4	25	75	100
			Practicals	-	3	2	-	50	50
		CTHM 603	Front office Management - III	4	-	4	25	75	100
			Practicals	-	3	2	-	50	50
		CTHM 604	Accommodation Operation - III	4	-	4	25	75	100
			Practicals	-	3	2	-	50	50
		CTHM 605	Hotel Law	4	-	4	25	75	100
			Seminar	-	3	2	-	50	50
		CTHM 606	Travel & Tour Management- IV	4	-	4	25	75	100
			Praticals	-	3	2	-	50	50
			Total Marks	24	18	36	150	750	900

B.A./B.Sc. THIRD YEAR MATHEMATICS SYLLABUS
SEMESTER – V, PAPER -5
RING THEORY & VECTOR CALCULUS

60 Hrs

UNIT – 1 (12 hrs) RINGS-I : -

Definition of Ring and basic properties, Boolean Rings, divisors of zero and cancellation laws Rings, Integral Domains, Division Ring and Fields, The characteristic of a ring - The characteristic of an Integral Domain, The characteristic of a Field.

UNIT – 2 (12 hrs) RINGS-II : -

Ideals, Definition of Homomorphism – Homorphic Image – Elementary Properties of Homomorphism –Kernel of a Homomorphism – Fundamental theorem of Homomorhphism.

UNIT –3 (12 hrs) VECTOR DIFFERENTIATION : -

Vector Differentiation, Ordinary derivatives of vectors, Differentiability, Gradient, Divergence, Curl operators, Formulae Involving these operators.

UNIT – 4 (12 hrs) VECTOR INTEGRATION : -

Line Integral, Surface Integral, Volume integral with examples.

UNIT – 5 (12 hrs) VECTOR INTEGRATION APPLICATIONS : -

Theorems of Gauss and Stokes, Green's theorem in plane and applications of these theorems.

Prescribed Book :-

1.A text Book of B.Sc., Mathematics by B.V.S.S.Sarma and others, published by S. Chand & Company Pvt. Ltd., New Delhi.

Reference Books :-

1. Abstract Algebra by J. Fralieh, Published by Narosa Publishing house.
2. Vector Calculus by Santhi Narayana, Published by S. Chand & Company Pvt. Ltd., New Delhi.
3.A Text book of Mathematics,Vol-III, Deepthi Publications.
4. Vector Calculus by R. Gupta, Published by Laxmi Publications.
5. Vector Calculus by P.C. Matthews, Published by Springer Verlag publicattions.
6. Rings and Linear Algebra by Pundir & Pundir, Published by Pragathi Prakashan.

Suggested Activities:

Seminar/ Quiz/ Assignments/ Project on Ring theory and its applications

B.A./B.Sc. THIRD YEAR MATHEMATICS SYLLABUS
SEMESTER – V, PAPER -6
LINEAR ALGEBRA

60 Hrs

UNIT – I (12 hrs) : Vector Spaces-I :

Vector Spaces, General properties of vector spaces, n-dimensional Vectors, addition and scalar multiplication of Vectors, internal and external composition, Null space, Vector subspaces, Algebra of subspaces, linear combination of Vectors, Linear span Linear independence and Linear dependence of Vectors.

UNIT –II (12 hrs) : Vector Spaces-II :

Basis of Vector space, Finite dimensional Vector spaces, basis extension, co-ordinates, Dimension of a Vector space, Dimension of a subspace.

UNIT –III (12 hrs) : Linear Transformations :

Linear transformations, linear operators, Properties of L.T, sum and product of LTs, Algebra of Linear Operators, Range and null space of linear transformation, Rank and Nullity of linear transformations – Rank – Nullity Theorem.

UNIT –IV (12 hrs) : Matrix :

Matrices, Elementary Properties of Matrices, Inverse Matrices, Rank of Matrix, Linear Equations, Characteristic Roots, Characteristic Values & Vectors of square Matrix, Cayley – Hamilton Theorem.

UNIT –V (12 hrs) : Inner product space :

Inner product spaces, Euclidean and unitary spaces, Norm or length of a Vector, Schwartz inequality, Triangle in Inequality, Parallelogram law, Orthogonality, Orthonormal set, complete orthonormal set.

Prescribed Books :

1.A text Book of B.Sc., Mathematics by B.V.S.S.Sarma and others, published by S. Chand & Company Pvt. Ltd., New Delhi.

Reference Books :

1. Linear Algebra by J.N. Sharma and A.R. Vasista, published by Krishna Prakashan Mandir, Meerut- 250002.
2. Matrices by Shanti Narayana, published by S.Chand Publications.
3. Linear Algebra by Kenneth Hoffman and Ray Kunze, published by Pearson Education (low priced edition), New Delhi.
4. Linear Algebra by Stephen H. Friedberg et al published by Prentice Hall of India Pvt. Ltd. 4th Edition 2007.

Suggested Activities:

Seminar/ Quiz/ Assignments/ Project on "Applications of Linear algebra Through Computer Sciences"

S.V.UNIVERSITY MODEL PAPER

III B.Sc , V Semester Examinations

PART – II, MATHEMATICS Paper – V

(Ring Theory and Vector Calculus)

me : 3 hrs **Max marks : 75**

SECTION I

Answer any FIVE questions. Each question carries 5 marks. **5 X 5= 25**

1. **Define zero divisors in a ring and give an example.**

2. **Prove that every field is an integral domain.**

3. **If f: R→ R' is a homomorphism of a ring R into the ring R' and, 0 and 0' are the zero elements in R and R' respectively then prove that f(0)=0'.**

4. **If f is a homomorphism ring R into a ring R' then prove that Ker *f* is an ideal of R.**

5. **If $\vec{A} = 5t^2\,\bar{\imath} + t\bar{\jmath} - t^3\bar{k}$ and $\vec{B}$ =sint $\bar{\imath}$ – cost$\bar{\jmath}$ then find $\frac{d}{dt}\,\vec{A}\,X\,\vec{B}$**

6. **If a = x+y+z, b= $x^2+y^2+z^2$ and c = xy + yz+ zx prove that [grad a, grad b, grad c] = 0**

7. **Evaluate $\int_c \bar{F}.d\bar{r}$ where $\bar{F} = xy\,\bar{\imath} + yz\,\bar{\jmath} + zx\,\bar{k}$ and curve c is $\bar{r} = t\,\bar{\imath} + t^2\,\bar{\jmath} + t^3\bar{k}$, t varying from -1 to 1.**

8. **State Gauss divergence theorem .**

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SECTION II

Answer any FIVE questions. Each question carries 10 marks. **5 X 10 = 50**

9a. Prove that every finite integral domain is field.

OR

b. Prove that characteristic of a Boolean ring is 2.

10a. Prove that intersection of two ideals in a ring is an ideal.

OR

b. State and prove Fundamental theorem of homomorphism on rings.

11a. If $\bar{r} = a\cos t\,\bar{\imath} + a\sin t\,j + at\tan\theta\ \ \bar{k}$, **find** $\left|\frac{d}{dt}\bar{r}\ \ X\frac{d^2}{dt^2}\bar{r}\right|$ **and** $\left[\frac{d}{dt}\bar{r}\ \ \frac{d^2}{dt^2}\bar{r}\ \ \frac{d^3}{dt^3}\bar{r}\right]$.

OR

b. Find the directional derivative of the function $f=x^2-y^2+2z^2$ **at the point P(1,2,3) in the direction of the line PQ where Q=(5,0,4).**

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12a. If $\bar{F} = x^2y^2\,\bar{\imath} + y\bar{\jmath}$ then evaluate $\int_C \bar{F} \cdot d\bar{r}$ where C is the curve $y^2 = 4x$ in XY-plane from(0,0)to (4,4).

OR

b. If $\bar{F} = 2y\,\bar{\imath} - 3\bar{\jmath} - x^2\bar{k}$ and S is the surface $y^2 = 8x$ in the first octant bounded by the planes $y = 4$ and $z = 6$, evaluate $\int_S \bar{F} \cdot \bar{N}\, dS$.

13a. State and prove Stokes theorem.

OR

b. Verify Green's theorem in the plane for $\int_c (3x^2 - 8y^2)\,dx + (4y - 6xy)\,dy$ where C is the closed curve bounded by $y = \sqrt{x}$ and $y = x^2$.

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S.V.UNIVERSITY MODEL PAPER

III B.Sc , V Semester Examinations

PART – II, MATHEMATICS Paper – VI

(Linear Algebra)

me : 3 hrs **Max marks : 75**

SECTION I

Answer any FIVE questions. Each question carries 5 marks. **5 X 5= 25**

1. **Let R be a field of real numbers and W = {(x,y,z) / x,y,z ϵR} .Is W a sub-space of $V_3(R)$.**

2. **W_1 and W_2 are two sub spaces of finite dimensional vector space V(F) then prove that $W_1 \cap W_2$ is a vector space .**

3. **Define basis and dimension of a vector space.**

4. **Prove that every non empty subset of a linearly independent set of vectors is a linearly independent.**

5. **Find the rank of the matrix** $\begin{bmatrix} 1 & 2 & 3 & 0 \\ 2 & 4 & 3 & 2 \\ 3 & 2 & 1 & 3 \\ 6 & 8 & 7 & 5 \end{bmatrix}$ **by reducing into echelon form.**

6. **Define characteristic vector and characteristic value of a matrix.**

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7. **Define inner product space and give an example.**

8. **In the inner product space R^3 find the $\|\alpha\|$ and unit vector of α where $\alpha = (1,2,3)$.**

SECTION II

Answer any FIVE questions. Each question carries 10 marks. 5 X 10 = 50

9a. Prove the necessary and sufficient condition for the sub-set W of V to be a sub-space of V is $\forall a, b \in F, \alpha, \beta \epsilon V \implies a\alpha + b\beta \epsilon W$.

OR

b. Verify whether the vectors (1,3,2), (1,-7,-8),(2,1,-1) of $V_3(R)$ are linearly independent or dependent.

10a. Prove that in a finite dimensional vector space any two bases will have same number of elements.

OR

b. Verify whether the set S = {(1,0,0),(1,1,0),(1,1,1)} is a basis of $R^3(R)$ or not.

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11a. State and prove Rank –Nullity theorem .

OR

b. Let T: $V_2 \rightarrow V_3$ be defined by T(x,y) = (x+y,2x-y,7y). Find $[T:B_1,B_2]$ where B_1, B_2 are standard basis of V_2 and V_3.

12a. Find the Eigen Values and Eigen vectors of the matrix $A = \begin{bmatrix} 3 & 1 & 1 \\ 2 & 4 & 2 \\ 1 & 1 & 3 \end{bmatrix}$

OR

b. State and prove Cayley- Hamilton theorem.

13a. State and prove Cauchy Schwarz inequality.

OR

b. In an inner product space , any orthogonal set of non zero vectors is linearly independent

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B.Sc MICROBIOLOGY (CBCS) SYLLABUS
THIRD YEAR – SEMESTER- V

MBT- 501 ENVIRONMENTAL & AGRICULTURAL MICROBIOLOGY

TOTAL HOURS: 36 **CREDITS: 3**

UNIT - I — No. of hours: 8

Terrestrial Environment: Soil profile and soil microflora
Aquatic Environment: Microflora of fresh water and marine habitats
Atmosphere: Aeromicroflora and dispersal of microbes
Extreme Habitats: Extremophiles: Microbes thriving at high & low temperatures, pH, high hydrostatic & osmotic pressures, salinity, & low nutrient levels.

UNIT – II — No. of hours: 8

Role of microorganisms in nutrient cycling (Carbon, nitrogen, phosphorus).
Treatment and safety of drinking (potable) water, methods to detect potability of water samples: (a) standard qualitative procedure: presumptive test/MPN test, confirmed and completed tests for faecal coliforms (b) Membrane filter technique.Microbial interactions – mutualism, commensalism, antagonism, competition, parasitism, predation.

UNIT – III — No. of hours: 6

Outlines of Solid Waste management: Sources and types of solid waste, Methods of solid waste disposal (composting and sanitary landfill).
Liquid waste management: Composition and strength of sewage (BOD and COD), Primary, secondary (oxidation ponds, trickling filter, activated sludge process and septic tank) and tertiary sewage treatment.
Xenobiotics – their recalcitrance and effects on microflora.

UNIT – IV — No. of hours: 7

Plant Growth Promoting Microorganisms - Mycorrhizae, Rhizobia, *Azospirillum, Azotobacter, Frankia,* phosphate-solubilizers flouroscent Pseudomonads.
Outlines of biological nitrogen fixation (symbiotic, non-symbiotic).
Biofertilizers - *Rhizobium, Cyanobacteria*.

UNIT – V — No. of hours: 7

Concept of disease in plants. Symptoms of plant diseases caused by fungi, bacteria, and viruses. Plant diseases - groundnut rust, Citrus canker and tomato leaf curl.
Principles of plant disease control.

MBP- 501 ENVIRONMENTAL & AGRICULTURAL MICROBIOLOGY

TOTAL HOURS: 36 **CREDITS: 2**

1. Analysis of soil – pH, Moisture content and water holding capacity.
2. Isolation of microbes (bacteria and fungi) from soil.
3. Study of air flora by petriplate exposure method.
4. Analysis of potable water: SPC, and MPN method.
5. Determination of Chemical Oxygen Demand (COD) of waste water samples.
6. Isolation of *Rhizobium* from root nodules.
7. Staining and observation of Vesicular Arbuscular Mycorrhizal (VAM) fungi.
8. Observation of plant diseases of local importance - Citrus canker, Tikka disease of Groundnut, Bhendi yellow vein mosaic, Rusts, Smuts, Powdery mildews, Tomato leaf curl.

SUGGESTED READINGS

Atlas RM and Bartha R. (2000). **Microbial Ecology: Fundamentals & Applications.** 4th edition. Benjamin/Cummings Science Publishing, USA

Barton LL & Northup DE (2011). **Microbial Ecology**. 1st edition, Wiley Blackwell, USA

Campbell RE. (1983). **Microbial Ecology**. Blackwell Scientific Publication, Oxford, England.

Lynch JM & Hobbie JE. (1988). **Microorganisms in Action: Concepts & Application in Microbial Ecology.** Blackwell Scientific Publication, U.K.

Madigan MT, Martinko JM and Parker J. (2014). **Brock Biology of Microorganisms**. 14th edition. Pearson/ Benjamin Cummings

Maier RM, Pepper IL and Gerba CP. (2009). **Environmental Microbiology**. 2nd edition, Academic Press

Martin A. (1977). **An Introduction to Soil Microbiology**. 2nd edition. John Wiley & Sons Inc. New York & London.

M. N. Reddy, V. Uma Maheswara Rao, P. Nagapadma, M. Raghuram and M. Charitha Devi (2012). Applied Microbiology B.Sc Third Year Paper-IV, Telugu Akademi, Hyderabad.

P.D. Sharma (2005) Environmental Microbiology. Alpha Science International New Delhi.

P.D. Sharma (2005) Microbiology – Rastogi Publication, India.

Subba Rao NS. (1999). **Soil Microbiology**. 4th edition. Oxford & IBH Publishing Co. New Delhi.

Willey JM, Sherwood LM, and Woolverton CJ. (2013). **Prescott's Microbiology**. 9th edition. McGraw Hill Higher Education.

SUBJECT :: B.Sc., MICROBIOLOGY (CBCS) MODEL QUESTION PAPER

THIRD YEAR – SEMESTER – V

MBT – 501 : ENVIRONMENTAL & AGRICULTURAL MICROBIOLOGY

Max Marks - 75 Time : 3 hrs

SECTION – A

ANSWER ANY FIVE OF THE FOLLOWING 5 x 5 = 25 M

Draw labeled diagrams wherever necessary

1. Oligotrophs.
2. Aeromicroflora.
3. Phosphorous cycle.
4. Types of solid wastes.
5. MPN Test.
6. Frankia.
7. Mosaic symtoms.
8. Tomato leaf curl.

SECTION – A

ANSWER ANY FIVE OF THE FOLLOWING 5 x 10 = 50 M

9. a) Write an essay on soil profile and soil microflora.

(or)

b) Discuss briefly about 'extremophiles'.

10. a) What is the role of microbes in nutrient cycling.

(or)

b) Write an essay on treatment and safety of drinking water.

11. a) Explain in detail about secondary sewage treatments.

(or)

b) Discuss about solid waste disposable.

11. a) Outline the symbiotic nitrogen fixation.

(or)

b) Write any three growth promoting microorganisms.

10/5/17

B.Sc MICROBIOLOGY (CBCS) SYLLABUS

THIRD YEAR – SEMESTER- V

Paper-VI: FOOD AND INDUSTRIAL MICROBIOLOGY

TOTAL HOURS: 36 **CREDITS: 3**

UNIT- I **No. of hours: 8**

Intrinsic and extrinsic parameters that affect microbial growth in food
Microbial spoilage of food - fruits, vegetables, milk, meat, egg, bread and canned foods
Food intoxication (botulism).
Food-borne diseases (salmonellosis) and their detection.

UNIT – II **No. of hours: 7**

Principles of food preservation - Physical and chemical methods.
Fermented Dairy foods – cheese and yogurt.
Microorganisms as food – SCP, edible mushrooms (white button, oyster and paddy straw). Probiotics and their benefits.

UNIT – III No. of hours: 6

Microorganisms of industrial importance – yeasts, moulds, bacteria, actinomycetes.
Isolation and Screening of industrially-important microorganisms.
Outlines of strain improvement.

UNIT – IV **No. of hours: 8**

Types of fermentation processes – solid state, liquid state, batch, fed-batch, continuous.
Design of fermenter.
Ingredients of Fermentation media
Downstream processing - filtration, centrifugation, cell disruption, solvent extraction.

UNIT – V **No. of hours: 7**

Microbial production of Industrial products - Citric acid, Ethanol, amylases, penicillin, glutamic acid and vitamin B12.

Ch. Pavangeetha
11/8/17

Chairman Board of Studies (PG)
MICROBIOLOGY
S. V. UNIVERSITY
TIRUPATI-517 502, A.P.

Practical –VI: FOOD AND INDUSTRIAL MICROBIOLOGY

TOTAL HOURS: 36 **CREDITS: 2**

1. Isolation of bacteria and fungi from spoiled bread/fruits/vegetables
2. Preparation of Yogurt/Dahi
3. Determination of the microbiological quality of milk sample by MBRT
4. Isolation of antagonistic microorganisms by crowded plate technique
5. Design of Fermenter
6. Microbial fermentation for the production and estimation of ethanol from Grapes.
7. Microbial fermentation for the production and estimation of citric acid.

SUGGESTED READING

Adams MR and Moss MO. (1995). **Food Microbiology**. 4th edition, New Age International (P) Limited Publishers, New Delhi, India.

Banwart JM. (1987). **Basic Food Microbiology**. 1st edition. CBS Publishers and Distributors, Delhi, India.

Casida LE. (1991). **Industrial Microbiology**. 1st edition. Wiley Eastern Limited.

Crueger W and Crueger A. (2000). **Biotechnology: A textbook of Industrial Microbiology**. 2nd Edition. Panima Publishing Company, New Delhi

Frazier WC and Westhoff DC. (1992). **Food Microbiology**. 3rd edition. Tata McGraw-Hill Publishing Company Ltd, New Delhi, India.

Jay JM, Loessner MJ and Golden DA. (2005). **Modern Food Microbiology**. 7th edition, CBS Publishers and Distributors, Delhi, India

Patel AH. (1996). **Industrial Microbiology** .1st Edition. MacMillan India Limited Publishing Company Ltd. New Delhi, India

Stanbury PF, Whitaker A and Hall SJ. (2006). **Principles of Fermentation Technology.** 2nd edition, Elsevier Science Ltd.

Tortora GJ, Funke BR, and Case CL. (2008). **Microbiology: An introduction**. 9th Edition. Pearson Education

Willey JM, Sherwood LM AND Woolverton CJ (2013), Prescott, Harley and Klein's **Microbiology**. 9th Edition. McGraw Hill Higher education

Chairman Board of Studies (PG)
MICROBIOLOGY
S. V. UNIVERSITY
TIRUPATI-517 502 A.P.
11/8/17

SUBJECT :: B.Sc., MICROBIOLOGY (CBCS) MODEL QUESTION PAPER
THIRD YEAR – SEMESTER – V
Paper – VI: FOOD AND INDUSTRIAL MICROBIOLOGY

Max Marks - 75 **Time : 3 hrs**

SECTION – A

ANSWER ANY FIVE OF THE FOLLOWING 5 x 5 = 25 M

Draw labeled diagrams wherever necessary

1. Food intoxication.
2. Yogurt.
3. Oyster mushrooms.
4. Importance of Moulds.
5. Batch fermentation.
6. Centrifugation.
7. Vitamin B_{12}.
8. Amylase.

SECTION – A

ANSWER ANY FIVE OF THE FOLLOWING 5 x 10 = 50 M

9. a) Discuss about intrinsic and extrinsic factors that affects microbial growth in food.

   (or)

   b) Comment on food-borne diseases and their detection.

10. a) What are the different types of food preservation?

    (or)

    b) Write an essay on probiotics and their benefits.

11. a) Describe the design of Fermenter.

    (or)

    b) Describe the different fermentation media.

12. a) Discuss the industrial production of citric acid.

    (or)

    b) Describe glutamic acid production.

Ch. Bhavagantar
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TIRUPATI-517 502, A.P.
11/8/17

Paper V: Electricity, Magnetism& Electronics

(For Maths Combinations)

V SEMESTER

Work load: 60 hrs per semester **4 hrs/week**

UNIT-I (12 hrs)

1. Electric field intensity and potential:

Gauss's law statement and its proof- Electric field intensity due to (1) Uniformly charged sphere and (2) an infinite conducting sheet of charge. Electrical potential – equipotential surfaces- potential due to i) a point charge, ii)charged spherical shell and uniformly charged sphere.

2. Dielectrics:

Electric dipolemoment and molecular polarizability- Electric displacement D, electric polarization P – relation between D, E and P- Dielectric constant and susceptibility. Boundary conditions at the dielectric surface.

UNIT-II (12 hrs)

3. Electric and magnetic fields

Biot-Savart's law, explanation and calculation of B due to long straight wire, a circular current loop and solenoid – Lorentz force – Hall effect – determination of Hall coefficient and applications.

4. Electromagnetic induction

Faraday's law-Lenz's law- Self and mutual inductance, coefficient of coupling, calculation of self inductance of a long solenoid, energy stored in magnetic field.Transformer - energy losses - efficiency.

UNIT-III (12 hrs)

5. Alternating currents and electromagnetic waves

Alternating current - Relation between current and voltage in LR and CR circuits,vector diagrams, LCR series and parallel resonant circuit, Q –factor, power in ac circuits.

6. Maxwell's equations

Idea of displacement current - Maxwell's equations (integral and differential forms) (no derivation), Maxwell's wave equation (with derivation), Transverse nature of electromagnetic waves.Poynting theorem (statement and proof), production of electromagnetic waves (Hertz experiment).

UNIT-IV (12 hrs)

7. Basic electronics:

PN juction diode, Zener diode, Tunnel diode, I-V characteristics, PNP and NPN transistors, CB, CE and CC configurations – Relation betweenα, β and γ - transistor (CE) characteristics -Determination of hybrid parameters, Transistor as an amplifier.

UNIT-V: (12 hrs)

8. Digital electronics

Number systems - Conversion of binary to decimal system and vice versa.Binary addition and subtraction (1's and 2's complement methods).Laws of Boolean algebra - De Morgan's laws-statement and proof, Basic logic gates, NAND and NOR as universal gates, exclusive-OR gate, Half adder and Full adder, Parallel adder circuits.

REFERENCE BOOKS

1. BSc Physics, Vol.3, Telugu Akademy, Hyderabad.
2. Electricity and Magnetism, D.N. Vasudeva. S. Chand & Co.
3. Electricity, Magnetism with Electronics, K.K.Tewari, R.Chand& Co.,
4. Principles of Electronics, V.K. Mehta, S.Chand& Co.,
5. Digital Principles and Applications, A.P. Malvino and D.P.Leach, Mc GrawHill Edition.

Practical Paper V:Electricity, Magnetism & Electronics

Work load: 30 hrs **2 hrs/week**

Minimum of 6 experiments to be done and recorded

1. Figure of merit of a moving coil galvonometer.
2. LCR circuit series/parallel resonance, Q factor.
3. Determination of ac-frequency –sonometer.
4. Verification of Kirchoff's laws and maximum power transfer theorem.
5. Field along the axis of a circular coil carrying current.
6. PN Junction Diode Characteristics
7. Zener Diode Characteristics
8. Transistor CE Characteristics- Determination of hybrid parameters
9. Logic Gates- OR,AND,NOT and NAND gates. Verification of Truth Tables.
10. Verification of De Morgan's Theorems.

Suggested student activities
Student seminars, group discussions, assignments, field trips, study project and experimentation using virtual lab

Examples
Seminars - A topic from any of the Units is given to the student and asked to give a brief seminar presentation.
Group discussion - A topic from one of the units is given to a group of students and asked to discuss and debate on it.
Assignment - Few problems may be given to the students from the different units and asked them to solve.
Field trip - Visit to Satish Dhawan Space Centre, Sriharikota / Thermal and hydroelectric power stations / Science Centres, any other such visit etc.
Study project - Web based study of different satellites and applications.

Domain skills:
Logical derivation, experimentation, problem solving, data collection and analysis, measurement skills

***** Documental evidence is to be maintained for the above activities.**

Paper VI: Modern Physics

(For Maths Combinations)

V SEMESTER

Work load: 60 hrs per semester **4 hrs/week**

UNIT-I (12 hrs)

1. Atomic and molecular physics

Introduction –Drawbacks of Bohr's atomic model- Sommerfeld's elliptical orbits-relativistic correction (no derivation).Vector atom model and Stern-Gerlach experiment - quantum numbers associated with it. L-S and j- j coupling schemes.Zeeman effect and its experimental arrangement.

Raman effect, hypothesis, Stokes and Anti Stokes lines. Quantum theory of Raman effect. Experimental arrangement – Applications of Raman effect.

UNIT-II (12 hrs)

2. Matter waves & Uncertainty Principle

Matter waves, de Broglie's hypothesis - wavelength of matter waves, Properties of matter waves - Davisson and Germer experiment – Phase and group velocities.

Heisenberg's uncertainty principle for position and momentum (x and p), & energy and time (E and t). Experimental verification - Complementarity principle of Bohr.

UNIT-III (12 hrs)

3. Quantum (wave) mechanics

Basic postulates of quantum mechanics-Schrodinger time independent and time dependent wave equations-derivations. Physical interpretation of wave function. Eigen functions, Eigen values. Application of Schrodinger wave equation to particle in one dimensional infinite box.

UNIT-IV(12 hrs)

4. General Properties of Nuclei

Basic ideas of nucleus -size, mass, charge density (matter energy), binding energy, angular momentum, parity, magnetic moment, electric moments. Liquid drop model and Shell model (qualitative aspects only) - Magic numbers.

5. Radioactivity decay:

Alpha decay: basics of α-decay processes. Theory of α-decay, Gamow's theory, Geiger Nuttal law.β-decay, Energy kinematics for β-decay, positron emission, electron capture, neutrino hypothesis.

UNIT-V (12 hrs)

6. Crystal Structure

Amorphous and crystalline materials, unit cell, Miller indices, reciprocal lattice, types of lattices, diffraction of X-rays by crystals, Bragg's law, experimental techniques, Laue's method and powder diffraction method.

7. Superconductivity:

Introduction - experimental facts, critical temperature - critical field - Meissner effect – Isotope effect - Type I and type II superconductors - BCS theory (elementary ideas only) - applications of superconductors.

REFERENCE BOOKS

1. BSc Physics, Vol.4, Telugu Akademy, Hyderabad
2. Molecular Structure and Spectroscopy by G. Aruldhas. Prentice Hall of India, New Delhi.
3. Modern Physics by R. Murugeshan and Kiruthiga Siva Prasath. S. Chand & Co.
4. Modern Physics by G. Aruldhas & P. Rajagopal. Eastern Economy Edition.
5. Concepts of Modern Physics by Arthur Beiser. Tata McGraw-Hill Edition.
6. Quantum Mechanics, Mahesh C Jain, Eastern Economy Edition.
7. Nuclear Physics, Irving Kaplan, Narosa publishing House.
8. Nuclear Physics, D.C.Tayal, Himalaya Publishing House.
9. Elements of Solid State Physics, J.P.Srivastava, Prentice Hall of India Pvt., Ltd.
10. Solid State Physics, A.J. Dekker, McMillan India.

Practical Paper VI:Modern Physics

Work load: 30 hrs **2 hrs/week**

Minimum of 6 experiments to be done and recorded

1. e/m of an electron by Thomson method.
2. Determination of Planck's Constant (photocell).
3. Verification of inverse square law of light using photovoltaic cell.
4. Study of absorption of α-rays.
5. Study of absorption of β-rays.
6. Determination of Range of β-particles.
7. Determination of M & H.
8. Analysis of powder X-ray diffraction pattern to determine properties of crystals.
9. Energy gap of a semiconductor using junction diode.
10. Energy gap of a semiconductor using thermister.

Note: For all the above 8 practical papers the book "B.Sc Practical Physics" by C.L. Arora Published by S.Chand & Co, New – Delhi may be followed.

NOTE: Problems should be solved at the end of every chapter of all units.

Suggested student activities
Student seminars, group discussions, assignments, field trips, study project and experimentation using virtual lab

Examples
Seminars - A topic from any of the Units is given to the student and asked to give a brief seminar presentation.
Group discussion - A topic from one of the units is given to a group of students and asked to discuss and debate on it.
Assignment - Few problems may be given to the students from the different units and asked them to solve.
Field trip - Visit to Satish Dhawan Space Centre, Sriharikota / Thermal and hydroelectric power stations / Science Centres, any other such visit etc.
Study project - Web based study of different satellites and applications.

Domain skills:
Logical derivation, experimentation, problem solving, data collection and analysis, measurement skills

***** Documental evidence is to be maintained for the above activities.**

Paper V : Electricity, Magnetism& Electronics

(For Non-Maths Combinations)

V SEMESTER

Work load: 60 hrs per semester **4 hrs/week**

UNIT-1(15 hrs)

1. Electric field and potential

Coulomb's law – electric field and intensity of electric field –intensity of electric field due to i) a point charge–electric dipole and dipole moment. Electric lines of force, Electric flux.Gauss's law statement and its proof- applications of Gauss Law to (1) Uniformly charged sphere (2) an infinite conducting sheet of charge (No Derivation- qualitative ideas only). Electrical potential – equi-potential surfaces- potential due to i) a point charge, ii)charged spherical shell.Equi-potential surfaces with examples.

UNIT-II(10 hrs)

2. Capacitance and dielectrics

Derivation of expression for capacity due to i) a parallel plate capacitor with and without dielectric, ii) a spherical capacitor. Energy stored in a capacitor, electric capacitance. Electric dipole moment Di-electrics with examples, effect of electric field-electric displacement D, electric polarization P, permeability &susceptibility (Definitions only) – relation between D,E and P.Dipolemoment of heart.

UNIT-III (10 hrs)

3. Current electricity

Current and current density, drift velocity expression, Kirchhoff's laws –statement and explanation and application to Wheatstone bridge, sensitivity of Wheatstone bridge, Carey-Foster's bridge- experimentalmeasurement of temperature coefficient of resistance- strain gauge-piezoelectric transducers (applications only)

UNIT-IV (15 hrs)

5. Electromagnetism

Magnetic induction B, magnetic flux – Biot –Savart's law, magnetic induction due to (i) a long straight conductor carrying current (ii) on the axis of a circular coil carrying current (iii) solenoid, (No derivation-qualitative treatment only) Ampere's law – derivation of expression for the force on (i) charged particles and (ii) current carrying conductor in the magnetic field, Hall effect and its importance-electromagnetic pumping.

Faraday's law of electromagnetic induction, Lenz's law - Construction, theory and working of a Moving Coil Ballistic Galvanometer,application of B.G. damping correction, Self induction, Mutual induction and their units- Electromagnetic measurement of blood flow.

UNIT-V(12 hrs)

6. Basic Electronics

PN junction diode, Zener diode and its V-I characteristics, half and full wave rectifiers(semiconductor type) (working qualitative ideas only).Bridge type full wave rectifier.Action of filters- Land π type.PNP and NPN transistors and charactrestics,Configurations Transistor configurations – CE transistor characteristics – h-parameters – Transistor as an amplifier.

Number system, conversion of binary to decimal and vice versa, De Morgans's theorems statements - logic gates – verification of truth tables, NAND and NOR gates as universal gates, Half and Full adders.

REFERENCE BOOKS

1. B.Sc., Physics, Vol.3, Telugu Academy, Hyderabad
2. Modern Physics by R. Murugeshan and Kiruthiga Siva Prasath – S. Chand & Co.
3. Electricity and Magnetism, Brijlal and Subramanyam. RatanPrakashanMandir.
4. Physics for Biology & Premedical Students –DN Burns & SG MacDonald, Addison Wiley.
5. Principles of Electronics, V.K. Mehta, S.Chand & Co.,
6. Digital Principles and Applications, A.P. Malvino and D.P.Leach, Mc GrawHill Edition.

Practical Paper V: Electricity, Magnetism& Electronics

Work load: 30 hrs **2 hrs/week**

Minimum of 6 experiments to be done and recorded

1. Figure of merit of a moving coil galvonometer.
2. LCR circuit series/parallel resonance, Q factor.
3. Determination of ac-frequency –sonometer.
4. Verification of Kirchoff's laws and maximum power transfer theorem.
5. Field along the axis of a circular coil carrying current.
6. PN Junction Diode Characteristics
7. Zener Diode Characteristics
8. Transistor CE Characteristics- Determination of hybrid parameters
9. Logic Gates- OR, AND,NOT and NAND gates. Verification of Truth Tables.
10. Verification of De Morgan's Theorems.

Suggested student activities

Student seminars, group discussions, assignments, field trips, study project and experimentation using virtual lab

Examples

Seminars - A topic from any of the Units is given to the student and asked to give a brief seminar presentation.

Group discussion - A topic from one of the units is given to a group of students and asked to discuss and debate on it.

Assignment - Few problems may be given to the students from the different units and asked them to solve.

Field trip - Visit to Satish Dhawan Space Centre, Sriharikota / Thermal and hydroelectric power stations / Science Centres, any other such visit etc.

Study project - Web based study of different satellites and applications.

Domain skills:

Logical derivation, experimentation, problem solving, data collection and analysis, measurement skills

***** Documental evidence is to be maintained for the above activities.**

Paper VI: Modern Physics

(For Non-Maths Combinations)

V SEMESTER

Work load: 60 hrs per semester **4 hrs/week**

UNIT-1(10 hrs)

1. Spectroscopy

Introduction - Zeeman effect - Experimental verification – Paschen Back effect – Stark effect – Explanations (elementary ideas only) - Raman effect, hypothesis, classical and quantum theory of Raman effect. Experimental arrangement for Raman effect and its application.

UNIT-II (12 hrs)

1. Fundamentals of quantum mechanics

Photoelectric effect – Explanation through demonstration, Einstein's Photoelectric equation – its verification by Millikan's experiment –theory of Compton effect (no derivation) and its experimental verification –Bohr's theory of Hydrogen atom – Derivation of expression for energy levels and spectral series of Hydrogen atom, atomic excitation, Frank Hertz experiment.

UNIT-III (10 hrs)

3. Matter Waves and uncertainty principle

Dual nature of radiation- de Broglie's theory of matter waves, expression for wavelength, properties of matter waves, Davisson and Germer experiment on electron diffraction – Discussion of results, Wave velocity and group velocity.
Heisenberg's uncertainty principle for position and momentum (x and p), energy and time (E and t).Experimental illustrations of uncertainty principal, Complementary principle of Bohr.

UNIT-IV: (12 hrs)

4. Radioactivity and radiation protection

The nature of radioactive emissions, the law of Radioactive decay, derivation, decay constant, Half life and mean life periods - derivations, units of radio activity, Carbon and Uranium dating (explanation) - Age of earth and rocks, Radioactive isotopes as tracers, radio cardiography. Principles of radiation protection– protective materials-radiation effects – somatic, genetic stochastic & deterministic effect, Natural radioactivity, Biological effects of radiation, Radiation monitors**.**

UNIT-V (16 hrs)

5. Crystal Structure

Amorphous and crystalline materials, unit cell, Miller indices, reciprocal lattice, types of lattices, diffraction of X-rays by crystals, Bragg's law, experimental techniques, Laue's method and powder diffraction method.

6. Superconductivity:

Introduction - experimental facts, critical temperature - critical field - Meissner effect – Isotope effect - Type I and type II superconductors - BCS theory (elementary ideas only) - applications of superconductors.

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3. Physics for Biology & Premedical Students –D.N. Burns & SG Mac Donald, Addison Wiley.
4. Modern Physics by R. Murugeshan and Kiruthiga Siva Prasath. S. Chand & Co.
5. Basic Radiological Physics Dr. K. Thayalan - Jayapee Brothers Medical Publishing Pvt. Ltd. New Delhi (2003)
6. Physics of Radiation Therapy : F M Khan - Williams and Wilkins, Third edition (2003)
7. The Physics of Radiology-H E Johns and Cunningham.

Practical Paper VI: Modern Physics& Medical Physics

Work load: 30 hrs **2 hrs/week**

Minimum of 6 experiments to be done and recorded

1. e/m of an electron by Thomson method.
2. Determination of Planck's Constant (photocell).
3. Verification of inverse square law of light using photovoltaic cell.
4. Study of absorption of α-rays.
5. Study of absorption of β-rays.
6. Determination of M & H.
7. Analysis of powder X-ray diffraction pattern to determine properties of crystals.
8. Energy gap of a semiconductor using junction diode.
9. Energy gap of a semiconductor using thermister.
10. Characteristics of LDR.

Suggested student activities

Student seminars, group discussions, assignments, field trips, study project and experimentation using virtual lab

Examples

Seminars - A topic from any of the Units is given to the student and asked to give a brief seminar presentation.

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Note: For all the above 8 practical papers the book "B.Sc Practical Physics" by C.L.Arora Published by S.Chand& Co, New – Delhi may be followed.

NOTE: Problems should be solved at the end of every chapter of all units.

MODEL PAPER

THREE YEAR B.Sc DEGREE EXAMINATION
CHOICE BASED CREDIT SYSTEM
FIFTH SEMESTER: PART II: PHYSICS
PAPER V: ELECTRICITY AND MAGNETISM
(FOR NON MATHEMATICS COMBINATIONS)

Time: 3 Hours Max. Marks: 75

Section-A (Essay type)

Answer All questions **Marks :10x5 = 50**

1. (a) Define Electric flux. State and prove Gauss law in electrostatics.

(OR)

(b) Define the electrical potential and derive an expression for the potential due to a charged spherical shell.

2. (a) Derive an expression for the capacitance of a parallel plate capacitor with and without dielectric medium.

(OR)

(b) Define electric displacement (D), electric field (E) and electric polarization (P) and derive the relation between D, E and P.

3. (a) Describe an experiment to measure the temperature coefficient of resistance of a material using Carey-Foster's Bridge.

(OR)

(b) State and explain Hall effect and write its importance.

4. (a) Explain Biot-Savart`s law and derive an expression for magnetic induction due to on the axis of a circular coil carrying current.

(OR)

(b) Describe the construction and working of Ballistic Galvanometer with necessary theory and write it`s uses.

5. (a) Explain half wave and full wave rectifiers using semiconductor diodes and draw input and output waveforms.

(OR)

(b) Explain the construction and working of OR, AND and NOT logic gates and verify with truth tables.

N. Venkateswara Reddy

(Dr. N. Venkateswara Reddy)
H.O.D of physics
S.V. Arts college, Tirupati.

Section-B (Short answer type)

Answer any three questions **Marks: 5 x3 = 15**

6. Explain equipotential surfaces with examples.

7. Derive an expression for energy stored in a capacitor.

8. State and explain Kirchoff's laws.

9. Write a short note on the electromagnetic measurement of blood flow.

10. State and prove de Morgans theorems.

Section-C

Answer any two questions **Marks: 5x2 = 10**

11. Radius of the gold nucleus is 6.6×10^{-15}m and its atomic number is 79. Calculate the potential on the surface of the gold nucleus.

12. A parallel plate capacitor with area of plates $1m^2$ and distance between the plates 0.1 mm, has a dielectric constant 5 as the medium between the plates. If this capacitor is charged to 100 V, calculate the energy stored in it.

13. A galvanometer of resistance 50Ω has current maximum 1mA. How this galvanometer is Converted into 0 to 10mA ammeter and 0 to 5 V voltmeter.

14. Calculate the self inductance of a solenoid of length 1m and area of cross section 0.01 m^2 with 200 turns.

15. Find the decimal equivalent of $(11001.011)_2$

N. Venu

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MODEL PAPER

THREE YEAR B.Sc DEGREE EXAMINATION
CHOICE BASED CREDIT SYSTEM
FIFTH SEMESTER: PART II: PHYSICS
PAPER VI : MODERN PHYSICS AND ELECTRONICS
(FOR NON MATHEMATICS COMBINATIONS)

Time: 3 Hours Max. Marks: 75

Section-A (Essay type)

Answer All questions **Marks :10x5 = 50**

1. (a) What is Zeeman effect ? Explain the experimental verification for Zeeman effect.

(OR)

(b) What is Raman effect ? Explain the experimental arrangement for Raman effect .

2. (a) What is Compton effect ? Explain its experimental verification.

(OR)

(b) Explain the Frank Hertz experiment and write its uses.

3. (a) Define de Broglie wave? Explain how Davisson and Germer predicated experimentally the electron waves predicated by de Broglie.

(OR)

(b) Explain the Heisenberg`s uncertainty principle. Describe the experimental illustrations of uncertainty principle using gamma ray microscope.

4.(a) Explain the law of Radioactive decay and derive expressions for decay constant, half life and mean life periods.,

(OR)

(b) Explain Carbon and Uranium dating with examples.

5. (a) What is Bragg`s law ? Explain Bragg`s X-ray spectrometer to determine the wave length Of X- rays.

(OR)

(b) Define the phenomenon of super conductivity, explain Meissner effect and write the uses of superconductors.

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S.V. ARTS COLLEGE
TIRUPATI.

Section-B (Short answer type)

Answer any three questions **Marks: 5 x3 = 15**

6. Write the applications of Raman effect.
7. Explain the Einstein`s photoelectric effect equation.
8. Explain the complementary principle of Bohr.
9. Discuss the biological effects of nuclear radiation.
10. Write the properties of superconducting materials.

Section-C

Answer any two questions **Marks: 5x2 = 10**

11. The original line in an Raman experiment is 5460 A^o and the stokes line is at 5520 A^o Find the wavelength of anti-stokes line.
12. A photon of wavelength 3310 A^o falls on a photo cathode and ejects an electron of maximum energy $3x10^{-9}$ joules. Calculate the work function of the cathode material. Given that $h=6.62x10^{-34}$J-S, $c=3x10^8$ m/sec.
13. An electron has a speed of 600 m/s with an accuracy of 0.005% . Calculate the certainty with which we can locate the position of the electron. Given that $h = 6.6x10^{-34}$ joule-sec, $m = 9.1x10^{-31}$ kg.
14. The half-life period of radium is 1590 years. In how many years willone gram of pure element be reduced to one centigram ?.
15. The spacing between the principle planes of NaCl crystal in 2.82 A^o. It is found that the first order Bragg reflection occurs at an angle of 10^0. What is the wavelength of X-rays. Given that sin 10^0=0.1736.

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MODEL PAPER

THREE YEAR B.Sc DEGREE EXAMINATIONS, NOV/DEC 2017

CHOICE BASED CREDIT SYSTEM

FIFTH SEMESTER

PART II : PHYSICS

PAPER V: Electricity, Magnetism and Electronics

(For maths combination)

(Revised syllabus w.e.f 2017-18)

Time: 3 Hours Max.Marks:75

SECTION – A (Essay type)

Answer ALL questions (5 x 10 = 50)

అన్నీ ప్రశ్నలకు సమాధానములు వ్రాయుము.

1. (a) Define electric potential. Derive an expression for the potential due to uniformly charged sphere.
విద్యుత్ శక్మమును నిర్వచించుము. ఏకరీతి ఆవేశ పూరిత గోళము వలన కలుగు విద్యుత్ శక్మమునకు సమీకరణమును రాబట్టుము.

OR

(b) Define electric field intensity (E), electric displacement (D), dielectric polarization (P); Obtain the relation between them.
విద్యుత్ క్షేత్ర తీవ్రత (E), విద్యుత్ స్థాన భ్రంశము (D) మరియు రోధక ధ్రువణము (P) లను నిర్వచించి, వాటి మధ్య సంబంధమును ఉత్పాదించుము.

2. (a) State Biot – Savart's law. By using it calculate magnetic induction 'B' due to long straight wire.
బయోట్ – సావర్ట్ నియమమును తెల్పుము. ఈ నియమమునుపయోగించి పొడవైన తిన్నని తీగ వలన కలుగు అయస్కాంత ప్రేరణ B ను కనుగొనుము.

OR

(b) State Faraday's laws of electromagnetic induction. Derive an expression for the self inductance of a solenoid.
విద్యుత్ అయస్కాంత ప్రేరణ కు సంబంధించిన ఫారడే నియమములను తెల్పుము. సాలినాయిడ్ యొక్క స్వయం ప్రేరణ కు సమీకరణమును రాబట్టుము.

3. (a) Obtain the expression for the resonance of a parallel LCR circuit. Find its Q-Factor.
సమాంతర LCR వలయము యొక్క అనునాద సమీకరణమును రాబట్టుము. వలయము యొక్క Q – గుణకమును కనుగొనుము.

OR

(b) State and prove Poynting theorem
పాయింటింగ్ సిద్ధాంతమును నిర్వచించి, నిరూపించుము.

4. (a) What is a Zener diode? In what way it is different from PN junction diode? Explain Zener mechanism.
జీనర్ డయోడు అనగానేమి? జీనర్ డయోడు PN సంధి డయోడు కంటె ఏవిధముగ విభిన్న మైనది? జీనర్ ప్రక్రియను వివరించుము.

OR

(b) What are hybrid parameters of a transistor? How they are determined.
ట్రాన్సిస్టరు యొక్క హైబ్రీడ్ పరామితులు అనగానేమి? వాటిని ఎలా కనుగొంటారు.

5. (a) Explain binary addition and substraction by 1's and 2's complement method.
ఒకట్ల మరియు రెండ్ల పూరక పద్ధతిని రెండు ద్వాంశ సంఖ్యల మొత్తము మరియు వాటి భేదాలను వివరించుము.

OR

14/6/17

(b) Discuss the working of half adder and full adder and give their truth tables.
అర్ధ సంకలని మరియు పూర్ణ సంకలని లు పని చేయు విధానమును వివరించి, వాటి సత్య పట్టికలను వ్రాయండి.

SECTION – B

ANSWER ANY THREE QUESTINONS (5 x 3 = 15)

ఏవైనా మూడు ప్రశ్నలకు సమాధనములు వ్రాయుము

6. State and prove Gauss law.
గౌస్ నియమమును తెల్పి, నిరూపించుము.

7. State and explain Hall effect
హాల్ ఫలితమును తెల్పి, వివరించుము.

8. Write Maxwell's equations in differential form.
మాక్స్ వేల్ సమీకరణములను అవకలన రూపములో వ్రాయుము.

9. Explain the working of a transistor as an amplifier.
ట్రాన్సిస్టరు వర్ధకముగ పనిచేయు విధానమును వివరించుము.

10. State and prove De-Morgan's laws.
డీ మోర్గాన్ నియమములను తెల్పి నిరూపించుము.

SECTION – C

ANSWER ANY TWO QUESTINONS (5 x 2 =10)

ఏవైనా రెండు ప్రశ్నలకు సమాధనములు వ్రాయుము

11. Dielectric constant of a material is 5. Find its permittivity and susceptibility.
ఒక పదార్థము యొక్క రోధక స్థిరాంకము 5. ఆ పదార్థము య్క్క ప్రవేశ్య శీలత మరియు ససెప్టబిలిటి లను కనుగొనుము.

12. Calculate the energy stored in the magnetic field of a solenoid of inductance 5mH, when a maximum current of 3A flows through it.
5mH ప్రేరణ గల సాలినాయిడ్ గుండా గరిష్ట విద్యుత్ ప్రవాహము 3A అయిన ఆ సాలినాయిడ్ లో ఏర్పడిన అయస్కాంత క్షేత్రము లో నిల్వ ఉన్న శక్తి ఎంత?

13. A 60Hz a.c.circuit has an inductor of 10mH and 2Ω resistance. Calculate its power factor.
60Hz పౌనఃపున్యము గల వలయము 10mH ప్రేరణ మరియు 2 Ω నిరోధమును కలిగి ఉంది. ఆ a.c. వలయము యొక్క సామర్థ్య గుణకమును కనుగొనండి.

14. The d.c. current gain of a transistor in common – emitter (CE) configuration is 200. Find the d.c.current gain in CB configuration.
ఉమ్మడి ఉద్గారి విన్యాసములో ఒక ట్రాన్సిస్టరు యొక్క d.c. కరెంటు వృద్ధి గుణకము 200 అయితే ఉమ్మడి ఆధారి విన్యాసంలో కరెంటు వృద్ధి గుణకమును కనుగొనండి.

15. Convert the decimal numbers 18 and 123 into binary numbers.
18 మరియు 123 దశాంశ సంఖ్యలను, ద్వి సంఖ్యామానములోనికి మార్చండి.

Baby 14/6/17

THIRD YEAR PHYSICS EXAMINATIONS

Paper-VI: **MODERN PHYSICS** (For Maths combination)

V SEMISTER

TIME:: 3Hours Max.Marks:: 75

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Answer ALL questions from Part –A, Three from Part –B, Two from Part – C

Part –A లో అన్నిప్రశ్నలకు, Part –B లో మూడు ప్రశ్నలకు, Part – C లో రెండు ప్రశ్నలకు జవాబులు వ్రాయుము

Part –A **5X10=50Marks**

1.a) What is Zeeman effect? Describe its experimental arrangement.
జీమన్ ఫలితము అనగా ఏమి? దీని ప్రయోగ ఏర్పాటును వివరించుము

OR

b) Explain Raman Effect. Describe its experimental arrangement. Give its applications.
రామన్ ఫలితం అనగానేమి? రామన్ ఫలితం ప్రయోగ ఏర్పాట్లు వివరించుము. దాన్ని అనువర్తనాలు ఏమి?

2.a) Describe Davisson – Germer experiment with a neat sketch.
చక్కటి పటముతో డేవిస్సన్-గేర్మెర్ ప్రయోగమును వివరించండి

OR

b) Explain Heisenberg Uncertainty Principle. Describe Gamma ray microscope
హైసన్ బర్గ్ అనిశ్చితత్వ నియమును వివరింపుము. గామ కిరణ సూక్ష్మ దర్శినిని వివరీకరించుము

3.a) Derive Schrodinger time independent and time dependent wave equations
(or) శ్రోడింగర్ కాలస్వతంత్ర మరియు కాలాధర తరంగ సమీకరణాలు ఉత్పాదించండి.

OR

b) Derive Schrodinger wave equation to particle in one dimensional box.
ఏకమితీయ పెట్టెలోని కణమునకు ష్రోడింగర్ సమీకరణమును ఉత్పాదించుము.

4.a) Describe the Liquid drop model of the nucleus
కేంద్ర ద్రవబిందు నమూన గురించి విపులముగా వివరించండి

OR

b) Explain Gamow's theory of Alpha decay
ఆల్ఫా క్షీణతకు గామో సిద్ధాంతం వివరింపుము.

5.a)Derive Bragg's law. Explain the Powder method to determine crystal structure.
బ్రాగ్ సూత్రము ఉత్పాదించండి. స్పటిక నిర్మాణం కనుగొనడానికి చూర్ణ పద్ధతిని వివరించండి.

OR

b) Explain Type I and Type II Super Conductors.
మొదటి మరియు రెండొవ రకము అతివాహకాలను వివరింపుము

Part –B **3X5=15 Marks**

6. Explain L-S and J-J Coupling
L-S మరియు J-J సంధానములను వివరించుము

7. Write Properties of matter waves.
ద్రవ్య తరంగాల ధర్మాలను వ్రాయుము

8. Eplain postulates of quantum Mechanics
క్వాంటమ్ యాంత్రిక శాస్త్రము యొక్క ప్రతిపాదనలు వ్రాయుము

9. Explain Geiger Nuttal law
గైగర్ న్యూటల్ నియమమును వివరింపుము

10.Explain Meissner effect.
మెస్నర్ ఫలితమును వివరింపుము.

14/6/17

Part –C 2X5=10 Marks

11. In a Raman experiment the sample is excited by 5460 A^0 and the Stokes line is at 5560A^0. Find the wavelength of the anti stokes line.
రామన్ ప్రయోగంలో పదార్థాన్ని 5460 A^0 రేఖతో దీపనం చేసారు. స్టోక్స్ రేఖ తరంగ దైర్ఘ్యం 5560A^0. విరుద్ధ స్టోక్స్ రేఖ తరంగ దైర్ఘ్యం కనుగొనండి.

12. Find the energy of the Neutron in eV whose deBroglie wavelength is $1A^0$. $h=6.6x10^{-34}$ j-s
ఒక న్యూట్రాన్ తరంగదైర్ఘ్యం $1A^0$, $h=6.62x10^{-34}$ j-s అయితే దాని శక్తి కనుగొనండి.

13. An electron of mass $9x10^{-31}$Kg is inside a box of length 10^{-8}cm. Find its minimum energy.
$9x10^{-31}$Kg ద్రవ్యరాశి గల ఒక ఎలెక్ట్రాన్ 10^{-8}cm పొడవు గల ఒక పేటికలో చలిస్తుంటే, దాని కనిష్ట శక్తి ఎంత.

14. Determine the binding energy of deuteron nucleus.Mass of deuteron nucleus is 2.013553 amu.
డ్యూటరాన్ బంధన శక్తికి లెక్కించుము. డ్యూటరాన్ కేంద్రక ద్రవ్యరాశి 2.013553 amu.

15. Calculate the critical current which can flow through a long thin superconductor wire of diameter 10^{-3}m. given $\mu_c = 7.9x10^3$ amp/m.

ఒక సన్నని అతి వాహక తీగ వ్యాసం 10^{-3}m, దానిలో ప్రవహించే సంధిగ్ధ విద్యుత్ ప్రవాహాన్ని లెక్కించండి.
$\mu_c = 7.9x10^3$ amp/m

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14/6/17

SRI VENKATESWSARA UNIVERSITY : TIRUPATI

STATISTICS SYLLABUS

Semester – V (CBCS With Maths Combination Common to BA/BSc)

1-5-145

Paper – V : *Sampling Techniques and Design of Experiments*

3 Hrs/Week

UNIT – I

Sampling Theory :Principal steps in sample surveys - census versus sample survey, sampling and non- sampling errors, advantages of sampling over census and limitations of sampling. Types of sampling: Subjective, probability and mixed sampling methods.

UNIT– II

Simple Random Sampling: simple random sampling , selection procedure of simple random sampling, Estimation of Population mean, Variances in SRSWOR and SRSWR, Advantages and Disadvantages of simple random sampling.

UNIT – III

Stratified random sampling: stratified random sampling, Advantages and Disadvantages of Stratified Random sampling, mean and variance of St.R.S. Allocation of sample size through Proportional and Neyman's or optimum allocation. $V(Ney) \leq V(Prop) \leq V(Ran)$,. Systematic Sampling: Systematic sampling When N=nk comparison of their relative efficiencies i.e $V(Sys) \leq V(St.rs) \leq V(Ran)$, Advantages and disadvantages of Systematic sampling.

UNIT – IV

Analysis of variance : Definition, assumptions, One-way with equal and unequal classification, Two-way classifications. Design of Experiments :Definition, Principles of design of experiments, CRD: Layout and analysis of Completely Randomized Design (C.R.D)

UNIT –V

Randomized Block Design (R.B.D) and Latin Square Design (L.S.D) with their layouts and Analysis, Missing plot technique in RBD and LSD. Efficiencies of these designs.

List of reference books :

1. Fundamentals of Applied Statistics. By S.C.Gupta and V.K.Kapoor. Sultan Chand
2. B.A/B.Sc III Year Paper-IV Statistics- applied Sttistics- Telugu Academic by Prof.K.Srinivasa RAo, Dr.D. Giri,Dr.A.Anand, Dr.V.Papaiah Sastry
3. B.A/B.Sc Statistics Paper-III by DVLN Jogiraju, C.Srikala, Palnati Sudarsan
4. Prayoga Rachana and Visleshana – Telugu Academy.
5. K.V.S. Sarma: Statistics made simple : do it yourself on PC. PHI
6. Anuvartita Sankhyaka sastram – Telugu Academy.

V Semester Practicals: Statistics

Semester – V (CBCS With Maths Combination Common to BA/BSc)

Paper V: Sampling Techniques and Design of Experiments

2 Hrs/Week

1. Estimation of population mean, Variance by SRSWOR and SRSWR Method and verification.
2. Allocation of Sizes through Proportional and optimal allocations
3. Showing of $V(Opt) \leq V(Prop) \leq V(Ran)$
4. showing of $V(sys) \leq V(st.rs) \leq V(Ran)$.
5. ANOVA for one – way classification with equal and unequal of observations
6. ANOVA for Two – way classification.
7. Analysis of CRD
8. Analysis of RBD
9. Missing plot technique in RBD
10. Analysis of LSD
11. Missing plot technique in LSD

Note : The above practical are to be done using M S Excel Package where ever it is possible (Compulsory)

THREE YEAR B.A/BSC. DEGREE EXAMINATION

CBCS – FIFTH SEMESTER

Part - II - STATISTICS (WM)

Paper V : Sampling Techniques and Design of Experiments

Revised syllabus w.e.f. 2017 - 18

MODEL PAPER

Time : 3 Hours **Max Marks : 75**

PART - A

Answer any **FIVE** of the following questions.
Each question carries **5** marks **5X5 = 25Marks**

1. Explain about sampling frame?
2. Describe about Response and Non Response errors?
3. A population has the values -5,10,3,-2, and 11. Then draw simple random samples of size 3 by without replacement method and show that $E(\bar{y}) = \bar{Y}$
4. What is the need for having stratification?
5. How do you say that systematic sampling becomes more efficient than simple random sampling when $S_{wsy}^2 \leq S^2$
6. Mention the Merits and Demerits of Two way classification?
7. How do you construct Latin square design?
8. Define the terms Treatments, Blocks and Experimental Error with examples?

PART – B

Answer **ONE** question from each unit.

Each question carries 10 marks. **5x10 = 50 Marks**

UNIT – I

9. Discuss various steps involved in conducting large scale sample survey?

(OR)

10. What do you meant by sampling and Non Sampling errors? How do you control these errors?

UNIT – II

11. Describe about SRSWOR and SRSWR methods? Give the properties and draw backs of these two methods?

(OR)

12. In SRSWOR method prove that $E(s^2) = S^2$ and $V(\bar{y}) = \frac{N-n}{N} \frac{S^2}{n}$

UNIT – III

13. In Stratified Random Sampling , derive the formula for variance of sample mean and variance for unbiased estimate of the population total?

(OR)

14. With your usual notations Prove that V(Opt) ≤ V(Prop) ≤ V(Ran)?

UNIT – IV

15. Define Analysis of variance? Mention the properties and applications involved in ANOVA?

(OR)

16.Describe Analysis of variance of Two Way classification ?

UNIT – V

17. How do you estimate single missing observation in Latin Square Design?

OR

18. Derive Relative Efficiency of LSD over RBD and CRD?

SRI VENKATESWARA UNIVERSITY : TIRUPATI

STATISTICS SYLLABUS

Semester – V (CBCS With Maths Combination Common to BA/BSc)

1-5-146

Paper – VI : Statistical Quality Control and Reliability

3 Hrs/Week

UNIT – I

Statistical Quality Control : Definition, Importance of SQC in industry. Causes of variation-chance and assignable causes, Process and Product control, Importance of Normal distribution, 3σ control limits, specification limits and Natural tolerance limits.

UNIT– II

Shewart control charts – Variable Control Charts- $\bar{X}$ and R-chart, $\bar{X}$ and S- chart Attribute type of charts - np- chart(No.of defectives) , p- chart(Proportion of defective)with and C-Chart, its applications.

UNIT – III

Acceptance sampling plans: Definition, Types of Accepting sampling plans, Merits and demerits of Acceptance sampling plans, applications, Concept of AOQ, AQL and LTPD, ASN, ATI, AOQL. Producers risk and consumer's risk.

UNIT – IV

Single and Double sampling plans for attributes and derivation of their OC and ASN functions. Design of single and double sampling plans for attributes

UNIT – V

Reliability: Meaning and concept of reliability, Reliability measures –Failure Density, Failure Rate or Hazard function , Probability of Failure, Mean Time to Failure(MITF), Mean Time Between Failures(MTBF), Exponential distribution as life model, its memory- less property.

List of reference books :

1. Fundamentals of Applied Statistics. By V.K.Kapoor and S.C.Gupta ,Sultan Chand
2. Reliability and life testing by S.K.Sinha, Wiley Eastern
3. Statistical Quality Control by R.C.Gupta:
4. B.A/B.Sc III Year Paper-IV Statistics- applied Sttistics- Telugu Academic by Prof.K.Srinivasa RAo, Dr.D. Giri,Dr.A.Anand, Dr. V.Papaiah Sastry
5. B.A/B.Sc Statistics Paper-IV Statistics, Quality, Reliability and OR by DVLN Jogiraju, C.Srikala, Palnati Sudarsan

V Semester Practicals: Statistics

Semester – V (CBCS With Maths Combination Common to BA/BSc)

Paper VI: Statistical Quality Control and Reliability

2 Hrs/Week

1.Construction of Mean($\bar{X}$) and Range(R) Charts

2. Construction of Mean($\bar{X}$) and S.D(s) Charts.

3.Construction of np- Chart (No.of defectives)

4.Construction of p-chart (Proportion of defectives) with fixed sample size

5. Construction of p- Chart (Proportion of defectives) with variable sample size

6.Construction of C Chart (No.of defects)

7.Construction of OC curves

8. Construction of ASN curve

9.Calculation of Failure density, Failure Rate Reliability, Probability of Failure

Note : The above practical are to be done using M S Excel Package where ever it is possible (Compulsory)

THREE YEAR B.A/BSC. DEGREE EXAMINATION

CBCS – FIFTH SEMESTER

Part - II - STATISTICS (WM)

Paper – VI : Statistical Quality Control and Reliability

Revised syllabus w.e.f. 2017 - 18

MODEL PAPER

Time : 3 Hours **Max Marks : 75**

PART - A

Answer any **FIVE** of the following questions.
Each question carries **5** marks **5X5 = 25Marks**

1. Give the importance of SQC in industries?
2. Explain about Process and Product control?
3. Describe about 3 σ control limits in SQC?
4. Distinguish between control charts for variables and attributes?
5. Discuss about producers risk and consumers risk?
6. Mention the Merits and Demerits sampling inspection?
7. Define about Operating characteristic curve and its interpretation?
8. Define the terms Failure Rate and Mean Time to Failure Rate with examples?

PART – B

Answer **ONE** question from each unit.

Each question carries 10 marks. **5x10 = 50 Marks**

UNIT – I

9. Describe the importance of normal distribution in SQC?

(OR)

10. Explain about Specification, Tolerance limits?

UNIT – II

11. Describe the Construction of $\bar{X}$ and R charts?

(OR)

12. The following data is related to defectives of 15 samples each containing 750 items then construct fraction defectives chart and give suitable comment.

250, 22, 138,456, 18, 322, 74, 154, 204, 35, 410, 84, 322, 38, 102,

UNIT – III

13. Explain the need for having sampling inspection?

(OR)

14. Describe about Acceptance Quality Level, Lot tolerance percent defective and Average Outgoing Quality Level.

UNIT – IV

15. Describe the construction of Operating Characteristic Curve and also give its properties?

(OR)

16.Deduce the construction and interpretation of Double Sampling Plan?

UNIT – V

17. Define reliability and mention advantages of reliability programme?

OR

18. Derive Lack of memory property of Exponential Distribution in the light of reliability theory.

ZOOLOGY SYLLABUS FOR V SEMESTER
ZOOLOGY - PAPER – V

3-5-131

ANIMAL BIOTECHNOLOGY

Periods:60 **Max. Marks:100**

Unit 1: Tools of Recombinant DNA technology - Enzymes and Vectors
Restriction modification systems: Types I, II and III. Mode of action, nomenclature, applications of Type II restriction enzymes in genetic engineering

DNA modifying enzymes and their applications: DNA polymerases. Terminal deoxynucleotidyl transferase, kinases and phosphatases, and DNA ligases

Cloning Vectors: Plasmid vectors:pBR and pUC series, Bacteriophage lambda and M13 based vectors, Cosmids, BACs, YACs,

Unit 2 Techniques of Recombinant DNA technology

Cloning: Use of linkers and adaptors

Gene delivery: Microinjection, electroporation, biolistic method (gene gun), liposome and viral-mediated delivery
PCR: Basics of PCR.
DNA Sequencing: Sanger's method of DNA sequencing- traditional and automated sequencing
Hybridization techniques: Southern, Northern and Western blotting,
Genomic and cDNA libraries: Preparation and uses

UNIT 3 Animal Cell Technology
Cell culture media: Natural and Synthetic
Cell cultures: primary culture, secondary culture, continuous cell lines; Protocols for Primary Cell Culture; Established Cell lines (common examples such as MRC, HeLa, CHO, BHK, Vero);
Hybridoma Technology: Cell fusion, Production of Monoclonal antibodies (mAb), Applications of mAb
Stem cells: Types of stem cells, applications

Unit 4 Reproductive Technologies & Transgenic Animals
Manipulation of reproduction in animals: Artificial Insemination, *In vitro* fertilization, super ovulation, Embryo transfer, Embryo cloning

Unit 5 Applied Biotechnology
Industry: Fermentation: Different types of Fermentation: Short notes on - Submerged & Solid state; batch, Fed batch & Continuous; Stirred tank, Air Lift, Fixed Bed and Fluidized; Downstream processing - Filtration, centrifugation, extraction, chromatography, spray drying and lyophilization

ZOOLOGY PRACTICAL SYLLABUS FOR V SEMESTER
ZOOLOGY - PAPER - V
ANIMAL BIOTECHNOLOGY

Periods: 24 **Max. Marks: 50**

Any SIX of the following:

1. Maintenance and storage of*E.coli* DH5 alpha cells.
2. DNA quantification using agarose gel electrophoresis (by using lambda DNA as standard).
3. Preparation for insertion and vector for ligation.
4. Preparation of competent cells
5. Transformation of *E. coli* with plasmid DNA using CaCl2,
6. Techniques: Western Blot, Southern Hybridization, DNA Fingerprinting
7. Amplification of DNA by PCR
8. Packing and sterilization of glass and plastic wares for cell culture.
9. Preparation of culture media.

SUGGESTED READING

1. Brown TA. (2010). Gene Cloning and DNA Analysis. 6th edition. Blackwell Publishing, Oxford, U.K.
2. Clark DP and Pazdernik NJ. (2009). Biotechnology: Applying the Genetic Revolution. Elsevier Academic Press, USA
3. Primrose SB and Twyman RM. (2006). Principles of Gene Manipulation and Genomics, 7th edition. Blackwell Publishing, Oxford, U.K.
4. Sambrook J and Russell D. (2001). Molecular Cloning-A Laboratory Manual. 3rd edition. Cold Spring Harbor Laboratory Press
5. Wiley JM, Sherwood LM and Woolverton CJ. (2008). Prescott, Harley and Klein's Microbiology. McGraw Hill Higher Education
6. Brown TA. (2007). Genomes-3. Garland Science Publishers
7. Primrose SB and Twyman RM. (2008). Genomics: Applications in human biology. Blackwell Publishing, Oxford, U.K.
8. Animal Cells Culture and Media, D.C. Darling and S.J. Morgan, 1994.BIOS Scientific Publishers Limited.
9. Methods in Cell Biology, Volume 57, Jennie P. Mathur and David Barnes, 1998. Animal Cell Culture Methods Academic Press.
10. P.K. Gupta: Biotechnology and Genomics, Rastogi publishers (2003).
11. B.D. Singh: Biotechnology, Kalyani publishers, 1998 (Reprint 2001)

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ZOOLOGY SYLLABUS FOR V SEMESTER

ZOOLOGY - PAPER - VI

3-5-132

ANIMAL HUSBANDRY

Periods:60 **Max. Marks: 100**

UNIT – I : 10 Hours

General introduction to poultry farming. Principles of poultry housing. Poultry houses. Systems of poultry farming. Management of chicks, growers and layers. Management of Broilers.

UNIT – II: 10 Hours

Poultry feed management – Principles of feeding. Nutrient requirements for different stages of layers and broilers. Methods of feeding. Poultry diseases – viral, bacterial, fungal and parasitic (two each); symptoms, control and management.

UNIT – III: 10 Hours

Selection, care and handling of hatching eggs. Egg testing. Methods of hatching. Brooding and rearing. Sexing of chicks.

UNIT- IV: 20 Hours

Breeds of Dairy Cattle and Buffaloes – Definition of breed; Classification of Indian Cattle breeds, exotic breeds and Indian buffalo breeds. Systems of inbreeding and crossbreeding. Housing of dairy animals – Selection of site for dairy farm; systems of housing – loose, housing system. Conventional dairy barn. Cleaning and sanitation of dairy farm. Weaning of calf. Castration and dehorning. Deworming and Vaccination programme. Records to be maintained in a dairy farm.

UNIT - V: 10 Hours

Care and management of dairy animals - Care and management of calf, heifer, milk animal, dry and pregnant animal, bulls and bullocks.

ZOOLOGY PRACTICAL SYLLABUS FOR V SEMESTER

ZOOLOGY –PRACTICAL - VI

ANIMAL HUSBANDRY

Periods:24 **Max. Marks: 50**

1. Study of various breeds of layers and broilers (photographs)
2. Identification of disease causing organisms in poultry birds (as per theory)
3. Study of the anatomy of a poultry bird by way of dissecting a bird. (Demonstration)
4. Study of various activities in a poultry farm (layers and broilers) and submission of a report.
5. Study of various breeds of cattle (photographs/microfilms)
6. Study of various activities carried out in a dairy farm and submission of a report.

ZOOLOGY MODEL PAPER FOR V SEMESTER

ZOOLOGY PAPER-V

ANIMAL BIO-TECHNOLOGY

Time: 3 hrs **Max Marks:75**

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I. Answer any **FIVE** of the following: 5x5=25 marks
Draw labeled diagrams wherever necessary

1. Restriction Enzymes
2. DNA Polymerase
3. PBR Vector
4. Microinjection Technique
5. PCR
6. Cryopreservation
7. In Vitro Fertilization
8. Chromactography

II. Answer any **FIVE** of the following 5x10=50 marks
Draw labeled diagrams wherever necessary

9. Describe DNA modifying enzymes and their applications
OR
Describe cloning vectors with examples

10. Enumearate recombinant DNA technology
OR
Describe the techniques involved in gene delivery system.

11. Define animal cell technology and describe the various cell culture techniques
OR
Define Hybidoma Technology

12. Describe reproductive technologies in animals
OR
Define Embryo Transfer and Embryo cloning
13. Describe different types of fermentation mechanisms
OR
Enumerate the processes involved in Downstream processing

ZOOLOGY PRACTICAL SYLLABUS FOR V SEMESTER 2017-18

ANIMAL BIO-TECHNOLOGY

Time: 2 hrs Max Marks:50

1. Major experiment: prepare the vector for ligataion 20 marks
2. Minor Experiment: Prepare the competent cells 10 marks
3. Identify the spotters describe e important characters with labeled diagram 2x5=10 marks
   a. PCR
   b. Clone- Dolly
4. Certified Record 10 marks

50 marks

(Chairperson)

ZOOLOGY MODEL PAPER FOR V SEMESTER

ELECTIVE - ZOOLOGY PAPER-VI

ANIMAL HUSBANDRY

Time: 3 hrs **Max Marks:75**

==========

I. Answer any **FIVE** of the following: 5x5=25 marks
Draw labeled diagrams wherever necessary

1. Poultry farming
2. Broilers
3. Poultry feed management
4. Methods of Hatching
5. Cross breeding
6. Cleaning and Sanitation of Dairy Farm
7. Vaccination Programme
8. Care and Management in Milk animal

II. Answer any **FIVE** of the following 5x10=50 marks
Draw labeled diagrams wherever necessary

9. Describe the Principles of Poultry
OR
Describe different methods of management of Chiks, Growers and Layers

10. Describe nutrient requirements for Layers and Broilers
OR
Enumerate various Poultry diseases, symptoms, control and managements.

11. Describe the construction of Hatchery
OR
Describe the methods of Hatching in Hatchery.

12. Describe the classification of Indian Cattle
OR
Describe housing of Dairy animals

13. Describe Care taken in Dairy Animals
OR
Describe the various managements of Dairy animals

ZOOLOGY PRACTICAL SYLLABUS FOR V SEMESTER

ELECTIVE-ZOOLOGY PRACTICAL-VI

ANIMAL HUSBANDARY

Time: 2 hrs **Max Marks:50**

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1. Draw a neat labeled diagram of Digestive system pegion/ Fowl 10 marks

2. Poultry/Cattle 4 spotters 4x5=20 marks
   Photographs of any three Birds/Cattle

3. Submission of a report regarding various activities in a poultary form 10 marks

4. Certified Record 10 marks

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50 marks

B. A. HISTORY

III Year B. A. Programme (UG) Courses – Under CBCS

Semester – VI

Paper – VII-(A) :: (Elective Paper)

HISTORY OF MODERN EUROPE (from 19th Century to 1945 A. D.)

(History of Modern World (1821 – 1945))

Unit – 1	Industrial Revolution: Origin, Nature and Impact.
Unit – II	Unification Movements in Italy & Germany and their Impact.
Unit - III	Communist Revolution in Russia – Causes, Course and Results – Impact on World Order.
Unit - IV	World War I: Age of Rivalry in Europe Between 1870 and 1914 – Results of the War – Paris Peace Conference - League of Nations.
Unit – V	World War II: Causes, Fascism & Nazism – Results; The United Nations Organization: Structure, Functions and Challenges.

REFERENCES:

1	J.A.Hobson, Imperialism: A Study
2	C.D. Hazen, Modern Europe up to 1945
3	H.A.L.Fisher, History of Europe
4	C.M.M.Ketelbey, A History of Modern Times
5	Grant and Temperley (ed), Europe in the 18th and 20th Centuries
6	David Thomson, Europe Since Napoleon
7	A.P.J.Taylor, The Struggle for Mastery in Europe
8	S.P.Nanda, History of Modern World
9	S.N.Dhar, International Relations and World Politics Since 1919

Project Work: Project work on the consequences of industrialization & globalization on society and economy should be given to students.

MODEL PAPER -1

Three Year B.A. Programme (UG) Courses - Under CBCS

History (Core Paper VII - Semester VI)

History of Modern Europe 19th C. to 1945 A.D

Time :3 Hrs **Max.Marks : 75**

PART - A

Answer any FIVE questions 5x5=25 M

UNIT - I

1. Reasons for mercantile revolution
   వాణిజ్య విప్లవ ము రావడానికి గల కారణాలు తెలుపండి.
2. 1864 Danish war
   1864 డానిష్ యుద్ధము
3. National Socialism of Stalin
   స్టాలిన్ జాతీయ సామ్యవాదము
4. Formation of USSR
   USSR ఏర్పాటు
5. Moracco Problem.
   మొరాకో సమస్య
6. Zeniva Disarmament Summit.
   జెనీవా నిరాయుధీకరణ సమావేశము
7. WHO
   ప్రపంచ ఆరోగ్య సంస్థ
8. UNICEF
   అంతర్జాతీయ బాలల నిధి.

SECTION - B

Answer all of the following questions **5x10=50M**

9. (a) What is industrial revolution? Causes, results of it?
   పారిశ్రామిక విప్లవం అనగా నేమి? దానికి గల కారణములు, ఫలితములు వివరింపుము.

(or)

(b) Impact of industrial revlution on Asia, Africa?
   ఆసియా మరియు ఆఫ్రికాలపై పారిశ్రామిక విప్లవ ప్రభావమును అంచనా వేయుము.

10. (a) Discuss the stages of Italy Unification
ఇటలీ ఏకీకరణలో వివిధ ఘట్టములను పేర్కొనము.

(or)

(b) Discuss the foreign policy of Bismark after the Unification of Germany?
జర్మనీ ఏకీకరణానంతరం బిస్మార్క్ అనుసరించిన విదేశాంగ విధానమును గురించి వివరించండి.

11 (a) Explain the role of Alexander II in Russian History?
జార్ రెండవ అలెగ్జాండర్ రష్యా చరిత్రలో గల స్థానము ఎట్టిది.

(or)

(b) Impact & Nature of Russian Revloution & 1917 on the World?
1917 రష్యా విప్లవ స్వభావం – ప్రపంచంపై దాని ప్రభావమును అంచనా వేయుము.

12 (a) Aims & Structure of the Non-Alingment Movement?
నానాజాతి సమితి ఆశయములు, నిర్మాణమును వివరింపుము.

(or)

(b) Discuss the security measures of France after World War - I.
మొదటి ప్రపంచయుద్ధానంతరం ఫ్రాన్స్ తన భద్రతకు చేసిన వివిధ ప్రయత్నా ఎట్టివి?

13 (a) What is Facism, its doctrine, evolution in Germary?
'ఫాసిజం' అనగా నేమి? దాని సిద్ధాంతాలు ఏవి? ఇటలీలో ఫాసిజం ఆవిర్భవించడానికి కారణాలు ఏవి? దాని ఉన్నతి, పతనం గురించి వ్రాయండి.

(or)

(b) World Economic Crisis in Europe.
ప్రపంచ ఆర్థిక మాంద్యం కారణాలు, పర్యవసానాలు ఎలా ఉన్నవి?

HISTORY

III Year B. A. Programme (UG) Courses – Under CBCS

Semester – VI

Paper – VIII-A-1 (Cluster Elective Paper –1)

CULTURAL TOURISM IN ANDHRA PRADESH

Unit – 1	Concepts of Tourism: Nature – Scope – Definition – Tourists & Excursionists – Domestic & International Tourists.
Unit – II	Types of Tourism: Heritage Tourism – Pilgrimage Tourism - Recreation Tourism – Sports & Adventure Tourism - Advance Tourism – Health Tourism – Environment Tourism.
Unit - III	History and Tourism – Heritage Sites – Definition – Ancient Monuments Preservation Act of 1904, Act of 1958 and Act of 1972 - Archaeological Survey of India – Stage Museums.
Unit - IV	Planning and Development of A.P. Tourism: APTDC – Aims & Objectives – Fairs & Festivals – Andhra Cuisine –Restaurants - Eco Tourism – Beaches & Hill Resorts – Mountaineering – Tourist Places in A.P.
Unit – V	Modalities of Conducting Tourism: Field Work - Visit to a Site – Conduct of Research – Preparation of Project Report

References:

1	APTDC Publications
2	Ashorth G.J, Marketing in Tourism Industry
3	Bhatia A.K., Tourism Development
4	Clare, Gunn, Tourism Planning
5	Khan, Nafees A, Development Tourism in India
6	Krishna K Karama, Basics of Tourism
7	Marrison A.M, Hospitality and Travel Marketing
8	RangaMukesh, Tourism Potential in India
9	Sarkar H, Museums and Protection of Monuments and Antiquities in India
10	Vijayalaxmi K.S., History of Tourism

Field Trip: Compulsory field trip to destinations of architectural, archaeological, historical and cultural importance is to be conducted. Students should be made to prepare detailed reports on the hand-on experience they gained in such trips.

Students should be encouraged to create **blogs** for local site seeing places and to write and organize articles on those spots.

MODEL PAPER

Three Year B.A. Programme (UG) Courses - Under CBCS

IIIrd B.A. History Paper VIII (C) A-1 Semester VI (Cluster Elective - 1)

Cultural Tourism of Andhra Pradesh

Time :3 Hrs **Max.Marks : 75**

PART - A

Answer any FIVE questions 5x5=25 M

UNIT - I

1. Tourism Scope
   పర్యాటక రంగ పరిధి

2. T.T.D Temples
   తిరుమల తిరుపతి ఆలయాలు

3. Health Tourism
   వైద్య ఆరోగ్య పర్యాటకం

4. Beaches in Andhra
   ఆంధ్ర రాష్ట్రంలోని బీచ్‌లు

5. Forts in Andhra
   ఆంధ్ర రాష్ట్రంలోని కోటలు

6. Spiritual Centres
   ఆధ్యాత్మిక పర్యాటక కేంద్రాలు

7. Summer Resorts
   వేసవి విడిది కేంద్రాలు

8. UNESCO
   యునెస్కో

SECTION - B

Answer all the following questions **5x10=50M**

9. (a) Discuss the uses of Tourism studies?
   పర్యాటకరంగములోని ప్రయోజనాలను వివరించండి?

(or)

(b) Discuss the Tourism Industries
   పర్యాటక రంగ పరిశ్రమ గురించి వ్రాయండి?

10. (a) Discuss the Resources of Tourism in Andhra ?
ఆంధ్ర రాష్ట్రంలో పర్యాటక వనరులను గురించి వ్రాయండి.

(or)

(b) Spirtitual Centres in Andhra Desham ?
ఆంధ్రలోని అధ్యాత్మిక పర్యాటక రంగం గురించి వ్రాయండి?

11 (a) Discuss the heritage and Preservation Act of 1904
పురాతన చారిత్రక కట్టడాల పరిరక్షణ చట్టం 1904 గురించి వ్రాయండి?

(or)

(b) Discuss archeological survey of India?
భారతదేశ పురావస్తు సర్వే (ఆర్కేలాజికల్ సర్వే) గురించి వ్రాయండి.

12 (a) Discuss the fairs and festivals in Andhradesh.
ఆంధ్ర రాష్ట్రంలో నిర్వహించే ఉత్సవాలు మరియు పండుగలు గురించి వ్రాయండి?

(or)

(b) Discuss the various Tourism Centres in Andhra?
ఆంధ్ర రాష్ట్రంలోని వివిధ పర్యాటక ప్రదేశాలను వివరింపుము?

13 (a) Discuss the Tourism Rules and Regulations?.
పర్యాటక రంగ ప్రవర్తన మరియు నియమాలు గురించి వ్రాయండి?

(or)

(b) Write about Andra Pradesh Tourism Development Corporation ?
ఆంధ్ర ప్రదేశ్ టూరిజం కార్పోరేషన్ గురించి వ్రాయండి.

B. A. HISTORY

III Year B. A. Programme (UG) Courses – Under CBCS

Semester – VI

Paper – VIII-A-2 (Cluster Elective Paper 2)

POPULAR MOVEMENTS IN ANDHRA DESA (1848 TO 1956 A.D.)

(History and Culture of Andhra from 1857 to 2014)

Unit – 1	Social & Self Respect Movements: Social Conditions –KandukuriVeeresalingam, Raghupathi Venkata Rathnam Naidu, GuruzadaApparao, Komarraju Venkata Laxmana Rao; New Literary Movements: Causes – RayaproluSubbarao, ViswanathaSathyanarayana, GurramJashua, BoyiBheemanna, SriSri – Impact.
Unit – II	Freedom Movement in Andhra (1885-1920): Contributory Factors – Vandemataram Movement – Swadeshi & Boycott programs – Glorious Events at Rajahmundry, Kakinada, Kotappakonda& Tenali – Home Rule Movement in Andhra.
Unit - III	Freedom Movement in Andhra (1920-1947): Non-Cooperation Movement – ChiralaPerala, Palanadu&Pedanandipadu Activities – Alluri Seetarama Raju &Rampa Revolt (1922-24) – Anti-Simon Commission Movement – Civil Disobedience Movement – Quit India Movement.
Unit - IV	Movement for Separate Andhra State (1953): Causes – Andhra Maha Sabha – Andhra Provincial Congress Committee – Andhra University – Conflict between Coastal Andhra &Rayalaseema – Sri Bagh Pact – Constitution of Committees & their Contribution – Martyrdom of PottiSriramulu – Formation of separate Andhra State.
Unit – V	Movement for formation of Andhra Pradesh (1956): VisalandhraMahasabha – Role of Communists – States Reorganization Committee – Gentlemen's Agreement – Formation of Andhra Pradesh.

References:

1	B. Kesava Narayana, Political and Social Factors in Modern Andhra
2	K.V.Narayana Rao, The Emergence of Andhra Pradesh
3	M. Venkata Rangaiah, The Freedom Struggle in Andhra Pradesh
4	P.R.Rao, History of Modern Andhra
5	SarojiniRegani, Highlights of Freedom Movement
6	SarojiniRegani, ఆంధ్రలోస్వాతంత్ర్యోద్యమచరిత్ర
7	V. Ramakrishna, Social Reform Movement in Andhra
8	B. Kesava Narayana, Modern Andhra & Hyderabad – 1858 – 1956 A.D., 2016

Project Work: With the aim of understanding of techniques and methods of research and presentation, students should be encouraged to draft a report on local writers, struggles, human rights movements, different types of social discrimination etc.

MODEL PAPER

Three Year B.A. Programme (UG) Courses - Under CBCS

IIIrd B.A. History - Paper VIII (C) A-2 Semester VI(Cluster Elective-2)

Popular Movements in Andhra Desa (1848 to 1956 AD)

Time :3 Hrs **Max.Marks : 75M**

PART - A

Answer any FIVE questions 5x5=25 M

UNIT - I

1. Adi Andhra Movement
   ఆది ఆంధ్ర ఉద్యమం

2. Vishvanatha Satyanarayana
   విశ్వనాథ సత్యనారాయణ

3. K.V.Laxmana Rao
   కొమర్రాజు వేంకట లక్ష్మణరావు

4. Gurajada Appa Rao
   గురుజాడ అప్పారావు

5. Andhra Home Rule Movement
   ఆంధ్రాలో హోమ్‌రూల్ ఉద్యమం

6. Rampa Rebellion.
   రంపా విప్లవం

7. Anti - Simon Commission movement in Andhra
   ఆంధ్రాలో సైమన్ కమీషన్ వ్యతిరేక ఉద్యమం

8. Potti Sri Ramulu
   శ్రీ పొట్టి శ్రీరాములు

SECTION - B

Answer all the following questions **5x10=50M**

9. (a) Social & Literary Contribution of K.V.Panthulu.
   కందుకూరి విరేశలింగం చేసిన సాంఘిక మరియు సాహిత్య సేవలను వివరింపుము.

(or)

(b) Discuss the Non-Brahmana Movement?
   ఆంధ్రాలో సాగిన బ్రాహ్మణేతర ఉద్యమం లేక ఆత్మ గౌరవ ఉద్యమం గూర్చి వ్రాయుము.

10. (a) Discuss the role of New Literary Movement in Andhra?
ఆంధ్ర సాహిత్యంలో నూతన భావోద్యమమునకు గల కారణములను విశదీకరించండి.

(or)

(b) Discuss the role of Andhra Nationalism?
ఆంధ్ర దేశంలో జాతీయతా భావము జనించుటకు దోహదం చేసిన పరిస్థితులను వివరింపుము.

11 (a) Role of Vande Matharam Movement in Andhra?
ఆంధ్రాలో సాగిన వందేమాతర ఉద్యమమును గూర్చి వ్రాయుము.

(or)

(b) Non-Cooparation movement in Andhra?
ఆంధ్రాలో సహాయ నిరాకరణోద్యమంలో గల వివిధ దశలను వివరింపుము?

12 (a) Civil - Disobedience movement in Andhra between 1930-34?
1930– 34 సంవత్సర మధ్యకాలంలో ఆంధ్రాలో సాగిన శాసనోల్లంఘనోద్యమమును సమీక్షించండి.

(or)

(b) Quit India Movement in A.P.?
ఆంధ్రప్రదేశ్‌లో క్విట్ ఇండియా ఉద్యమం గూర్చి వ్రాయుము.

13 (a) Write the Formation of Andhra State?
ఆంధ్ర రాష్ట్రము ఏర్పడిన విధానమును వివరింపుము.

(or)

(b) How did Andhra Pradesh Form?
ఆంధ్రప్రదేశ్ ఎట్లు ఆవిర్భవించెను.

B. A. HISTORY

III Year B. A. Programme (UG) Courses – Under CBCS

Semester – VI

Paper – VIII-A-3 (Cluster Elective Paper – 3)

COMTEMPORARY HISTORY OF ANDHRA PRADESH (1956-2014)

Unit – 1	Socio-Economic Changes in Andhra Pradesh – River Projects & Infrastructural Development – Education & Scientific Progress – Regional Politics – Emergence of Telugu Desam Party.
Unit – II	Growth of Leftist Ideology – Marxist & Radical Literature – Naxalbary Movement - Communist Activities - Electoral Politics – Present Status of Communist Movement.
Unit - III	Dalit Movement – Understanding Untouchability - Education – Literature - Struggle for Identity – Demand for Political Space.
Unit - IV	Early trends towards Bifurcation: Jai Telengana Movement (1969) – Mulki Rules – Legal Battle - Jai Andhra Movement (1972) – Six Point Formula (1973).
Unit – V	Bifurcation of Andhra Pradesh: Power Politics – Economic Discontentment – Riparian Disputes - Unemployment –Foundation of Telangana RastraSamiti – Movements for separate Telangana & unified Andhra Pradesh – Formation of Telangana State (2014)

REFERENCES:

1	Barry Pavier, The Telangana Movement - 1944-51
2	Chinnayya Suri, Agrarian Movement in Andhra, 1921-71
3	K. Ramachandra Murthy, Unveiling Telangana State
4	P.R.Rao, History of Modern Andhra
5	S. Ratnakar, A Brief History of Telangana & Andhra Pradesh
6	Sri Krishna Committee Report
7	TarimelaNagireddy, India Mortgaged
8	Y.V.Krishna Rao, Growth of Capitalism in Indian Agriculture: A Case Study of A.P.
9	KattiPadmarao, దళితదర్శనం
10	Y. Chinnarao, దళితఉద్యమచరిత్ర
11	News Paper Clippings (2001-2014)

Project Work: Students may be asked to prepare assignments on local caste struggles; regional disparities; aspirations; recent developments etc., through interviews and verifying press reports.

MODEL PAPER

Three Year B.A. Programme (UG) Courses - Under CBCS

IIIrd B.A. History Paper VIII (C) A-3 Semester VI (Cluster Elective -3)

Contemporary History of Andhra Pradesh (1956 - 2014)

Time :3 Hrs **Max.Marks : 75**

PART - A

Answer any FIVE questions 5x5=25 M

UNIT - I

1. Naxalbari Movement
   నక్సల్బరి ఉద్యమం.

2. Communist Movement
   కమ్యూనిస్ట్ ఉద్యమం.

3. Six Point Programme - 1973
   6 అంశాల పథకం 1973.

4. Jai telangana Movement
   జై తెలంగాణా ఉద్యమం 1969.

5. Jai Andhra Movement
   జై ఆంధ్రా ఉద్యమం 1972.

6. Telangana Rastra Samithi
   తెలంగాణా రాష్ట్ర సమితి.

7. Telangana Formation - 2014
   తెలంగాణా ఏర్పాటు ఉద్యమం – 2014.

8. Andhra Pradesh Unity Movement
   ఆంధ్రప్రదేశ్ ఐక్య ఉద్యమం.

SECTION - B

Answer all the following questions **5x10=50M**

9. (a) Discuss the River Valley and infrastructure development in A.P.
   ఆంధ్రప్రదేశ్‌లో నదీ వ్యవస్థ మరియు మౌలిక సదుపాయాల అభివృద్ధిని వివరింపుము.

(or)

(b) Discuss the reasons for arise of T.D.P
   తెలుగుదేశం పార్టీ ఆవిర్భావానికి దారితీసిన పరిస్థితులను వివరింపుము.

10. (a) What led for the leftist movement in A.P.

ఆంధ్ర ప్రదేశ్ వామపక్ష ఉద్యమ అభివృద్ధికి దారితీసిన పరిస్థితులను వివరింపుము.

(or)

(b) What led for the communist movement in A.P.

ఆంధ్రప్రదేశ్‌లో కమ్యూనిస్ట్ ఉద్యమం ప్రస్తుతం ఉన్న తీరును వివరింపుము.

11 (a) Dalit Movement in Andhra

ఆంధ్రప్రదేశ్‌లో దళిత ఉద్యమం గూర్చి వ్రాయుము.

(or)

(b)Naxatbari Movement in A.P

ఆంధ్రప్రదేశ్ విభజనకై జరిగిన తొలి ప్రయత్నములను వివరింపుము.

12 (a) The initial movement for the Division of A.P.

ఆంధ్రప్రదేశ్ విభజనకై జరిగిన తొలి ప్రయత్నములను వివరింపుము.

(or)

(b) What were the reasons for formation of TRS.

తెలంగాణ రాష్ట్ర సమితి ఏర్పాటుకు దారితీసిన పరిస్థితులను వివరింపుము.

13 (a) Discuss the movements arise for TS & AP states.

తెలంగాణా ఏర్పాటు మరియు ఆంధ్రప్రదేశ్ ఏర్పాటుకు జరిగిన ఉద్యమములను గూర్చి వ్రాయుము.

(or)

(b) Discuss what led for the Emergence of TS.

తెలంగాణా ఆవిర్భావానికి దారితీసిన కారణములను గురించి వ్రాయుము.

B. A. ECONOMICS
III Year B. A. Programme (UG) Courses – Under CBCS
Semester – VI
Paper – VII (E) (Elective)
Paper VII (E) -- ENTREPRENEURSHIP AND SMALL BUSINESS DEVELOPMENT

Module -1:

Introduction - Entrepreneurship meaning, nature and Characteristics of entrepreneurship, Barriers to entrepreneurship

Module -2:

Establishing a small enterprise: The startup process, project identification, selection of the product -selection of site/location and legal considerations

Module -3:

Small Enterprises and Enterprise Launching Formalities: Definition of Small Scale; Rationale; Objective; Scope; SSI; Registration; NOC from Pollution Board; Machinery and Equipment Selection

Module -4:

Role of Support Institutions and Management of Small Business: Director of Industries; DIC; SIDO; SIDBI; Small Industries Development Corporation (SIDC); SISI; NSIC; NISBUD; State Financial Corporation SIC.

Module -5:

Project Preparation - project formulation, Project Report Preparation; Specimen of Project Report, assessment of project feasibility, analysis's of project, Project Planning and Scheduling using Networking Techniques of PERT / CPM preparation of project report,

Reference:

1. Desai, Vasant (2003). Small-Scale Industries and Entrepreneurship. Himalaya Publishing House, Delhi.
2. Kaulgud, Aruna (2003). Entrepreneurship Management. Vikas Publishing House, Delhi. 38
3. Cynthia, L. Greene (2004). Entrepreneurship Ideas in Action. Thomson Asia Pvt. Ltd., Singapore.

B. A. ECONOMICS
III Year B. A. Programme (UG) Courses – Under CBCS
Semester – VI
Paper – VIII- Cluster Elective – (E) Entrepreneurship

Paper – VIII- Industrial Economics

Module-1

Industry and economic development industry and sectoral linkages – industrial classification and data information.

Module-2

Public, private joint and co-operative sectors - private corporate sector- MNCs and their role.

Module-3

Industrial productivity - concept - measurement - productivity in Indian industries - industrial sickness - underutilization of capacity - factors accounting for it and its consequences.

Module - 4

Globalization and Indian industry - privatization and issues relating to disinvestment policy.

Module-5

Industrial development in India - industrial policy - Role of the Central and State - Industrial policy and economic reforms - Industrial growth and pattern.

BOOKS FOR REFERENCE:

1. Dhingra, I.c. Indian Industrial Economy

2. Gadgil, P.G. Indian Economy

3. Kuchhal, S.C. Industrial Economy of India

4. Sharma, N.K. Industrial Economics

B. A. ECONOMICS
III Year B. A. Programme (UG) Courses – Under CBCS
Semester – VI
Paper – IX - Cluster Elective – (E) Entrepreneurship

Paper – IX - Labour Economics

Module 1:

Introduction - Labour Economics – Concept and definition – Nature, Scope and Importance – Labour as a unique factor of production

Module 2:

Labour Market - Concept of labour Market and its features –Determinants of the supply and the demand for labour – Organized and unorganized labour

Module 3:

Wages - Wage Concept and Definitions – Wage and development – Collecting bargaining – Wage differentials – Wage Ploicy - Objectives and importance

Module 4:

Labour Productivity, State and labour - Concept of Labour Productivity – Measurement and Importance of Labour productivity – Determinants – Causes for Low Labour Productivity and Measures to Increase Labour Productivity – Technology and Labour Productivity

Module 5:
State and labour – Need for State intervention in Labour matters – methods of intervention – Labour Social Security and Labour Welfare Measures – Labour Ploicy, Objectives and Importance – Emerging perception on state intervention.

Reference:

1. Bhagoliwal T.N (2000), Economics of Labour and Industrial relations. Sahitya Bhavan, Agra.

2. McConnel C.R. and S.L. Brue (2002), Contemporary Labour Economics, McGraw Hill, NeYork.

3. Mittal and Sanjay Prakash Sharma (2000), labour Economics, RSBA Jaipur

B. A. ECONOMICS
III Year B. A. Programme (UG) Courses – Under CBCS
Semester – VI
Paper – X - Cluster Elective – (E) Entrepreneurship

Paper – X - INDUSTRIAL MANAGEMENT

Module – 1
Basics of Management Introduction, Definition of management, characteristics of management, functions of management - Planning, Organising, Staffing, Directing, Co-ordination, Controlling, Motivating, Communication, Decision Making - Administration and management, Nature of management, levels of management, managerial skills, managerial roles,

Module - 2
Forms of Organization- Line , Line –staff etc. Forms of ownerships – Partnership, Proprietorship, Joint stock, Co-operative society, Govt. Sector etc, concept of Globalisation

Module – 3
Strategic Management– Evolution - Concept and Characteristics of strategic management – Defining strategy –Strategic Management Process.

Module – 4
Quality Management Definition of quality, goalpost view of quality, continuous improvement definition of quality, types of quality – quality of design, conformance and performance, phases of quality management, - The ISO 9001:2000 Quality Management System Standard

Module – 5
Financial & Project Management -Capital Structure, Fixed & working capital -Introduction to capital budgeting, - Break even analysis - assumptions, importance - Cost-Benefit analysis.

Reference Books :

1. L.C.Jhamb , Savitri Jhamb , Industrial Management – I , Everest Publishing House .
2. Dinesh Seth and Subhash C. Rastogi, “Global Management Solutions”, Cengage Learning, Second Edition, USA.
3. B. Davis and Margrethe H. Olson, "Management Information Systems", Mc-Graw-Hill International Editions.
4. Azar Kazmi , “Strategic Management & Business Policy “, Tata McGraw Hill, New Delhi
5. Kenneth C. Laudon and Jane P. Laudon, “"Management Information Systems", Eighth Edition, Pearson Education
6. K.Shridhara Bhat, “Materials and Logistics Management”, Himalaya Publishing House, Mumbai
7. M.Y. Khan and P. K. Jain, “Financial Management”, Tata McGraw Hill, New Delhi
8. Ravi M. Kishore, “Project Management”, Tata McGraw Hill, New Delhi

SRI VENKATESWARA UNIVERSITY – TIRUPATI

III BA – PROGRAMME (UG) COURSES – VI SEMESTER (CBCS)

PAPER - VII (E) ELECTIVE – (E) ENTREPRENEURSHIP

PAPER – VII(E)- Entrepreneurship and Small Business Development.

MODEL QUESTION PAPER

TIME : 3HOURS PART –A MARKS : 75

I ANSWER ANY FIVE QUESTIONS FROM THE FOLLOWING **10X5=50 MARKS**

1. Explain the characteristics of Entrepreneurship.
   వ్యవస్థాపక లక్షణాలను వివరించండి.
   (or) Discuss various barriers to Entrepreneurship.
   వ్యవస్థాపకతలో గల వివిధ అడ్డంకులను చర్చించండి.
2. Discuss various steps to be followed in order to identify a product.
   ఒక ఉత్పత్తిని గుర్తించేందుకు క్రమంలో అనుసరించవలసిన వివిధ దశలను చర్చించండి.
   (or) How to register your startup with Startup India.
   స్టార్ట్‌అప్ ఇండియాతో మీ ~~ప్రారంభ~~ సంస్థను నమోదు ఎలా చేసుకోవాలో వివరించండి.
   ఉద్యమ
3. Explain role of small scale industries in economic development in india.
   భారతదేశ ఆర్థికాభివృద్ధిలో చిన్న తరహా పరిశ్రమల పాత్రను వివరించండి
   (or) What is the registration procedure for small scale industries?
   చిన్న తరహా పరిశ్రమల నమోదు ప్రక్రియ ఏమిటి?
4. Evaluate the support programmes undertaken by the Government for the promotion of entrepreneurship in India?
   భారతదేశంలో వ్యవస్థాపకత ప్రోత్సహించడానికి ప్రభుత్వం చేపట్టిన మద్దతు కార్యక్రమాలను
   వివరించండి
   (or) Explain the objectives of State Financial Corporation.
   స్టేట్ ఫైనాన్షియల్ కార్పొరేషన్ యొక్క లక్ష్యాలను వివరించండి.
5. Explain feasibility report preparation and evaluative criteria.
   సాధ్యత నివేదిక తయారీ మరియు మూల్యాంకన ప్రమాణాలను వివరించండి
   (or) Explain briefly the networking techniques for project planning and scheduling.
   ప్రాజెక్ట్ ప్రణాళిక మరియు షెడ్యూల్ తయారీలో నెట్వర్కింగ్ పద్ధతులను వివరించండి.

PART – B

II ANSWER ANY FIVE QUESTIONS FROM THE FOLLOWING **5X5=25 MARKS**

6. Entrepreneurship
   వ్యవస్తాపకత
7. DIC
   DIC
8. PRET
   PRET
9. Legal Considerations
   చట్టపరమైన పరిగణనలు
10. Risk Tolerance
    రిస్క్ టాలరెన్స్
11. Startup Business
    ప్రారంభ వ్యాపారం
12. MSME
    MSME
13. Project Report.
    ప్రాజెక్ట్ రిపోర్ట్.

1. B.O.S. Chairperson (Economics)
2.
3. T. (T. Radhakumari)
4.

SRI VENKATESWARA UNIVERSITY – TIRUPATI

III BA – PROGRAMME (UG) COURSES – VI SEMESTER (CBCS)
PAPER - VIII (E) CLUSTER ELECTIVE – (E) ENTREPRENEURSHIP
PAPER – VIII (E)- INDUSTRIAL ECONOMICS
MODEL QUESTION PAPER

TIME : 3HOURS PART –A MARKS : 75

I ANSWER ANY FIVE QUESTIONS FROM THE FOLLOWING 10X5=50 MARKS

1. Discuss the role of Industrialization in Economic Development
   ఆర్థికాభివృద్ధిలో పారిశ్రామికీకరణ పాత్ర గురించి చర్చించండి
   (or) Explain the Classification of Industries in India
   భారతదేశంలో పరిశ్రమల వర్గీకరణను గురించి వివరించండి
2. How cooperative societies are helping in developing the rural industries?
   గ్రామీణ పరిశ్రమలను అభివృద్ధి చేయడానికి సహకార సంఘాలు ఎలా సహాయపడుతున్నాయి?
   (or) What is the Role of MNCs in Industrial Development?
   పారిశ్రామిక అభివృద్ధిలో MNC ల పాత్రను వివరించండి
3. Why there is a Low Level of Industrial Productivity in India?
   భారతదేశంలో పారిశ్రామిక ఉత్పాదకత ఎందుకు తక్కువగా ఉంది?
   (or) What are the causes for industrial sickness in India? Suggest some remedial measures
   భారతదేశంలో పారిశ్రామిక రుగ్మతలకు కారణాలు వివరించి, నివారణ చర్యలను సూచించండి
4. Elucidate the impact of Globalization on Indian industries.
   భారతదేశంలో పరిశ్రమలపై ప్రపంచికరణ ప్రభావం గురించి వివరించండి.
   (or) Explain the various issues relating to disinvestment in India.
   భారతదేశంలో పెట్టుబడుల ఉపసంహరణల వలన ఏర్పడిన వివిధ సమస్యలను వివరించండి
5. Explain the impact of new economic reforms on industrial sector in India.
   భారతదేశంలో పారిశ్రామిక రంగంపై కొత్త ఆర్థిక సంస్కరణల ప్రభావాన్ని వివరించండి
   (or) The Role of Government in Accelerating Industrial Development in India
   భారతదేశంలో పారిశ్రామిక అభివృద్ధిని పెంచడంలో ప్రభుత్వ పాత్రను వివరించండి.

PART – B

II ANSWER ANY FIVE QUESTIONS FROM THE FOLLOWING 5X5=25 MARKS

6. Agro-based industries
   వ్యవసాయ ఆధారిత పరిశ్రమలు
7. Sectorial Linkages
   రంగాల అనుసంధానం
8. Disinvestment
   పెట్టుబడుల ఉపసంహరణ
9. under utilization of capacity
   సామర్థ్యాల అల్ప వినియోగం
10. Globalization
    ప్రపంచీకరణ
11. Industrial Productivity
    పారిశ్రామిక ఉత్పాదకత
12. privatization
    ప్రైవేటీకరణ
13. public sector
    ప్రభుత్వ రంగం

1 B.O.S. Chairperson (Economics)
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SRI VENKATESWARA UNIVERSITY – TIRUPATI

III BA – PROGRAMME (UG) COURSES – VI SEMESTER (CBCS)
PAPER - IX(E) CLUSTER ELECTIVE – (E) ENTREPRENEURSHIP
PAPER – IX(E)- LABOUR ECONOMICS
MODEL QUESTION PAPER

TIME : 3HOURS PART- A MARKS : 75

I ANSWER ANY FIVE QUESTIONS FROM THE FOLLOWING **10X5=50 MARKS**

1. What are the major uses of Labour Economics to an economy.
ఒక ఆర్థికవ్యవస్థలో శ్రామిక ఆర్థశాస్త్రము యొక్క ప్రధాన ఉపయోగాలు వివరించండి

(or) What are the major characteristics of Labour as a factor of production.
ఉత్పత్తి కారకంగా 'శ్రమ' ప్రధాన లక్షణాలను చర్చించండి .

2. Define Labour Market? Explain different features of Labour Markets.
శ్రామిక మార్కెట్ అనగా నేమి?? లేబర్ మార్కెట్స్ వివిధ లక్షణాలను వివరించండి.

(or) DefineDemand for Labour? What are the main determinants of Demand for Labour?
శ్రామిక డిమాండ్ నిర్వచించి లేబర్ డిమాండ్ యొక్క ప్రధాన నిర్ణాయకాలను గురించి వివరించండి?

3. Explain the factors that affect wage differentials.
వేతనంలో వ్యత్యాసాలను ప్రభావితం చేసే అంశాల గురించి వివరించండి.

(or) What is the importance and need of the National Wage Policy
జాతీయ వేతనం విధానము యొక్క ప్రాముఖ్యతను మరియు ఆవశ్యకతను చర్చించండి .

4. Define Labour Productivity. How to measure the Labour Productivity?
శ్రామిక ఉత్పాదకతను నిర్వచించి, లేబర్ ఉత్పాదకతను ఎలా అంచనా వేస్తారో వివరించండి.

(or) How to increase Labour Productivity? Explain
లేబర్ ఉత్పాదకత పెంచడానికి తీసుకోవలసిన చర్యలను వివరించండి.

5. Evaluate Labour Welfare measures provided by Indian Government.
భారత ప్రభుత్వం అమలు చేస్తున్న కార్మిక సంక్షేమ కార్యక్రమాలను పరిశీలించండి

(or) Why the state intervention is necessary in Industrial Relations.
పారిశ్రామిక సంబంధాలలో రాష్ట్ర జోక్యం ఎందుకు అవసరం-చర్చించండి

PART – B

II ANSWER ANY FIVE QUESTIONS FROM THE FOLLOWING **5X5=25 MARKS**

6. Factors of Production
ఉత్పత్తి కారకాలు
7. Supply of Labour
శ్రామిక సప్లయ్
8. Collective Bargaining
సమిష్టి బేరసారాలు
9. Wage Differentials
వేతన వ్యత్యాసాలు
10. Labour Productivity
శ్రామిక ఉత్పాదకత
11. Labour Social Security
శ్రామిక సాంఘిక భద్రత
12. Wage Policy
13. వేతన విధానాలు
13. Unorganized Labour
అసంఘటిత శ్రామికులు

1 B.O.S. Chairperson (Economics)
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SRI VENKATESWARA UNIVERSITY – TIRUPATI

III BA – PROGRAMME (UG) COURSES – VI SEMESTER (CBCS)
PAPER - X(E) CLUSTER ELECTIVE – (E) ENTREPRENEURSHIP
PAPER – X(E)- INDUSTRIAL MANAGEMENT
MODEL QUESTION PAPER

TIME : 3HOURS PART –A MARKS :75

I ANSWER ANY FIVE QUESTIONS FROM THE FOLLOWING 10X5=50 MARKS

1. Explain various functions of Industrial Management.
పారిశ్రామిక నిర్వహణ యొక్క విధులను వివరించండి

   (or) Explain the important Managerial Skills.
ముఖ్యమైన నిర్వాహక నైపుణ్యాలను వివరించండి

2. What are the different forms of Ownerships?
వివిధ రకాల యాజమాన్య పద్ధతులను గురించి వివరించండి

   (or) Discuss various characteristics of a Joint Stock Company.
జాయింట్ స్టాక్ కంపెనీ యొక్క వివిధ లక్షణాలను చర్చించండి

3. Evaluate the importance of Strategic Evaluation.
వ్యూహాత్మక మూల్యాంకనం యొక్క ప్రాముఖ్యతలను చర్చించండి

   (or) What is Strategic Management Process? Explain its stages
వ్యూహాత్మక నిర్వహణ ప్రక్రియ అంటే ఏమిటి? దాని యొక్క వివిధ దశలను వివరించండి

4. Explain the different stages in Quality Management System.
నాణ్యత ప్రమాణాలను నిర్వహణ విధానములో వివిధ దశలను వివరించండి

   (or) How to Measure Quality Performance in Production Management
ఉత్పత్తి నిర్వహణలో నాణ్యత ప్రమాణాలను ఎలా కొలుస్తారో వివరించండి.

5. What makes the **Cost-Benefit Analysis** important?
కాస్ట్-బెనిఫిట్ విశ్లేషణ ఎందుకు అంత ప్రాముఖ్యతను సంతరించుకొన్నదో వివరించండి?

   (or) Explain **Break Even Analysis** with diagramme.
రేఖాచిత్రంతో సహాయముతో బ్రేక్ ఈవెన్ విశ్లేషణను వివరించండి

PART – B

II ANSWER ANY FIVE QUESTIONS FROM THE FOLLOWING 5X5=25 MARKS

6. Staffing
స్టాఫింగ్

7. Levels of Management
నిర్వహణ స్థాయిలు

8. Staff and Line
స్టాఫ్ అండ్ లైన్

9. Globalization
ప్రపంచీకరణ

10 Strategic Management
వ్యూహాత్మక నిర్వహణ

11 Goal post Loss Function
గోల్ పోస్ట్ లాస్ ప్రమేయము

12 ISO 9001:2000
ఐఎస్ఓ 9001- 2000

13 Working Capital
నిర్వహణ మూలధనం

CBCS: SYLLABUS - SEMESTER WISE (2015-16)
THIRD YEAR; SEMESTER –VI
B.A. POLITICAL SCIENCE
PAPER-VII-(B)(Elective): PRINCIPLES OF PUBLIC ADMINISTRATION

Unit-1: Nature of Public Administration

1. Meaning, Nature scope and significance of Public Administration
2. Public and Private Administration

Unit-2: Administrative Theories

1. Classical Theory-Henry Fayol
2. Human Relations theory-Elton Mayo
3. Rational decision making theory-Herbert Simon

Unit-3: Principles of Organization

1. Hierarchy- Span of control-Unity of command
2. Co-ordination-leadership

Unit-4: Structure of organization

1. Chief Executive-Types and Functions
2. Line and Staff Agencies

Unit-5: Theories of Motivation

1. Meaning and importance of Motivation
2. Hierarchy of needs theory; Abraham Maslow
3. Theories of X and Y ; Donglas Mc Gregor

Reference books:

1. Pardhasaradhi (Eds) (2011) Public Administration; Concepts, Theories and Principles, Telugu Academy, Hyderabad
2. R.kSapru (2014) 3rd Edition, Administrative Theories and Management Thought,
   PHI learning Pvt.Ltd, New Delhi.
3. Prasad D R, Prasad V S,(Eds) (2010),Administrative Thinkers, Sterling Publishers, NewDelhi.

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SRI VENKATESWARA UNIVERSITY

CBCS-SYLLABUS-SEMESTERWISE (2015-2016)

III YEAR SEMESTER-VI

B.A.POLITICAL SCIENCE-MODEL PAPER

PAPER-VII-(B) (Elective): PRINCIPLES OF PUBLIC ADMINISTRATION

Time: 3 Hours **SECTION – A** Max.Marks -75

Answer any five questions. Each question carries 5 Marks. 5X5=25

1. POSD CORB
   పోస్ట్ కార్బ్
2. Importance of Public Administration
   ప్రభుత్వ పాలనా ప్రాముఖ్యత
3. Public Administration -Private Administration
   ప్రభుత్వ పాలనా ప్రైవేటు పాలన
4. Division of Work
   పని విభజన
5. Hierarchy
   క్రమాను గ్రత శ్రేణి
6. Luther Gullick
   లూధర్ గల్లిక్
7. Managerial views
   నిర్వహణ దృక్పదము
8. Motivation
   ప్రేరణ
9. Abraham Maslow
   అబ్రహం మాస్లో
10. Span of Control
    నియంత్రణావధి

SECTION-B

Answer all questions. Each question carries 10 marks. 5X10=50

11. (a) Discuss the meaning and scope of Public Administration.
ప్రభుత్వ పాలనా శాస్త్రము అర్థం, పరిధిని చర్చించుము.

(Or)

(b) Explain the importance of Public Administration in developing countries.
అభివృద్ధి చెందుతున్న దేశములలో ప్రభుత్వ పాలనా శాస్త్ర ప్రాముఖ్యతను వివరించుము.

12. (a) Critically examine the classical theory of organization
సాంప్రదాయ వ్యవస్థా సిద్ధాంతమును విమర్శనాత్మకంగా చర్చించుము.

(Or)

(b) What is Maya's contribution to the development of Human relation approach?
మానవ సంబంధాల దృక్పథం అభివృద్ధికి మెమో చేసిన కృషిని వివరింపుము.

13. (a) Explain Simon's contribution to decision making theory
నిర్ణయీకరణ సిద్ధాంతానికి సైమన్ చేసిన సేవను వివరించుము.

(Or)

(b) Explain the major theories of leadership
వివిధ నాయకత్వ సిద్ధాంతములను వివరింపుము.

14. (a) Write an essay on powers and functions of chief executive
ప్రధాన కార్య నిర్వహకుని అధికారాలు, విధులు గురించి ఒక వ్యాసం వ్రాయుము.

(Or)

(b) Explain the nature of staff, line agencies
స్టాఫ్, లైన్ ఏజెన్సీల స్వభావమును వివరింపుము.

15. (a) Discuss the Hierarchy merits and demerits
క్రమాణుగ్రతశ్రేణి ప్రయోజనాలు, లోపాలను చర్చించుము.

(Or)

(b) Distinguish between theory X and theory Y
'ఎక్స్' సిద్ధాంతము మరియు 'వై' సిద్ధాంతముల మధ్య వ్యత్యాసాన్ని పేర్కొనుము.

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THIRD YEAR; SEMESTER – VI
B.A. POLITICAL SCIENCE
PAPER-VIII (C-1) (ELECTIVE): INTERNATIONAL RELATIONS

Unit- I: Basic Concepts of International Relations

1. Meaning, Nature and Scope of International Relations
2. Balance of power - Collective Security - National interests

Unit-II: Approaches to the study of International Relations

1. Idealism – Woodrow Wilson
2. Classical Realism – Hans Morgenthau, Modern Realism-Kenneth Waltz

Unit-III: Phases of International Relations (1914-1945)

1. Causes and effects of the First World War
2. Causes and effects of the Second World War

Unit-IV: Phases of International Relations (1945 onwards)

1. Origins of First Cold War – Détente – Causes
2. Origin of New Cold War and the end of Cold War

Unit-V: International Organisation

1. Structure, functions and role of UNO in the protection of International Peace
2. Problems of the Third World : Struggle for New International Economic Order

Reference Books:

1. Jackson, R and Sorensan Y, Introduction to International Relations; Theories and approaches, New York, OUP, 2008.
2. Baylis, J and Smith, S (Eds), The Globalization of World Politics; An Introduction to International Relations, Oxford, OUP,2011
3. Aneek Chatterjee, International Relations Today; Concepts and Applications, New Delhi, Pearson Education, 2008.
4. E.H. Carr, International relations between the two world Wars, Lodon, Palgrave Macmillan, 2004.

New

CBCS – SYLABUS – SEMSTERWISE (2015-16)
III YEAR SEMESTER – VI
B.A. POLITICAL SCIENCE - MODEL PAPER

PAPER VIII-C-1 (CLUSTER ELECTIVE) INTERNATIONAL RELATIONS

I. Answer any five questions: **5 X 5 = 25M**

1. Meaning and importance of International Relations
   అంతర్జాతీయ సంబందాలు అర్థం మరియు ప్రాముఖ్యత
2. Balance of Power
   అధికార సమతౌల్యం
3. What is Idealism?
   ఆదర్శవాదం అనగానేమి?
4. Morgenthau
   మార్గెంథో
5. League of Nations
   నానాజాతి సమితి
6. Atlantic Charter
   అట్లాంటిక్ చార్టర్
7. Détente
   డిటాంట్
8. New Cold War
   నయా ప్రచ్ఛన్నయుద్ధం
9. Security Council
   భద్రతా మండలి
10. List out the problems of developing countries
    అభివృద్ధి చెందుతున్న దేశాల సమస్యలను తెలపండి

II. Answer five questions **5 x10 = 50 M**

11. A. Explain the scope of the International Relations. **OR**
    అంతర్జాతీయ రాజకీయ సంబందాల పరిధిని వివరించండి

    B. What is Collective Security and its functioning in the International Relations.
    సమిష్టి భద్రత అనగానేమిటో తెలిపి, అంతర్జాతీయ రాజకీయాలలో దాని పనితీరును వివరింపుము

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12. A. Write an essay on Idealist Approach in International Relations. **OR**

అంతర్జాతీయ రాజకీయ సంబంధాలలో ఆదర్శవాద వైఖరిపై ఒక వ్యాసం వ్రాయుము.

B. Elucidate the principles of Morgenthau's Realism.

వాస్తవిక వాదంపై మార్గెంథో సూత్రాలను వివరింపుము.

13. A. Explain the causes of the I World War. **OR**

మొదటి ప్రపంచ యుద్ధం కారణాలను వివరింపుము?

B. What are the implications that led to the II World War?

రెండవ ప్రపంచ యుద్ధం కారణాలను వివరింపుము

14. A. What is the Cold War? Give reasons for the origin of Cold War. **OR**

ప్రచ్ఛన్నయుద్ధం అనగా నేమి? దాని ఆవిర్భావానికిగల కారణాలను తెలుపుము.

B. Derive the major landmarks in the end of the Cold War?

ప్రచ్ఛన్న యుద్ధం అంతంకావడంలో గల ప్రధాన ఘట్టాలను విశదీకరించుము

15. A. Discuss the achievements and failures of the UNO. **OR**

ఐక్యరాజ్యసమితి విజయాలు, వైఫల్యాలను చర్చించండి.

B. Examine the role of New International Economic Order in International Relations.

అంతర్జాతీయ రాజకీయాలలో 'నయా అంతర్జాతీయ ఆర్థికక్రమం' పాత్రను పరిశీలించండి.

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CBCS:SYLLABUS-SEMESTER WISE(2015-2016)

THIRD YEAR;SEMESTER-VI

B.A.POLITICAL SCIENCE

PAPER;VIII-C-2(CLUSTER ELECTIVE)

INDIAN FOREIGN POLICY

Unit-I:Evolution of Indian Foreign Policy

1. Determinants of Indian Foreign Policy
2. Continuity and Change in Indian Foreign Policy

Unit-II:Non-Alignment and India

1. Evolutionary Growth of Non-Aligned Movement
2. Relevance of Non-Aligned Movement in the Contemporary World

Unit-III: India's Relations with USA and Russia

1.Indo-US Relations: Cold War Era, Post-Cold War Era

2.India-Russia Relations: Cold War Era, Post-Cold War Era

Unit-IV:India and Her Neighbours

1. Sino-India Relations
2. India's Role in South Asian Association of Regional Cooperation

Unit-V: Trends in India's Foreign Policy

1. India and UNO
2. Issues and Challenges to India's Foreign Policy

References:

1. David Scott(Ed), Handbook of India's International Relations,London,Routledge,2011
2. Gangully.S(Ed),India as an Emerging Power, Portland, Frank Class,2003.
3. Tellis,A. and Mirski,S(Ed),Crux of Asia: China,India and the Emerging Global Order,Washington,Carnegie Endowment for International Peace,2013

4.Muni,S.D.Indian Foreign Policy,Delhi,2009

THREE YEAR B.A.DEGREE EXAMINATION,MAY/JUNE-2018
CHOICE BASED CREDIT SYSTEM
SIXTH SEMESTER
THIRD YEAR; B.A. POLITICAL SCIENCE
PAPER-VIII-C-2(CLUSTER ELECTIVE)-INDIAN FOREIGN POLICY

(w.e.f.2016-2017)

TIME: 3Hours **Max.Marks:75**

PART-A

విభాగం-A

Answer any five of the following (5x5=25)

1. National Interest
   జాతీయ ప్రయోజనము
2. Cold War
   కోల్డ్ వార్
3. Non-Aligned Movement
   అలీనోద్యమం
4. Treaty of Peace, Friendship And Cooperation,1971
   శాంతి ,స్నేహ మరియు సహకార ఒప్పందం, 1971
5. Panchasheel
   పంచశీల
6. Kashmir Problem
   కాశ్మీర్ సమస్య
7. Cross Border Terrorism
   సీమాంతర ఉగ్రవాదం
8. SAARC
   సార్క్
9. Nuclear Politics
   అణ్వస్త్ర రాజకీయాలు
10. Neutrality
    తటస్థ విధానము

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PART-B
విభాగం-B

Answer any Five questions choosing one question from each unit (5x10=50)
ప్రతి యూనిట్ నుంచి ఒక ప్రశ్నకు సమాదానం వ్రాయుము

11. a). What are the determinants of Indian Foreign Policy.
భారత విదేశాంగ విదానాన్ని నిర్ణయించు అంశాలేవి

(Or)

b). Describe the salient features of Indian Foreign Policy
భారత దేశ విదేశాంగ విధాన విశిష్ట లక్షణాలను వివరించండి

12. a. Write about the evolutionary growth of Non-Aligned Movement.
అలీనోద్యమ పరినమాభివ్రుద్ధిని గురించి వ్రాయండి

(Or)

b). Estimate ~~the~~ India's role in the Non-Aligned Movement
అలినోద్యమంలో భారతదేశం పాత్రను అంచనా వేయండి

13. a). What are the changes took place in the Indo-US relations in the post- cold war era.
ప్రచ్చన్నయుద్ధానంతరం భారత-అమెరికా దేశాల సంభంధాలలో వచ్చిన మార్పులేవీ

(Or)

b). Write about the Indo-Soviet relations during the cold war era
ప్రచ్చన్నయుద్ధకాలంలో భారత్-సోవియట్ దేశాల మధ్య సంబధాలను వివరించండి

14. a).What are the major issues in the Sino-Indian relations
భారత్-చైనా సంబధాలలో ప్రధాన సమస్యలేవీ

(Or)

b.)Estimate the India's role in the SAARC
సార్క్ లో భారతదేశ పాత్రను అంచనావేయండి

15. a).Describe ~~the~~ India's role in the UNO in protecting world peace.
ప్రపంచశాంతి పరిరక్షణలో UNO లో భారతదేశము కృషిని వివరించండి

(Or)

b).Write about ~~the~~ terrorism and how far the terrorism is a major threat to India's development
ఉగ్రవాదం గురించి వివరించండి మరియు భారతదేశ అభివృద్ధికి ఉగ్రవాదం ఎంతవరకు అడ్డంకిగా ఉన్నదో తెలపండి

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THIRD YEAR; SEMESTER – VI
B.A. POLITICAL SCIENCE
PAPER- VIII (C-3) (ELECTIVE): CONTEMPORARY GLOBAL ISSUES

Unit- I: Concept of Globalization

1. Meaning, nature and scope of Globalization
2. Types of Globalization - Political, economic and cultural

Unit-II: Anchors of Global Political Economy

1. International Monetary Fund – Nature, Role and Functions
2. Work Bank-Nature, Role and Functions

Unit-III: Nation State and Globalization

1. Nation State in the context of Globalization – reasons for the decline of nation state – challenges and future of nation state
2. Consequences of Globalization – Rise of Inequalities within and across Nations

Unit-IV: Contemporary Global issues

1. Ecological Issues – Effects-Ozone depletion, degradation of natural resources, global warming and factors of conflict- mitigation- Agreements
2. Terrorism – State sponsored terrorism and cross-border terrorism-Terrorist organisations

Unit – V

1. World Trade Organization: Origin, evolution, nature and role in the context of Globalization
2. BRICS – Origin, objectives, evolution and Annual Summit

Reference Books:

1. Ritzer, G., Globalization: A Basic Text, Sussex: Wiley- Black well,2009
2. Streger, M., Globalization: A Very Short Introduction, Oxford, OUP,2013
3. Heywood, A., Global Politics, New York, Palgrave Macmillian,2011
4. Held, D et.al, Global Transformations; Politics, Economics and culture California, Stanford University Press,1999
5. J. Volger, 'Environmental Issues'in J. Baylis, S. Smith an owens, P(Eds) Globalization of world politics, New York, Palgrave,2011

CBCS – SYLABUS – SEMSTERWISE (2015-16)
III YEAR SEMESTER – VI
B.A. POLITICAL SCIENCE - MODEL PAPER

PAPER VIII-C-3 (CLUSTER ELECTIVE) CONTEMPORARY GLOBAL ISSUES

I. Answer any five questions: **5 X 5 = 25M**

ఏవైనా ఐదు ప్రశ్నలకు సమాధానములు వ్రాయుము

1. Economic Globalisation
   ఆర్థిక ప్రపంచీకరణ
2. International Monetary Fund
   అంతర్జాతీయ ద్రవ్య నిధి
3. IBRD
   ఐ.బి.ఆర్.డి.
4. Nation state
   జాతి రాజ్యం
5. Depletion of Ozone layer
   ఓజోన్ పొర క్షీణత
6. Cross-border terrorism
   సరిహద్దు ఉగ్రవాదం
7. Causes of terrorism
   ఉగ్రవాదానికి కారణాలు
8. Origin of WTO
   డబ్ల్యు.టి.ఓ. మూలం/ఆరంభం
9. LEDC
   ఎల్.ఈ.డి.సి.
10. Objectives of BRICS
    బ్రిక్స్ లక్ష్యాలు

II. Answer five questions **5 x10 = 50 M**

ఐదు ప్రశ్నలకు సమాధానములు వ్రాయుము

11. A. Explain the nature and scope of Globalisation.
    ప్రపంచీకరణ స్వభావాన్ని, పరిధిని వివరించండి. OR

    B. What is Cultural Globalisation and discuss its impact on developing countries.
    సాంస్కృతిక ప్రపంచీకరణ అంటే ఏంటో తెలిపి, అభివృద్ధి చెందుతున్న దేశాలపై దాని ప్రభావాన్ని చర్చించండి.

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12. A. Evaluate the role and functions of International Monetary Fund.
అంతర్జాతీయ ద్రవ్య నిధి యొక్క పాత్రను, విధులను అంచనా వేయండి. **OR**

B. Discuss the role and functions of World Bank.
ప్రపంచ బ్యాంక్ పాత్రను, విధులను చర్చించండి.

13. A. What are the challenges facing by the nation states in the context of globalisation?
ప్రపంచీకరణ నేపథ్యంలో జాతి రాజ్యాలు ఎదుర్కొంటున్న సవాళ్ళు ఏవి? **OR**

B. Do you agree that globalisation has led to inequalities? Justify.
ప్రపంచీకరణ వల్ల ఆర్థిక అసమానతలకు దారి తీసిందని విశ్వసిస్తున్నారా? సమర్థించండి.

14. A. Elucidate various agreements to counter the climate change.
వాతావరణ మార్పు నివారణకు చేసుకున్న వివిధ ఒప్పందాలను స్పష్టం చేయండి. **OR**

B. What is terrorism? Trace various terrorist organisations in the world.
ఉగ్రవాదం అనగా? ప్రపంచంలోని వివిధ ఉగ్రవాద సంస్థల గురించి తెలపండి.

15. A. Explain the nature and role of World Trade Organisation.
ప్రపంచ వాణిజ్య సంస్థ స్వభావాన్ని, పాత్రను వివరించండి. **OR**

B. Write an essay on origin and evolution of BRICS.
బ్రిక్స్ యొక్క ఆవిర్భావాన్ని, పరిణామంపై ఒక వ్యాసాన్ని వ్రాయండి.

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స్పెషల్ తెలుగు

సెమిస్టర్-06. పేపర్-7 (ఎలక్టివ్-1)

అలంకార శాస్త్రం

ప్రాచీన కవితా నిర్మాణ పద్ధతులు

1. కావ్యము :

కవి కావ్యము, నిర్వచనాలు : భారతీయ ఆలంకారికులు, తెలుగు ఆలంకారికులు. కావ్య ప్రయోజనం, కావ్య భేదాలు, కావ్య హేతువులు.

2. రసము :

రస నిర్వచనం, (విభావ, అనుభావ, సాత్విక, సంచారి భావాలు), రసము – యన్నిష్టము, రసము – రసభేదాలు

3. ధ్వని :

ధ్వని నిర్వచనం, ధ్వని సిద్ధాంతం, అభిధ, లక్షణ, వ్యంజన, ధ్వని భేదాలు

4. కళలు – లలిత కళలు :

దృశ్య – శ్రవ్య కళలు, లలిత కళల్లో కవిత్వ స్థానం.

5. దృశ్య కావ్య భేదాలు – దశవిధ రూపకాలు :

ఆధార గ్రంథాలు :

1. సాహిత్య శిల్ప సమీక్ష – పింగళి లక్ష్మీకాంతం
2. సాహిత్య సోపానాలు – దివాకర్ల వేంకటావధాని
3. కావ్యాలోకము – నండూరి రామకృష్ణమాచార్య
4. భారత ధ్వని దర్శనము – శలాక రఘునాథ శర్మ
5. రసోల్లాసము – ఆచార్య జి.వి.సుబ్రహ్మణ్యం

స్పెషల్ తెలుగు

సెమిస్టర్ - 06. పేపర్ - 7 (ఎలక్టివ్-1)

అలంకార శాస్త్రం

3 గం॥లు **మార్కులు : 75**

భాగం - అ

I. ఈ క్రింది వాటిలో ఐదింటికి సమాధానాలు రాయండి. **5×5 = 25**

1. రస సంఖ్య
2. సాత్విక భావాలు
3. ప్రతీక
4. అభిద
5. ముక్తకం
6. రసరాజము
7. కావ్య నిర్వచనం
8. భావచిత్రం

భాగం - ఆ

II. ఈ క్రింది ప్రశ్నలకు సమాధానాలు రాయండి. **5×10 = 50**

1. **ప్రాచ్య, పాశ్చాత్యుల కావ్య నిర్వచనాలు పోల్చండి**

(లేదా)

కావ్య ప్రయోజనాల గురించి చర్చించండి.

2. **కావ్య హేతువులలో ప్రతిభ ప్రాధాన్యతను వివరించండి.**

(లేదా)

కావ్య భేదాల గురించి రాయండి.

3. **రసము యన్నిష్ఠము?**

(లేదా)

ధ్వని భేదాల గురించి చర్చించండి.

4. **లలిత కళల్లో కవిత్వ స్థానాన్ని గురించి విశ్లేషించండి.**

(లేదా)

దశవిధ రూపకాల గురించి రాయండి.

5. **రస స్వరూపాన్ని గురించి వివరించండి.**

(లేదా)

నాటక లక్షణాల గురించి రాయండి.

CLUSTER ELECTIVE - 1

స్పెషల్ తెలుగు

సెమిస్టర్-06. పేపర్-8

[1] జర్నలిజం

1. సమాచార వినిమయం (కమ్యూనికేషన్) :

కమ్యూనికేషన్ నిర్వచనం, రకాలు, డైరెక్ట్ కమ్యూనికేషన్, వెర్బల్ కమ్యూనికేషన్, నాన్ వెర్బల్ కమ్యూనికేషన్, ఇంటర్ పర్సనల్ కమ్యూనికేషన్, ఇంట్రా పర్సనల్ కమ్యూనికేషన్, ఇండోర్ కమ్యూనికేషన్, ఔట్‌డోర్ కమ్యూనికేషన్, మాస్ కమ్యూనికేషన్.

2. జర్నలిజం :

రిపోర్టింగ్, ఎడిటింగ్, నిర్వచనాలు, రకాలు, రిపోర్టర్ అర్హతలు, లక్షణాలు, విధులు, ఎథిక్స్ ఆఫ్ రిపోర్టింగ్, ఎడిటింగ్, సబ్-ఎడిటర్ అర్హతలు, లక్షణాలు, బరువు బాధ్యతలు.

3. న్యూస్ ఫీచర్స్ :

ఫీచర్ న్యూస్, స్పాట్ న్యూస్, న్యూస్ ఈవెంట్స్, న్యూస్ హెడ్స్, న్యూస్ లీడ్స్, అన్ని రకాల న్యూస్‌లు, ఫీచర్ లక్షణాలు, రకాలు.

4. తెలుగు పత్రికల చరిత్ర :

తెలుగు పత్రికల ఆవిర్భావ వికాసాలు, తొలిదశ, మలిదశ, పరిణామ దశ, విస్తరణ దశ, వికాస దశ, తెలుగు పత్రికల వర్గీకరణ, రకాలు, తెలుగు పత్రికలు, పాత్రికేయులు.

5. సమాచార వినిమయ సాధనాలు :

శ్రవ్య, దృశ్య, శ్రవ్యదృశ్య సాధనాలు; గ్రామీణ (Rural), సాంప్రదాయిక (Traditional) సాధనాలు.

ఆధార గ్రంథాలు :

1. జర్నలిజం పరిచయం – బూదరాజు రాధాకృష్ణ
2. తెలుగు జర్నలిజం – డి॥ వి.లక్ష్మణరెడ్డి
3. తెలుగు జర్నలిజం – దుర్గం రవీందర్
4. తెలుగు జర్నలిజం చరిత్ర-వ్యవస్థ – రాపోలు ఆనంద భాస్కర్
5. సమాచారాల చేరవేత, పాత్రికేయత్వం – డా॥ యస్.జి.డి.చంద్రశేఖర్

మాదిరి ప్రశ్నాపత్రం

బి.ఏ.డిగ్రీ తృతీయ సంవత్సరము

స్పెషల్ తెలుగు

సెమిస్టర్-06. పేపర్-8

1 జర్నలిజం

3 గం॥లు **మార్కులు : 75**

భాగం - అ

I. ఈ క్రింది వాటిలో అయిదింటికి సమాధానాలు రాయండి. 5×5 = 25

1. సురవరం ప్రతాపరెడ్డి
2. బాక్స్ఐటమ్
3. వార్త - నిర్వచనం
4. నార్ల వెంకటేశ్వరరావు
5. తొలి తెలుగు పత్రిక
5. అముద్రిత గ్రంథ చింతామణి
7. ముట్నూరి కృష్ణారావు
8. భారతి

భాగం - ఆ

II. ఈ క్రింది ప్రశ్నలకు సమాధానాలు రాయండి. 5×10 = 50

1. రిపోర్టర్ అర్హతలు, విధుల గురించి రాయండి.

(లేదా)

ఎడిటింగ్ నిర్వహణ, ఎడిటర్ అర్హతల గురించి రాయండి.

2. తెలుగులో ముద్రణా దశలను విపులీకరించండి.

(లేదా)

వార్తల్లోని రకాలు, శీర్షికా ప్రాధాన్యతను చర్చించండి.

3. ప్రసిద్ధ తెలుగు పత్రికల గురించి రాయండి.

(లేదా)

జాతీయోద్యమంలో తెలుగు పత్రికల పాత్ర, ప్రాధాన్యతల గురించి తెల్పండి.

4. తొలి తెలుగు పత్రికల ఆవిర్భావ, వికాసాల గురించి రాయండి.

(లేదా)

ఫీచర్ నిర్వచనం, లక్షణాలను పేర్కొనండి.

5. ప్రాచీన కాలంలో సమాచారాల చేరవేత పద్ధతుల గురించి రాయండి.

(లేదా)

తెలుగులో స్త్రీల ప్రత్యేక పత్రికలు, వాటి ప్రయోజనాల గురించి రాయండి.

CLUSTER ELECTIVE - 2

స్పెషల్ తెలుగు

సెమిస్టర్-06. పేపర్-8

2. ఆధునిక తెలుగు భాషా నిర్మాణం

1. ఆధునిక తెలుగు భాష – సంధి, సమాస, లింగ, వచన, విభక్తి నిర్మాణం.

2. ఆధునిక తెలుగు భాష – క్రియ, ప్రాతిపదికల. అకర్మక, సకర్మక, ప్రేరణార్థక, సమాపక, అపమాపక క్రియలు.

3. తెలుగు వాక్య నిర్మాణం. వాక్య బేధాలు – సామాన్య, సంశ్లిష్ట, క్రియా రహిత, క్రియాసహిత యత్తదర్థక వాక్యాలు కర్మణి, కర్తరి ప్రయోగాలు, ప్రత్యయాలు – పురుష బోధక, అర్థ బోధక, కాల బోధక ప్రత్యయాలు, నామ్నీకరణ.

4. తెలుగు భాషా స్వరూపం – గ్రాంథిక భాష, వ్యావహారిక భాష

5. తెలుగు భాషా ఆధునీకీకరణ ఆవశ్యకత, పద్ధతులు – సమస్యలు – తెలుగు భాష ప్రామాణీకరణ – ఆవశ్యకత, సమస్యలు.

ఆధార గ్రంథాలు :

1. ఆధునిక ప్రామాణికాంధ్ర వ్యాకరణం – వర్ధుల వెంకటేశ్వర్లు
2. ఈనాడు భాషా స్వరూపం – బూదరాజు రాధాకృష్ణ
3. తెలుగు భాషా తత్త్వం – కొమర్రాజు వేంకట లక్ష్మణరావు
4. తెలుగు భాషా చరిత్ర – (సం) భద్రిరాజు కృష్ణమూర్తి
5. తెలుగులో వెలుగులు – చేకూరి రామారావు
6. తెలుగు వాక్యం – చేకూరి రామారావు
7. వాడుక భాషే రాస్తున్నామా? – ముప్పాళ్ళ రంగనాయకమ్మ

మాదిరి ప్రశ్నాపత్రం
బి.ఏ.డిగ్రీ తృతీయ సంవత్సరం
స్పెషల్ తెలుగు
సెమిస్టర్-06. పేపర్-8
ఆధునిక తెలుగు భాషా నిర్మాణం

3 గం॥లు **మార్కులు : 75**

భాగం - అ

I. ఈ క్రింది వాటిలో అయిదింటికి సమాధానాలు రాయండి **5×5 = 25**

1. అసమాపక క్రియలు
2. యత్తదర్థక వాక్యాలు
3. క్రియా రహిత వాక్యం
4. క్ష్వార్థం
5. కర్మణి వాక్య ప్రయోగం
6. సంశ్లిష్ట వాక్యం
7. నామ్నీకరణ
8. కాలబోధక ప్రత్యయాలు

భాగం - ఆ

II. ఈ క్రింది ప్రశ్నలకు సమాధానాలు రాయండి. **5×10 = 50**

1. ఆధునిక తెలుగు భాషలో సంధి స్వరూపాన్ని గూర్చి రాయండి.

(లేదా)

అకర్మక, సకర్మక క్రియా బేధాలను నిరూపించండి.

2. తెలుగులో సంయుక్త వాక్యాలను గురించి వివరించండి.

(లేదా)

పురుష బోధక ప్రత్యయాల గురించి రాయండి.

3. ప్రామాణిక భాష అంటే ఏమిటి? ప్రమాణ భాష ఆవశ్యకతను చర్చించండి.

(లేదా)

ఆధునిక సమాస స్వరూపాన్ని వివరించండి.

4. క్రియా సహిత వాక్యాల గురించి రాయండి.

(లేదా)

అర్థబోధక ప్రత్యయాల గురించి రాయండి.

5. లింగ, వచన, విభక్తుల గురించి రాయండి.

(లేదా)

ఆధునిక తెలుగు భాషలో వాక్య నిర్మాణం గురించి చర్చించండి.

CLUSTER ELECTIVE - 3

స్పెషల్ తెలుగు

సెమిస్టర్-06. పేపర్-8

3. తెలుగు అనువాదం

1. అనువాదం :

స్వరూప స్వభావాలు, అనువాద నిర్వచనం, అనువాద ప్రమాణాలు, మూలభాష, లక్ష్యభాష, పదం, పదబంధం, వాక్యం-ఉపవాక్యం, లేఖనం-ప్రతిలేఖనం, అనువాదం శాస్త్రమా, కళా?

2. అనువాదం - రకాలు :

వివిధ రకాల అనువాదాలు (మూల విధేయానువాదం, స్వేచ్ఛానువాదం, నుడికారపు అనువాదం, యాంత్రిక అనువాదం), అనువాదకుడు - లక్షణాలు-రకాలు.

3. అనువాద సమస్యలు :

భౌగోళిక, భాషా, సాంస్కృతిక సమస్యలు, పరిష్కార మార్గాలు, అనువాద ప్రయోజనాలు.

4. అధికార భాషగా తెలుగు :

రాష్ట్ర పాలనా యంత్రాంగంలో జరిగిన, జరుగుతున్న కృషి, అధికార భాష ఆవశ్యకత, అధికార భాష సంఘం విధులు, హక్కులు, బాధ్యతలు, తెలుగు సజీవ భాషకు దోహదాలు.

5. అనువాదం ఆవశ్యకత :

ఆధార గ్రంథాలు :

1. అనువాద సమస్యలు - రాచమల్లు రామచంద్రారెడ్డి
2. అనువాద సిద్ధాంతాలు - డా॥ ఎస్.అక్కిరెడ్డి
3. అధికార భాషగా తెలుగు - సి.ధర్మారావు
4. అనువాద పాఠాలు - బూదరాజు రాధాకృష్ణ
5. అనువదించడం ఎలా? - గోవిందరాజు చక్రధర్

మాదిరి ప్రశ్నాపత్రం

బి.ఏ.డిగ్రీ తృతీయ సంవత్సరం

స్పెషల్ తెలుగు

సెమిస్టర్-06. పేపర్-8

3 తెలుగు అనువాదం

3 గం॥లు **మార్కులు : 75**

భాగం - అ

I. ఈ క్రింది వాటిలో అయిదింటికి సమాధానాలు రాయండి. **5×5 = 25**

1. లక్ష్యభాష
2. పదం - పదబంధం
3. అనువాద ప్రమాణాలు
4. యాంత్రికానువాదం
5. భావానువాదం
6. స్వేచ్ఛానువాదం
7. అనువాద సమస్యలు
8. శాస్త్రానువాదం

భాగం - ఆ

II. ఈ క్రింది ప్రశ్నలకు సమాధానాలు రాయండి. **5×10 = 50**

1. అనువాద నిర్వచనాలను సోదాహరణంగా వివరించండి?

(లేదా)

అనువాదకుడు, అనువాదంలో అనుసరించాల్సిన పద్ధతులను పేర్కొనండి.

2. అనువాద ప్రయోజనాలు పేర్కొనండి.

(లేదా)

అనువాదం శాస్త్రమా? కళా? చర్చించండి.

3. వివిధ రంగాలలో జరుగుతున్న అనువాద కృషిని గురించి చర్చించండి.

(లేదా)

అనువాద విధానంలో పత్రికల పాత్రను గురించి రాయండి.

4. అధికార భాషగా తెలుగు ఆవశ్యకతను చర్చించండి.

(లేదా)

అధికార భాషా అమలుకు ప్రభుత్వం చేపట్టిన చర్యల గురించి రాయండి.

5. తెలుగు మృతభాష అవుతుందా - చర్చించండి.

(లేదా)

ఉత్తమ అనువాద విధానాలను పేర్కొనండి.

Sri Venkateswara University : TIRUPATI

Table 6 : B. A (Accountancy)– **Semester VI**

W.E.F. 2017-18

DSC: Compulsory

ACCOUNTING FOR SPECIAL ENTITIES

Teaching Hours :6 per week

Unit – I : Partnership Accounts 1:

Partnership – introduction – Fixed and fluctuating capital methods – admission of a partner – new profit sharing ratio – revaluation of assets and liabilities – treatment of goodwill – treatment of undistributed profits and losses – (problems only)

Unit – II : Partnership Accounts 2:

Retirement of a partner – revaluation of assets and liabilities – goodwill treatment – undistributed profits – Death of a partner – Dissolution – firm and partnership (insolvent of one partner only) – (problems)

Unit – III : Instalment Purchase System:

Instalment purchase system – introduction and features – differences between hire purchase system and instalment purchase system – problems on Instalment purchase system only.

Unit – IV : Single Entry System:

Single entry system – introduction and limitations – ascertainment of profit – statement of affairs method – conversion method (simple problems only).

Unit – V : Brach Accounts:

Branch Accounts – introduction – types of branches – dependent branches – cost price method and invoice price method – debtors method – stock and debtors method only (problems on dependent branches only)

MODEL QUESTION PAPER

ACCOUNTING FOR SPECIAL ENTITIES

Section – A

Answer any FIVE of the following. Each question carries 3 marks **5 x 3 = 15**

1. Fixed capital method.
2. Sacrificing ratio.
3. Retirement of a partner.
4. Joint life policy.
5. Features of instalment purchase system.
6. Statement of affairs
7. Differences between single entry system and double entry system.
8. Types of branches.

Section – B

Answer any ONE question from each unit.
Each question carries 12 marks **5X12 =60**

Unit – I

9. On 1st January 2010 Arjun and Bhargav entered into a partnership on the following terms.

   a. Mr. Arjun and Mr.Bhargav are to contribute capitals of `50,000 and `30,000 respectively
   b. Profits and losses are to be shared in the ratiao of 3:2
   c. Interest on capital is to be allowed at 5 percent perannum
   d. Interest on drawings is to be charged at 2% pa
   e. Mr. Arjun is to get a salary of `500 per month
   f. Mr. Bhargav is to get commission at 2% on the net profit of the firm before charging any of the above

On 31st December 2010 their trading profits, before giving effect to the above terms, was `60,000. During the year Mr.Arjun has withdrawn `1,000 and Mr.Bhargav`500 from the firm on which interest is to be charged for the whole year.

Prepare profit and loss appropriation account and partners capital accounts

a. Fixed capital method
b. Fluctuating capital method

OR

10. The following is the balance sheet of Amar and Sunil who share profits and losses in the ration of 3/5 and 2/5

Liabilities	`	Assets	`
Adhitya's Capital	20,000	Debtors	20,000
Bhargav's capital	16,000	Buildings	18,000
Creditors	24,000	Plant	20,000
General reserve	32,000	Stock	24,000
Workmen compensation fund	8,000	Cash	18,000
	100,000		100,000

They agreed to admit Chandra on the following terms:-

a. The value of buildings to be increased to `20,000
b. The value of stock to be increased to `32,000
c. There is a liability on workmen's compensation fund which was determined at `4,000
d. Chandra contributes `20,000 in cash as his share of goodwill
e. Chandra has to bring further cash as would make his capital equal to 20% of the combined capital to Adhitya andBhargav after all adjustments.

Show the necessary ledger accounts in the books of firm and new balance sheet after the admission of Chandra.

Unit - II

11. A, B and C are partners in a business, sharing profits and losses in the ratio of 10:7:3.

Liabilities	`	Assets	`
Creditors	40,000	Fixed assets	1,00,000
Reserve fund	20,000	Stock	70,000
Capitals		Debtors 30,600	
A	80,000	Less: RBD 600	30,000
B	60,000	Cash at bank	20,000
C	20,000		
	2 20,000		2,20,000

C retires on that date subject to the following conditions:

a. Fixed assets are to be depreciated by 20% except buildings worth `40,000 (book value) which is to be valued at `60,000

b. `600 to be written off as bad debts and provision for doubtful debts to be done at 4%

c. The goodwill of the firm to be valued at `32,000

d. Liability for outstanding expenses `4,000 to be provided

e. There were office equipment which were 100% depreciated to be valued at `8,000 on the date of retirement. It was to be brought into books.

f. It was agreed that A and B will share profits equally in future.

Show necessary ledger accounts and balance sheet after C's retirement.

OR

12. Ravinder, Shekhar and Ramana are partners sharing 2:2:1 ratio. On 1-1-2010 their balance sheet was as under

Liabilities	`	Assets	`
Sundry creditors	18,000	Cash at bank	4,000
Reserve fund	20,000	Bill receivable	2,000
Capital A/cs		Debtors 20,000	
Ravinder	30,000	Less: Reserve 1,000	19,000
Shekhar	20,000	Stock	12,000
Ramana	2,000	Machinery	30,000
		Buildings	23,000
	90,000		90,000

On the above date the firm was dissolved. The assets realised machinery `15,000; buildings `8,000; stock `10,000; Bills receivable – Nil; debtors `8,000. `1,850 included in the creditors need not paid. There is an unrecorded liability of `850 which had to be paid. The expenses of dissolution amounted to `3,000. `1,000 could only be realised from the estate of Ramana on becoming insolvent. Give ledger accounts to be close the books of account. Apply Garner Vs Murray rule.

Unit – III

13. Sekhar transport purchased a truck on instalment purchase system from Arun Automobiles on 1-1-2014. The cash price was `1,21,850 and down payment `21,850. The balance was payable in 4 instalments of `25,000 each plus interest at 12% p.a. at the end of 2014, 2015, 2016 and 2017. Sekhar transport provides depreciation at 20% p.a. on written down value method.

Pass journal entries in the books of Sekhar Transport. Also show the accounts.

OR

14. Supraja purchased a machine on 1-1-2015 from Suraj on installment system for `36,100 to be paid as follows. On delivery `9,000 at the end of first `12,300, at the end of second year 9,300, at the end of third year `5,500. The vendor charges interest @ 10% p.a. Determine the cash price and write entries in the books of Supraja who charges depreciation at 5% p.a. on diminishing balance method. Prepare necessary accounts in the books of Suraj.

Unit – IV

15. Mr Aditya keeps his books on single entry system and supplies the following information.

Assets & Liabilities	1-4-2016 (`)	31-3-2017(`)
Bank	30,000	40,000
Debtors	40,000	50,000
Stock	60,000	64,000
Investments	1,00,000	1,60,000
Creditors	34,000	40,000
Furniture	30,000	70,000
Bills payable	12,000	16,000
Loan from bank	---	30,000

Aditya has drawn `2,000 pm for domestic purpose and `12,000 from business funds to meet his son's education expenses. The rent paid to business premises is `2,400 and only, ½ premises is used for business whereas the entire rent was paid from business funds. The furniture is depreciated at 20% pa and `4,000 are to be provided for doubtful debts. Prepare the relevant statements and show the profit or loss made by Aditya for the year ending 31-3-2017.

OR

16. Mr. Ragava did not keep his books of accounts under double entry system. From the following information available from his records, prepare profit and loss account for the year ended 31st March 2017 and a balance sheet as at that date. Depreciate equipment by 10%.

Summary of cash book

Dr Cr

Receipts	`	Payments	`
To Balance B/d	80,000	By Purchases	1,40,000
To Sales	4,00,000	By Payment to creditors	2,00,000
To Receipts from Debtors	3,00,000	By Sundry expenses	60,000
		By Cartage	20,000
		By Drawings	80,000
		By Balance C/d	2,80,000
	7,80,000		7,80,000

Other information

	31-3-2016	31-3-2017
	`	`
Debtors	90,000	1,20,000
Creditors	1,44,000	68,000
Stock of materials	1,00,000	1,60,000
Equipment	4,00,000	4,00,000
Furniture	30,000	30,000
Discount allowed during the year		14,000
Discount received during the year		17,000

Unit – V

17. A Head Office in Hyderabad has branch at Tirupati to which goods are invoiced by the Head Office at 20% on selling price. All cash received by the branch is daily remitted to Head Office. From the following particulars, show how the branch account will appear in the Head Office books.

Particulars	`
Stock on January 1, 2016 (at invoice price)	1,00,000
Debtors on 1-1-2016	1,20,000
Goods supplied by Head Office (at invoice price)	3,20,000
Cash sales	50,000
Cash received from customers	2,20,000
Goods returned to Head Office at invoice price	20,000
Cheques received from Head Office	
Wages and Salaries	45,000
Rent	5,000
Sundry expenses	12,000
Stock on 31-12-2016 (at invoice price)	1,25,000
Debtors on 31-12-2016	1,40,000

OR

18. Virinchi Technologies of Hyderabad is having a Branch at Bangalore. The particulars relating to The Branch as on 31.12.2016 was as follows.

	`
Stock at the Branch as on 1.1.2016	22,500
Debtors at the Branch as on 1.1.2016	45,000
Petty Cash at the Branch as on 1.1.2016	450
Goods sent to Branch during the Year	3,78,000
Credit Sales during the year	3,42,000

Remittances from the Branch			
for cash sales	90,000		
Received from Debtors	3,15,000		4,05,000
Cheques sent to the Branch during the year:			
For salaries	13,500		
For Rent & Taxes	2,300		
For Petty Cash	1,700	17,500	
Stock at Branch as on 31.12.2016			37,500
Goods Returned by the branch			3,000
Debtors as on 31.12.2016			72,000
Petty cash as on 31.12.2016			300

Show the Net Profit for the year 2016

Cluster Electives :

Accounting : teaching Hours 6 per week per subject

6.1 Auditing
6.2 Management Accounting
6.3 Project work

CLUSTER ELECTIVE – B.A, ACCOUNTING

AUDITING

Unit-I: Auditing: Meaning – Objectives – Errors and Frauds - Importance of Auditing – Auditing as a Vigil Mechanism – Role of Auditor in checking corporate frauds.

Unit-II: Types of Audit: Based on Ownership and time - Independent, Financial, Internal, Cost, Tax, Government, Secretarial audits.

Unit-III: Planning of Audit: Steps to be taken at the commencement of a new audit – Audit programme - Audit note book - Internal check, internal audit and internal control.

Unit-IV: Vouching and Investigation: Vouching of cash and trading transactions – Investigation, Auditing vs. Investigation

Unit-V: Company Audit and Auditors Report: Auditor's Qualifications – Appointment and Reappointment – Rights, duties, liabilities and disqualifications - Audit report: Contents.

References:

1. S.Vengadamani, "Practical Auditing", Margham Publications, Chennai.
2. Ghatalia, "Principles of Auditing", Allied Publishers Pvt. Ltd., New Delhi.
3. Pradeesh Kumar, Baldev Sachdeva & Jagwant Singh, "Auditing Theory and Practice, Kalyani Publications, Ludhiana.
4. N.D. Kapoor, "Auditing", S. Chand, New Delhi.
5. R.G. Saxena, "Principles and Practice of Auditing", Himalaya Publishing House, New Delhi.
6. Jagadesh Prakesh, "Principles and Practices of Auditing" Kalyani Publications, Ludhiana.
7. Kamal Gupta and Ashok Gupta, "Fundamentals of Auditing", Tata McGraw Hill
8. B.N. Tondan, "Practical Auditing", S.Chand, New Delhi.

Sri Venkateswara University
Model Paper
III B.A (Accountency)
Semester – VI, W.E.F.2017-18
AUDITING

Time: 3 hours **Max.Marks: 75 M**

Section – A

Answer any FIVE of the following. Each question carries 3 marks **5 x 3 = 15**

1. a) Auditing
b) Auditing as a Vigil Mechanism
c) Internal Audit
d) Government Audit
e) Audit Note Book
g) Investigation
h) Vouching
i) Auditors qualifications

Section – B

Answer any ONE question from each unit.
Each question carries 12 marks **5X12 =60**

UNIT-I

2. Define Auditing. Explain objectives of Auditing

(or)

3. Describe the importance of Auditing.

UNIT-II

4. Describe the various types of Audit.

(or)

5. Distinguish between Cost Audit and Financial Audit

UNIT-III

6. What steps should be taken in to A/c vehicle commencement of New Audit?

(or)

7. What are the contents of Audit programme?

UNIT-IV

8. "Vouching is the essence of Auditing". Discuss?

(or)

9. Distinguish between Audit and Investigation?

UNIT-V

10. What are the Rights and duties of company Auditor?

(or)

11. What are the contents of Audit Report?

MANAGEMENT ACCOUNTING

Unit–I: Management Accounting: Interface with Financial Accounting and Cost Accounting – Scope and limitations of management accounting - Functions of Management Accounting and its importance (Theory only)

Unit–II: **Financial statement analysis** - Financial Statement analysis and interpretation Comparative statements – Common size analysis and trend analysis (including problems).

Unit–III: Ratio Analysis: Classification, Importance and limitations - Analysis and interpretation of Accounting ratios - Liquidity, profitability, turnover or activity and solvency ratios (including problems).

Unit–IV: Fund Flow Statement: Concept of fund: Preparation of funds flow statement. Uses and limitations of funds flow analysis (including problems).

Unit–V: Cash Flow Statement: Concept of cash flow – Preparation of cash flow statement - Uses and limitations of cash flow analysis (including problems).

References:

1. Cost Accounting and Management Accounting – T.S. Reddy and Hariprasad Reddy, Margham publications, Chennai
2. S.N. Maheswari, A Textbook of Accounting for Management, S. Chand Publishing, New Delhi
3. I.M Pandey, "Management Accounting", Vikas Publishing House, New Delhi,
4. Shashi K. Gupta & R.K. Sharma, "Management Accounting: Principles and Practice", Kalyani Publishers, Ludhiana.
5. Jawahar Lal, Accounting for Management, Himalaya Publishing House, New Delhi.
6. Charles T. Horngren, et.al, "Introduction to Management Accounting" Person EducationIndia, New Delhi, 2002.
7. Murthy & Guruswamy – Management Accounting, Tata McGraw Hill, New Delhi.
8. Dr. Kulsreshtha & Gupta – Practical problems in Management Accounting.
9. Bhattacharya, D., "Management Accounting", Pearson Education India, New Delhi.
10. S.P. Gupta – Management Accounting, S. Chand Publishing, New Delhi.

Sri Venkateswara University
Model Paper
III B.A (Accountency)
Semester – VI, April, 2018
DSC 3G 6.3 – Management Accounting

Time: 3 hours **Max.Marks: 75 M**

Section – A

Answer any FIVE questions, each question carries 3 marks **5 X3=15**

1. a) Management Accounting
b) Financial Statements
c) Liquidity Ratios
d) Gross Profit Ratio
e) Funds from operation
f) Operating Activities
g) Cash flow statement
h) Limitations of Ratio Analysis
i) Common size statement
j) Cost Accounting

Section – B

Answer any ONE question from each unit.
Each question carries 12 marks **5X12 =60**

UNIT-I

2. Explain scope and limitations of Management Accounting

(or)

3. Explain the functions & importance of Management Accounting

UNIT-II

4. Dhandapani & Co. Ltd., furnishes the following Balance Sheets for the years 2014 and 2015. Prepare common-size balance sheets.

Balance sheets

Liabilities	2014 Rs.	2015 Rs.	Assets	2014 Rs.	2015 Rs.

Share capital	2,00,000	3,00,000	Buildings	4,00,000	4,00,000
Reserves	6,00,000	7,00,000	Machinery	6,00,000	10,00,000
10% Debentures	2,00,000	3,00,000	Stock	2,00,000	3,00,000
Creditors	3,00,000	5,00,000	Debtors	2,00,000	2,50,000
Bills payable	1,00,000	80,000	Cash at Bank	1,00,000	50,000
Tax payable	1,00,000	1,20,000			
	15,00,000	20,00,000		15,00,000	20,00,000

(or)

5. The following are the extracts from the income statements of Bright Ltd., for the 6 years ending 2015. You are required to calculate trend percentages, taking 2014 as the base year and give two major conclusions you can draw.

(figures in thousands)

Particulars	2012	2013	2014	2015	2016	2017
Sales	300	340	420	480	520	600
Cost of goods sold	180	204	256	287	300	330
Office Expenses	40	42	45	50	55	60
Selling expenses	20	25	30	40	50	60
Net profit/loss	60	69	89	103	115	150

UNIT-III

6. The following figures relate to the trading activities of a company for the year ended 31-03-2016.

Particulars	Rs.	Particulars	Rs.
Sales	1,00,000	Salary of salesmen	1,800
Purchases	70,000	Advertising	700
Closing stock	14,000	Travelling expenses	500
Sales returns	4,000	Salaries (office)	3,000
Dividend received	1,200	Rent	6,000
Profit on sale of fixed assets	600	Stationery	200
Loss on sale of shares	300	Depreciation	1,000
Opening stock	11,000	Other expenses	2,000
		Provision for tax	7,000

You are required to calculate

1. Gross profit ratio
2. Operating profit ratio
3. Operating ratio
4. Net profit ratio

(or)

7. The following figures are extracted from the Balance Sheet of X Ltd., as on 31st December:

	2012 Rs.	2013 Rs.
Stock	25,000	40,000
Debtors	10,000	16,000
Cash at Bank	5,000	4,000
Creditors	8,000	15,000
Bills payable	2,000	3,000
Provision for Taxes	5,000	7,000
Bank Overdraft	5,000	15,000

Calculate the Current Ratio and Quick Ratio for the two years.

UNIT-IV

8. Prepare a schedule of changes in working capital from the following Balance Sheets:

Balance Sheets

Liabilities	2014 Rs.	2015 Rs.	Assets	2014 Rs.	2015 Rs.
Share capital	50,000	50,000	Fixed assets	18,000	28,000
10% Debentures	10,000	20,000	Investments:		
Bills payable	18,000	6,000	Non-trading	10,000	10,000
Outstanding expenses	6,000	9,000	Trading	8,000	9,000
Trade Creditors	33,000	40,000	Inventories	12,000	18,000
			Trade Debtors	40,000	48,000
			Accrued interest	4,000	6,000
			Unexpired insurance	-	3,000
			Cash at bank	17,000	2,000
			Cash in hand	8,000	1,000
	1,17,000	1,25,000		1,17,000	1,25,000

(or)

9. The following are the summarised Balance Sheets of Malar Industries Ltd., as on 31st December 2009 and 2010:

Balance Sheet

Liabilities	2009 Rs.	2010 Rs.	Assets	2009 Rs.	2010 Rs.
Capital:			Fixed Assets	41,000	40,000
7% Redeemable			*Less:* Depreciation	11,000	15,000
preference shares	-	10,000		30,000	
Equity shares	40,000	40,000	*Current assets:*		
General reserve	2,000	2,000	Debtors	20,000	24,000
Profit & Loss A/c	1,000	1,200	Stock	30,000	35,000
Debentures	6,000	7,000	Prepaid expenses	300	500
Current Liabilities:			Cash	1,200	3,500
Creditors	12,000	11,000			
Provision for tax	3,000	4,200			
Proposed dividend	5,000	5,800			
Bank overdraft	12,500	6,800			
	81,500	88,000		81,500	88,000

Prepare: i) Statement showing changes in the working capital.
ii) A statement of sources and applications of funds.

UNIT-V

10. From the following data you are required to calculate the cash from operations:
funds from operations for the year 1998 Rs.84,000. Current assets and liabilities as on 1-4-08 and 31-03-09 were as follows:

	1-4-08 Rs.	31-03-09 Rs.
Trade creditors	1,82,000	1,94,000
Trade debtors	2,75,000	3,15,000
Bills receivable	40,000	35,000
Bills payable	27,000	31,000
Inventories	1,85,000	1,70,000
Trade investments	40,000	70,000
Outstanding expenses	20,000	25,000
Prepaid expenses	5,000	8,000

(or)

11. From the following Balance Sheets as on 31-03-15 and 31-03-14, prepare a Cash Flow Statement:

Liabilities	31.03.2015 Rs.	1.04.2014 Rs.	Assets	31.03.2015 Rs.	1.04.2014 Rs.
Share capital	1,50,000	1,00,000	Fixed assets	1,50,000	1,00,000
Profit & Loss A/c	80,000	50,000	Goodwill	40,000	50,000
General reserve	40,000	30,000	Stock	80,000	30,000
6% Debentures	60,000	50,000	Debtors	80,000	50,000
Creditors	40,000	30,000	Bills Receivable	20,000	30,000
Outstanding exp.	15,000	10,000	Bank	15,000	10,000
	3,85,000	2,70,000		3,85,000	2,70,000

SEMESTER – VI – PROJECT WORK

Marks: Project work–70+Viva-voce-30 marks

Objectives

1. To impart skills among the students to write a report of their choice in a given area / field.
2. To enable the students to develop necessary insights into the practical field by making use of functional knowledge of different areas attained in the previous years.

Internship

During the summer vacation, at the end of the second year, students have to undergo an internship for one month with companies and other Business organizations (including Chartered Accounting Firm).

The student should submit a brief report not exceeding 10 pages on learnings of internship and a certificate from the organization, along with the project work.

Project Work Guidelines

The students have to submit a Project report on a selected topic of their choice, selecting from the broad areas of their curriculum, guided by a Faculty member.

The students are expected to prepare a project report on a selected topic that should comprise of 50 to 80 pages. The project report is to be valued by the External Examiners suggested by the Board of Studies in Commerce. The project report is to be submitted at the college by 31st March of the year.

SRI VENKATESWARA UNIVERSITY

CBCS B.A.(Non-Maths) Statistics Course Structure

W.E.F.2017-18

3rd YEAR - VI SEMESTER

STATISTICS

Year	Sem	Paper	Subject	Hrs	Cridets	IA	EA	Total
3	VI	VII	**Elective(A)**					
			Analysis of variance and Vital Statistics	3	3	25	75	100
			LAB	2	2	-	50	50
			Cluster Elective (A)					
		VIII	A-I : Applied Statistics	3	3	25	75	100
			A-II :Statistical Quality Control and Operations Research	3	3	25	75	100
			A-III : Numerical Analysis	3	3	25	75	100
			A-I : LAB	2	2	-	50	50
			A-II : LAB	2	2	-	50	50
			A-III : LAB	2	2	-	50	50

SRI VENKATESWARA UNIVERSITY

STATISTICS SYLLABUS

Semester – VI (CBCS With Non-Maths Combination Common to BA)

Elective Paper – VII(A) : ANALYSIS OF VARIANCE AND VITAL STATISTICS

UNIT – I

Analysis of variance : Definition, Assumptions, One-way with equal and unequal classification, Two-way classifications.

UNIT – II

Design of Experiments : Definition, Terminology in experimental design, Principles of design of experiments- Replication, Randomization and Local control, Completely Randomized Design(CRD): Layout, Advantages and analysis of Completely Randomized Design (C.R.D)

UNIT –III

Randomized Block Design (R.B.D) and Latin Square Design (L.S.D) with their layouts and Analysis, Missing plot technique in RBD and LSD.

UNIT – IV

Vital Statistics: Introduction, Uses of vital statistics, Methods of obtaining vital statistics, Measurement of mortality: Crude death rate(CDR), Specific death rates(S.D.R) and Standardized death rate(St.D.R) , Measurements of Fertility: Crude Birth Rate(CBR), General Fertility Rate (GFR), Specific Fertility Rate (SFR) and Total Fertility Rate(TFR).

UNIT -V

Population growth rates: Pearl's vital index, Grass reproduction rate (GRR) and Net reproduction rate (NRR). Life Table- Assumptions, Description and construction of life table uses of life table, Abridged Life Table.

List of reference books :

1. Fundamentals of Applied Statistics. By S.C.Gupta and V.K.Kapoor. Sultan Chand
2. III Year B.A/B.Sc Paper-III applied Statistics-1 Telugu Academic by Prof.K.Srinivasa RAo, Dr.D. Giri,Dr.A.Anand, Dr.V.Papaiah Sastry
3. B.A/B.Sc Statistics Paper-III by DVLN Jogiraju, C.Srikala, Palnati Sudarsan
4. Prayoga Rachana and Visleshana – Telugu Academy.
5. K.V.S. Sarma: Statistics made simple : do it yourself on PC. PHI
6. Anuvartita Sankhyaka sastram – Telugu Academy.

STATISTICS PRACTICALS

Semester – VI (CBCS With Non-Maths Combination Common to BA)

Elective Paper – VII(A) : ANALYSIS OF VARIANCE AND VITAL STATISTICS

1. ANOVA – one way classification with equal number of observations
2. ANOVA – one way classification with unequal number of observations
3. A NOVA- Two way classification with equal number of observations.
4. Analysis of CRD.
5. Analysis of RBD
6. Analysis of RBD with missing observation
7. Analysis of LSD
8. Analysis of LSD with missing observation
9. Calculation of mortality rates
10. Calculation of Fertility rates
11. Calculation of NRR and GRR
12. Construction of Life Table

SRI VENKATESWARA UNIVERSITY

STATISTICS MODEL QUESTION PAPER

Semester – VI (CBCS With Non-Maths Combination Common to BA)

Elective Paper – VII(A) : ANALYSIS OF VARIANCE AND VITAL STATISTICS

(w.e.f. 2017-18)

(Scientific calculators and statistical tables are allowed)

Time:3 Hours **Max.Marks:75**

PART - A

Answer any **FIVE** of the following questions. Each question carries 5 Marks 5 X 5 = 25M

1. Define ANOVA? State the assumptions?
2. Give Lay-Out of CRD?
3. Define (i) Treatment (ii) Block with examples
4. Describe the Lay-Out of RBD? Give its Advantages?
5. Define vital statistics? Give its Uses
6. Define abridged life table?
7. State the measures of population growth?
8. What are the components of life table?

PART-B

Answer **ALL** questions. Each question carries 10 Marks 5X10=50M

UNIT - I

9. Explain ANOVA of Two Way classification?

OR

10. Three varieties of coal were analyzed by four chemists and the ash-content in the varieties was found to be as under. Do the varieties differ significantly in their ash content.

Varieties	Chemists			
	I	II	III	IV
A	8	5	5	7
B	7	6	4	4
C	3	6	3	4

UNIT – II

11. Explain the basic principles of experimental design?

OR

12. Explain Analysis of variance of CRD

UNIT - III

13. Write down the ANOVA table of LSD ?

OR

14. Define RBD and write layout of RBD ?

UNIT - IV

15. Explain various rates of fertility?

OR

16. Explain the mortality rates?

UNIT – V

17. Explain NRR and GRR?

OR

18. Fill the following life table

Age	l_x	d_x	q_x	p_x	L_x	T_x	e_x^0
4	95000	500	?	?	?	4050300	?
5	?	400	?	?	?	?	?

SRI VENKATESWARA UNIVERSITY

STATISTICS SYLLABUS

Semester – VI (CBCS With Non-Maths Combination Common to BA)

Cluster Elective Paper – VIII(A-I) : APPLIED STATISTICS

UNIT – I

Time series : Introduction, Components of Time Series, Analysis of time series, Uses of time series, Measurement of trend : Graphic method, Semi averages, Moving averages and trend lines by straight line and parabola.

UNIT – II

Seasonal Indices : Simple average method, Ratio to moving average method, Ratio to trend method and Link relatives method.

UNIT – III

Index numbers: Introduction, Applications and Limitations of index numbers, Problems involved in the construction of index numbers, Simple and weighted index number, Criteria of good index number, Fisher good index number.

UNIT -IV

Chain base and fixed base index numbers, Base shifting and Splicing of index numbers. Cost of living index numbers: Definition, Uses, Construction.

UNIT – V

Official Statistics: Functions and organization of CSO and NSSO. Agricultural Statistics, area and yield statistics. National Income and its computation, Utility and difficulties in estimation of national income.

List of reference books:

1. Gun, A.M., Gupta, M.K. and Dasgupta, B. (2008): Fundamentals of Statistics, Vol. II, 9th Edition World Press, Kolkata.
2. Gupta, S. C. and Kapoor, V.K. (2008): Fundamentals of Applied Statistics, 4th Edition(Reprint), Sultan Chand & Sons
3. B.A/B.Sc III Year Paper-III Statistics- applied Statistics- Telugu Academic by Prof.K.Srinivasa Rao, Dr.D. Giri, Dr.A.Anand, Dr.V.Papaiah Sastry
4. K.V.S. Sarma: Statistics Made Simple: do it yourself on PC. PHI.

STATISTICS PRACTICALS

Semester – VI (CBCS With Non-Maths Combination Common to BA)

Cluster Elective Paper – VIII(A-I) : APPLIED STATISTICS

1. Calculation of trend values by Moving Average Method(Odd & Even Period)
2. Calculation of trend values by Linear Trend method
3. Calculation of seasonal indices by Simple Average Method
4. Calculation of seasonal indices by Ratio to Moving Average Method
5. Calculation of seasonal indices by Ratio – to- Trend Method
6. Calculation of seasonal indices by Link Relatives Method
7. Calculation of simple index numbers
8. Calculation of Weighted index numbers
9. Calculation of Different weighted index numbers
10. Construction of Fisher Good Index number
11. Construction of Cost of living index number
12. Calculation of Fixed base index number
13. Calculation of Chain base index number.

SRI VENKATESWARA UNIVERSITY

STATISTICS MODEL QUESTION PAPER

Semester – VI (CBCS With Non-Maths Combination Common to BA)

Cluster Elective Paper – VIII(A-I) : APPLIED STATISTICS

(w.e.f. 2017-18)

(Scientific calculator and statistical tables are allowed)

Time: 3 Hours **Max.Marks:75**

PART - A

Answer any **FIVE** of the following questions. Each question carries 5 Marks 5 X 5 = 25M

1. Write uses of time series?
2. Define time series and write components of time series ?
3. Explain simple average method of finding seasonal indices ?
4. Define index numbers and mention its limitations ?
5. Prove that fisher index number is a good index number ?
6. Explain base shifting of index number ?
7. Define Cost of living index number and mention its uses ?
8. Write functions of CSO ?

PART-B

Answer **ALL** questions. Each question carries 10 Marks 5X10=50M

UNIT - I

9. Explain 4 yearly moving average method for finding trend values ?

Or

10. Explain components of time series ?

UNIT - II

11. Describe Ratio to trend method for finding seasonal indices ?

Or

12. Explain Link relatives method for finding seasonal indices ?

UNIT - III

13. Calculate weighted index numbers for the following data?

Item	2006		2009	
	Price	Quantity	Price	Quantity
A	10	10	5	20
B	8	10	6	20
C	6	20	9	30
D	4	20	8	40

Or

14. Explain problems involved in the construction of index numbers ?

UNIT - IV

15. Explain chain base and Fixed base index numbers ?

Or

16. Explain splicing of index numbers ?

UNI - V

17. Explain National income and its uses ?

Or

18. Describe uses and assumptions of CSO and NSSO ?

SRI VENKATESWARA UNIVERSITY

STATISTICS SYLLABUS

Semester – VI (CBCS With Non - Maths Combination Common to BA)

Cluster Elective Paper – VIII(A-II): STATISTICAL QUALITY CONTROL AND OPERATIONS RESEARCH

UNIT – I

Statistical Quality Control : Definition, Importance of SQC in industry. Causes of variation- chance and assignable causes, Process and Product control, Importance of Normal distribution, 3σ control limits, specification limits and Natural tolerance limits.

UNIT– II

Shewart control charts – Variable Control Charts- $\bar{X}$ and R-chart, $\bar{X}$ and S- chart, Attribute type of charts - np- chart(No.of defectives) , p- chart(Proportion of defective), C-Chart(No.of defects) and its applications.

UNIT - III

Transportation Problem: Introduction, Transportation Table, General Transportation problem, Initial basic feasible solution by North West Corner Rule, Least cost method and Vogel's Approximation Method (VAM), Un-Balanced Transportation Problem, Maximization Transportation Problem.

UNIT - IV

Assignment problem: Introduction, Mathematical formulation of the problem, Optimal solution by Hungarian method. Un balanced assignment problem and Maximization case in assignment problem

UNIT - V

Sequencing Problem: Introduction, Principle assumptions, Basic terms used in sequencing, Optimum Sequence Algorithm(Johnston Algorithm), processing n Jobs through two machines, Processing n Jobs through three machines and K machines

Reference Books:

1. Applied Statistics: S.C.Guptha and V.K. Kapoor
2. Statistics Made simple Do it yourself on PC By K.V.S. Sarma
3. B.A/B.Sc III Year Paper-IV Statistics- applied Statistics- Telugu Academic by Prof.K.Srinivasa Rao, Dr.D. Giri, Dr.A.Anand, Dr.V.Papaiah Sastry
4. Taha, H. A. (2007): Operations Research: An Introduction, 8th Edition, Prentice Hall of India.
5. KantiSwarup, Gupta, P.K. and Manmohan (2007): Operations Research, 13th Edition, Sultan Chand and Sons.
6. S.Kalavathi, Operations Research, 2nd Edition, Vikas

STATISTICS PRACTICALS

Semester – VI (CBCS With Non - Maths Combination Common to BA)

Cluster Elective Paper – VIII(A-II): STATISTICAL QUALITY CONTROL AND OPERATIONS RESEARCH

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1. Construction of Mean($\bar{X}$) and Range(R) Charts
2. Construction of np- Chart (No.of defectives)
3. Construction of p-chart (Proportion of defectives) with fixed sample size
4. Construction of C Chart (No.of defects)
5. Solution of TP by North West Corner Rule to find IBFS
6. Solution of TP by Least Cost Method to find IBFS
7. Solution of TP by VAM to find IBFS
8. Solution of Unbalanced TP
9. Solution of Assignment problem by Hungarian Method
10. N jobs through two machines
11. N jobs through three machines

SRI VENKATESWARA UNIVERSITY

STATISTICAL MODEL QUESTION PAPER

Semester – VI (CBCS With Non-Maths Combination Common to BA)

Cluster Elective Paper – VIII(A-II): STATISTICAL QUALITY CONTROL AND OPERATIONS RESEARCH

(w.e.f. 2017-18)

(Scientific calculator and statistical tables are allowed)

Time: 3 Hours **Max.Marks:75**

PART - A

Answer any **FIVE** of the following questions. Each question carries **5** marks 5X5 = 25Marks

1. Give the importance of SQC in industries?
2. Describe about 3σ- control limits in SQC?
3. Explain construction of C- chart?
4. Define the terms feasible solution, optimum solution and Un balanced TP ?
5. Explain North west corner rule for finding IBFS?
6. Write mathematical formulation of assignment problem?
7. Write assumptions of sequencing problem?
8. Define sequencing problem and Explain (i) Total Elapsed Time (ii)Idle time

PART – B

Answer all questions. Each question carries 10 marks. **5x10 = 50 Marks**

UNIT – I

9. Describe the importance of normal distribution in SQC?

(OR)

10. Explain about Specification, Tolerance limits?

UNIT – II

11. Describe the Construction of $\bar{X}$ and R charts?

(OR)

12. The following data is related to defectives of 15 samples each containing 750 items then construct fraction defectives chart and give suitable comment on the production process?

250, 22, 138,456, 18, 322, 74, 154, 204, 35, 410, 84, 322, 38, 102,

UNIT – III

13. Define transportation problem? How to find IBFS using VAM

(OR)

14.Determine an IBFS to following TP by Least cost method?

Origins	Destinations				Supply
	D_1	D_2	D_3	D_4	
O_1	6	4	1	5	14
O_2	8	9	2	7	16
O_3	4	3	6	2	5
Demand	6	10	15	4	

UNIT – IV

15. Describe the Hungarian method for solving the Assignment problem?

(OR)

16. Solve the following assignment problem?

		Jobs				
MACHANIC		1	2	3	4	5
	A	10	3	3	2	8
	B	9	7	8	2	7
	C	7	5	6	2	4
	D	3	5	8	2	4
	E	9	10	9	6	10

UNIT – V

17.Describe the procedure for processing n jobs through three machines?

OR

18. There are five jobs each of which must go through the two machines A and B in the order AB. Processing times are given below. Determine a sequence for five jobs that will minimise the total elapsed time

Job	1	2	3	4	5
Machine A	5	1	9	3	10
Machine B	2	6	7	8	4

SRI VENKATESWARA UNIVERSITY

STATISTICS SYLLABUS

Semester – VI (CBCS With Non- Maths Combination Common to BA)

Cluster Elective Paper – VIII(A-III) :NUMERICAL ANALYSIS

UNIT – I

Finite Differences: Definitions of operators Δ, ∇ & E- Properties-Relationship among operators-Difference Table- Uses- Estimation of single and Two Missing values- Newton's Binomial expansion rule- Problems

UNIT – II

Interpolation and Extrapolation- Assumptions- uses- Newtons's forward formula- Newton's back ward formula- Interpolation at unequal intervals- Divided differences-properties- Newton's divided differences formula- Lagrange's formula- Problems(With out proof)

UNIT – III

Central Differences: Uses – Gauss Forward and Backward formulae- Sterling's formula- Bessel's formula- Laplace Everett's formula - Problems(With out proof)

UNIT – IV

Numerical Differentiation: First and Second order derivatives-Newton,s forward and Back ward Differentiation formulae-, Gauss Forward and Backward differentiation formulae- Sterling's- Bessel's- Laplace Everett's differentiation formulae- Problems(With out proof)

UNIT – V

Numerical Integration: Importance- General Quadrature rule- Trapezoidal Rule- Simpson's -1/3 Rule- Simpson's -3/8 Rule –Weddle's Rule - Problems(With out proof)

List of reference books:

1. Statistical Methods by S.C.Gupta,
2. Gupta, S. C. and Kapoor, V.K. (2008): Fundamentals of Mathematical Statistics, New Edition(Reprint), Sultan Chand & Sons
3 Statistics and Numerical methods by Dr. A. Singaravelu, ARS Publications.

STATISTICS PRACTICALS

Semester – VI (CBCS Non- Maths Combination Common to BA)

Cluster Elective Paper – VIII (A-III) :NUMERICAL ANALYSIS

1. Missing values by Binomial Expansion method
2. Newton's forward formula
3. Newton's back ward formula
4. Lagrange's formula
5. Gauss forward central formula
6. Gauss backward central formula
7. Sterling's central difference formula
8. Bessel's central difference formula
9. Laplace-Everett's central difference formula
10. Gauss forward differentiation formula
11. Gauss backward differentiation formula
12. Sterling's differentiation formula
13. Bessel's differentiation formula
14. Laplace-Everett's differentiation formula
15. Trapezoidal Rule
16. Simpson's 1/3 and 3/8 rule

SRI VENKATESWARA UNIVERSITY

STATISTICS MODEL QUESTION PAPER

Semester – VI (CBCS With Non-Maths Combination Common to BA)

Cluster Elective Paper – VIII(A-III) : NUMERICAL ANALYSIS

(w.e.f. 2017-18)

(Scientific calculators and statistical tables are allowed)

Time:3 Hours **Max.Marks:75**

PART- A

Answer any **FIVE** questions. Each question carries **FIVE** marks 5 X 5 = 25 Marks

1. Define the operators Δ , ∇ and E
2. Evaluate $\left(\frac{\Delta}{E}\right)^2 x^2$
3. Define interpolation. Give its assumptions ?
4. State the divided difference properties
5. Define central differences ? Give its uses
6. State Gauss forward and Backward formula.
7. Define Numerical differentiation ?
8. Define Numerical integration and give its importance ?

PART -B

Answer all questions. Each question carries 10 marks. **5x10 = 50 Marks**

UNIT - I

9. Define finite differences ? Write down tables of forward and backward differences

(OR)

10. Estimate the missing value in the following table

x	:	1	2	3	4	5
f(x)	:	7	--	13	21	37

UNIT - II

11. State Newton's divided difference formula and Lagrange's formula for interpolation?

(OR)

12. Use Newton's forward formula to find the value of y when x = 2.75 from the following data

x	:	2.5	3.0	3.5	4.0	4.5
Y	:	24.145	22.043	20.225	18.644	17.262

UNIT - III

13. State Gauss forward and Backward difference formula, Sterling's formula and Bessel's formula.

(OR)

14. From the following table find the value of y when x = 338 using Gauss forward formula

x	:	310	320	330	340	350
y	:	25	26	27	25	26

UNIT - IV

15. Write the dy/dx, d^2y/dx^2 to the newton's forward and backward formula.

(OR)

16. Find f ´(1.5) and f ´´(1.5) from the following table by Newton's forward formula

x	:	1	2	3	4	5
f(x)	:	4	26	58	112	466

UNIT - V

17. Write down the formulae for Trapezoidal rule, Simpson's 1/3 rd and 3/8 rule for numerical integration.

(OR)

18. Calculate by Simpson's $\frac{1}{3}$rd rule an appropriate value of $\int_{-3}^{3} x^4 dx$ by taking seven distant ordinates.

SRI VENKATESWARA UNIVERSITY : TIRUPATI

Table-6: B.A/B.Sc (Computer Applications): Semester – VI

Sl. No.	Course	Name of the subject	Total Marks	Mid. Sem. Exam	Sem. End Exam	Teaching Hours**	Credits
1.	DSC 1 G	**e-Commerce Applications**	100	25	75	4	4
		Practical's	50		50	2	2
4.	Elective-DSC 1 H/Inter-disp./Gen. Elec.	**Cluster electives :** **Elective : 1** e-Payments System Practical's	 100 50	 25	 75 50	 4 2	 4 2
5.	Elective-DSC 2 H/Inter-disp./Gen. Elec.	Advanced Java Script Practical's Project work	100 50 100	25	75 50 100	4 2 5	4 2 5
6.	Elective-DSC 3 H/Inter-disp./Gen. Elec.	**Elective : 2** e- Payment System Practical's Tally Practical's Project work					
Total			550	75	475	18	23
Grand Total							

Note: elect any one from the cluster electives

SEMESTER – VI DSC; E-Commerce

DSC G 6.1 E-COMMERCE APPLICATIONS

Unit-I: e-Commerce Framework: Traditional vs. e-Business Applications - Anatomy of e-Commerce Applications – Present day trends.

Unit-II: Network Infrastructure of e-Commerce: Components of the I-way - Global information distribution networks - Public policy issues - Internet as a network infrastructure - Business of the internet commercialization.

Unit-III: Network Security: Client server network security - Firewalls and Network security - data and message security - Encrypted documents and Electronic mail.

Unit-IV: Electronic Commerce and World Wide Web: Consumer oriented E-commerce, Electronic payment systems, Electronic data interchange (EDI), EDI applications in business, EDI and E-commerce EDI implementation.

Unit-V: Intra-organizational e-Commerce: e-Commerce catalogs, Document Management and Digital libraries – Managing Supply Chain through e-Platform.

Reference:

1. R. Kalakota and A. B. Whinston, Frontiers of Electronic Commerce, Addison Wesley.

2. David Kosiur, Understanding Electronic Commerce, Microsoft Press.

3. Soka, From EDI to Electronic Commerce, McGraw Hill.

4. Saily Chan, Electronic Commerce Management, John Wiley.

B.Com (CA)/B.A/B.Sc (CA) DEGREE EXAMINATION

MODEL QUESTION PAPER

VI SEMESTER

PAPER: E- COMMERCE APPLICATIONS

Time:3 Hours **Max. Marks: 75**

SECTION-A

Time :3.00 Hours **Marks 5X3=15**

1. Answer any five questions from the following. Each question carries 3 marks

a. Define E-Commerce
b. Electronic marketing
c. Online payment
d. Smart card
e. Authentication
f. Encryption
g. WWW
h. Networking
i. Browsing
j. Online meeting

SECTION –B

Answer one question from each unit. Each question carries 12 marks (5x12=60)

UNIT-I

2.Explain merits and demerits of E-Commerce

(OR)

3.Explain different business models of E-Commerce

UNIT-II

4. explain the various components of I – way/

(Or)

5. What is internet explain the infrastructure of Inter net

UNIT-III

6.Explain the types of Encryption.

(OR)

7. Explain the functionality of firewall in detail.

UNIT-IV

8.What do you understand by online payment system

(OR)

9.What is meant by EDI? Explain uses and limitations of EDI

UNIT-V

10.Write about Supply Chain management.

(OR)

11.Explain digital and document management

B.A(CA)/B.Sc(CA) Cluster Elective :1

6.4: Advanced JavaScript JQUERY/AJAX/ JSON/Angular JS

COURSEOBJECTIVE:

To impart knowledge in designing a web page in a structured way by using advanced java scriptie., using different scripting languages.

COURSEOUTCOMES

On completing the subject, students will be able to: create a dynamic web site using advanced features of JavaScript and create a website with good and attractive design

UNIT I

J Query–Basics: String, Numbers, Boolean, Objects, Arrays, Functions, Arguments, Scope, Built-in Functions. J Query–Selectors: CSS Element Selector, CSS Element ID Selector, CSS Element Class Selector, CSS Universal Selector, Multiple Elements E, F, G Selector, Call back Functions. J Query–DOM Attributes: Get Attribute Value, Set Attribute Value. J Query – DOM Traversing: Find Elements by index, Filtering out Elements, Locating Descendent Elements, J Query DOM Traversing Methods.

UNIT II

J Query–CSS Methods: Apply CSS Properties, Apply Multiple CSS Properties, Setting Element Width & Height, J Query CSS Methods. J Query–DOM Manipulation Methods: Content Manipulation, DOM Element Replacement, Removing DOM Elements, Inserting DOM elements, DOM Manipulation Methods. J Query– Events Handling: Binding event handlers, Removing event handlers, Event Types, The Event Object, The Event Attributes. J Query– Effects: J Query Effect Methods, j Query Hide and Show, j Query Toggle, j Query Slide–slide Down, slide Up, slide Toggle, j Query Fade–fade In, fade Out, fade To, j Query Custom Animations

UNIT III

Intro to **j Query UI**, Need of j Query UI in real websites, Downloading j Query UI, Importing j Query UI, Drag gable, Droppable, Resizable, Selectable, Sortable, Accordion, Auto Complete, Button Set, Date Picker, Dialog, Menu, Progress Bar, Slider, Spinner, Tabs, Tooltip, Color Animation, Easing Effects, add Class, remove Class, Effects, j Query UI themes, Customizing j Query UI widgets/plug-ins, j Query UI with CDN, Consuming j Query Plug-ins from 3rd party web sites j Query Validations, Intro to j Query validation plug-in, Using j Query validation plug-in, Regular expressions.

UNIT IV

Intro to AJAX, Need of AJAX in real web sites, Getting data base data using j Query-AJAX, Inserting, Updating, Deleting database data using j Query-AJAX Grid Development using j Query-AJAX Intro to **JSON**JSON syntax, Need of JSON in real websites, JSON object, JSON array, Complex JSON objects, Reading JSON objects using j Query.

UNIT V

Intro to **Angular JS,** Need of Angular JS in real websites, Downloading Angular JS, Angular JS first example, Angular JS built-in directives, Angular JS expressions, Angular JS modules, Angular JS controllers, Angular JS scope Angular JS dependency injection Angular JS, boots trapping Angular JS data bindings, Angular JS$ watch, Angular JS filters, Angular JS events, Angular JS AJAX, Ng-repeat, Angular JS with js on arrays, Angular JS registration form and login form, Angular JS CRUD operations, Angular JS Animations, Angular JS validations ϖ Angular JS$q, Angular JS custom values, Angular JS custom factories, Angular JS custom services, Angular JS custom directives, Angular JS custom providers, Angular JS Routing, Angular UIR outing.

REFERENCEBOOKS

1. jQueryUI1.8:TheUserInterfaceLibraryforjQuerybyDanWellman
2. j Query Fundamentals by RebeccaMurphey
3. Ajax: The Complete Reference by Thomas A. Powell
4. Pro Angular JS by Adam Freeman Kindle Edition

STUDENTACTIVITY:

1. Creation of web site for a small scale company
2. Creation of website for a student database

MODEL QUESTION PAPER
(CHOICE BASED CREDIT SYSTEM)
B.A/B.Sc (Computer Applications)
6.4. Advanced Java Script JQUERY/AJAX/JSON/Angular JS

Time:3 Hrs Max Marks:75

SECTION – A

Answer any FIVE questions **5X3=15**

1. What is J Query?
2. MVC
3. What are attributes in J Query?
4. Define J Query slide effect?
5. Use of jQuery filter?
6. What is Ajax in jQuery?
7. What are the DOM & BOM?
8. What are the advantages of Ajax?

SECTION – B

Answer any ONE question from each unit. **5X12=60**

Each question carries 12 marks

UNIT - I

9. What are Selectors in J Query and how many types of Selectors are there?

Or

10. Define DOM? Explain briefly about DOM Traversing in j Query?

UNIT – II

11. What are the DOM Manipulation Methods in J Query?

Or

12. Explain the Event Handling in J Query?

UNIT – III

13. What is the usage of J Query UI?

Or

14. Define CDN? What are the types of CDN?

UNIT – IV

15. What is JSON? Explain the need of JSON in real websites?

Or

16. What are various methods to make Ajax request in J Query?

UNIT – V

17. Explain data binding in Angular JS?

Or

18. What are the features of Angular JS?

IIIYEAR B.A(CA)/B.Sc (CA): VI SEMESTER

Electives : Advanced Java Script JQUERY/AJAX/ JSON/Angular JS

Practical's:

1. Using j Query find all text areas, and makes a border. Then adds all paragraphs to the j Query object to set the irbordersred.

2. UsingjQueryaddtheclass"w3r_font_color"andw3r_backgroundtothelastparagraphelement.

3. Using j Query add an ew class to an element that already has a class.

4. Using j Query insert some HTML after all paragraphs.

5. Using j Query insert a DOM element after all paragraphs.

6. Convert three headers and content panels into an accordion. Initialize the accordion and specify the animate option

7. Convert three headers and content panels into an accordion. Initialize the accordion and specify the height.

8. Create a pre-populated list of values and delay in milliseconds between a keys trokeoccurs and as earchis performed.

9. Initialize the button and specify the disable option.

10. Initialize the button and specify an I con on the button.

11. Initialize the button and donot show the label.

12. Create a simple jQuery UID atepicker. Now pick a date and store it in atext box.

13. Initializethedatepickerandspecifyatexttodisplayfortheweekoftheyearcolumnheading.

VI SEMESTER-B.A(CA)/B.Sc(CA)
(CHOICE BASED CREDIT SYSTEM)
E-PAYMENTS SYSTEM

Unit-I: e-Cash and Virtual Money: Electronic Data Interchange (EDI) - NEFT/RTGS/Electronic Payment modes - Foundations of e-Cash and Issues; Security, Anonymity, Intractability, Virtual currencies, Bit coin.

Unit-II: Automated Clearing and Settlement: Process of Real Time Gross Settlement System - Net Settlement -ATM Networks – Fed wire, CHIPS and SWIFT.

Unit-III: e-Payment Security and Digital Signature: Cryptographic Methods - Hash functions - Public/Private Key methods: RSA - Digital Signatures - Certification Process - Digital identity Documents and Remote Authentication.

Unit-IV: **Mobile Payments:** Wireless payments, Digital Wallets, Google Wallet – Obopay - Security Challenges.

Unit-V: Electronic Invoice and Payment System: Electronic Statement Delivery - EIPP providers - Biller service providers - Customer service providers - Reconciliation through Bank -Invoice Paper elimination - Scan-based trading (SBT).

References:

1. Domonique Rambure and Alec Nacamuli, "Payment Systems: From the Salt Mines to the Board Room", Palgrave MacMillan.
2. Weidong Kou, *"Payment Technologies for E-Commerce".* Springer, Germany.
3. Donal O'Mahony, Michael Peirce and Hitesh Tewari, "Electronic Payment Systems", Artech House, Inc.
4. M. H. Sherif, Protocols for Secure Electronic Commerce, Boca Raton, Fla, CRC Press.

MODEL QUESTION PAPER

VI SEMESTER-B.COM (CA)/ B.A;B.Sc(CA)

(CHOICE BASED CREDIT SYSTEM)

E –PAYMENT SYSTEM

Time: 3 Hrs **Max Marks: 75**

SECTIONS –A

1. **Answer any FIVE questions, each question carries 3 marks** **5 X3=15**

a. Electronic Data Interchange (EDI)
b. Fed wire
c. E- Cash
d. Digital Signature
e. Online Payment
f. Payment Wallet
g. Electronic Statement Delivery
h. ATM

SECTION – B

Answer any ONE question from each unit.
Each question carries 12 marks **5X12 =60**

Unit-1

2. Explain about E-Cash? What are the issues to arising in E-Cash system?

Or

3. Explain about different types of electronic payment modes?

Unit -2

4. Describe the process of real time gross settlement system?

Or

5. Write an essay on CHIPS and SWIFT?

Unit- 3

6. Explain the methods of cryptography?

Or

7. Explain the functions of digital signature?

Unit- 4

8. Write the importance of wireless payments system in nowadays?

Or

9. Explain digital wallets and its types?

Unit- 5

10. Describe the biller service providers?

Or

11. Explain about scan based trading?

B.A/B.Sc Computer Applications DEGREE COURSE – III YEAR

SEMESTER – VI – PROJECT WORK

Marks: Project work–70+Viva-voce-30 marks

Objectives

1. To impart skills among the students to write a report of their choice in a given area / field.
2. To enable the students to develop necessary insights into the practical field by making use of functional knowledge of different areas attained in the previous years.

Internship

During the summer vacation, at the end of the second year, students have to undergo an internship for one month with companies and other Business organizations (including Chartered Accounting Firm).

The student should submit a brief report not exceeding 10 pages on learnings of internship and a certificate from the organization, along with the project work.

Project Work Guidelines

The students have to submit a Project report on a selected topic of their choice, selecting from the broad areas of their curriculum, guided by a Faculty member.

The students are expected to prepare a project report on a selected topic that should comprise of 50 to 80 pages. The project report is to be valued by the External Examiners suggested by the Board of Studies in Commerce. The project report is to be submitted at the college by 31st December of the year.

B.A(CA)/B.Sc(CA) Cluster Elective :2

B.A. / B.Sc. COMPUTER APPLICATIONS
TALLY

Unit-I: Tally: Features of Tally accounting – Components of Gateway of Tally – Company creation – Creation of groups - Creation, display, and alteration of multiple and single ledgers – Various types of vouchers – Creation and alteration of vouchers – Configuration and print of financial statements and other reports, documents and vouchers.

Unit II: Tally Inventory - Configuration – Creation, display, and alteration of inventory masters – Recording various inventory vouchers – Display and print of inventory reports – Lab exercises.

Unit-III: GST: Enabling Tally for GST – Features and Classification of GST – Exemptions from GST – Exports and imports – Inter-state purchases and sales (IGST) – Lab exercises.

Unit-IV: TDS: Creation of ledgers and vouchers – Advance and balance payments of Tax – Generation of TDS reports – Enabling Service tax - Creation of ledgers and recording of vouchers – Lab exercises.

Unit-V: Payroll: Payroll features - Enabling payroll – Creation of Pay head ledgers – Creation of employee masters and pay roll voucher and attendance voucher – Display and print of various payroll reports - Lab exercises.

REFERENCE BOOKS: 1. Nadhani, A.K. and Nadhani, K.K. Implementing Tally 7.2 BPB Publication, New Delhi.
2. Kiran Kumar, K.Tally 9, Laasya Publishers, Hyderabad
3. Fire wall media, Tally 9.
4. Vishnu Priya Singh, tally 9, Computech Publications Ltd, New Delhi.
5. Sharma, KVS, Statistics mode simple, do it yourself and PC, Prentice Hall of India Pvt. Ltd., New Delhi
6. Goods and Services Tax, Himalaya Publishing House.

MODEL QUESTION PAPER

Third Year B.com - VI semester

TALLY

Time: 3hrs Max Marks: 75

I. Answer any **five** question from the following : 5X3=15

a) Accruals
b) Accrual Accounting
c) Audit Trail
d) what is meant by balance sheet
e) Double-Entry Bookkeeping
f) explain the Payroll
g) COMPANY CREATION
h) voucher entry

II. Answer any **one** question for the **each unit** from the following: 5X12=60

UNIT-I

1. Explain the company creation process in tally software? And write a note on company alteration and deletion in tally?

(OR)

2. Explain the single and multiple Group creation process in tally software? How to create sub Groups?

UNIT-II

3. Explain the inventory voucher creation and alteration process of inventory masters?

(OR)

4. Explain the Display and print of inventory reporting process?

(OR)

UNIT-III

5. Write the GST Ledger creation process in tally?

(OR)

6. Write the Features and Classification of GST in tally? Explain the Exemptions of GST?

UNIT-IV

7. Explain the TDS ledger and voucher creation process in tally?

(OR)

8. How to generate TDS reports in tally? And Explain enabling process of serves tax in tally?

UNIT-V

9. Write the Payroll features? And Creation of Pay head ledgers?

(OR)

10. Write the employee masters and payroll vouchers in tally?

E-PAYMENTS SYSTEM

Unit-I: e-Cash and Virtual Money: Electronic Data Interchange (EDI) - NEFT/RTGS/Electronic Payment modes - Foundations of e-Cash and Issues; Security, Anonymity, Untraceability, Virtual currencies, Bitcoin.

Unit-II: Automated Clearing and Settlement: Process of Real Time Gross Settlement System - Net Settlement -ATM Networks - Fedwire, CHIPS and SWIFT.

Unit-III: e-Payment Security and Digital Signature: Cryptographic Methods - Hash functions - Public/Private Key methods: RSA - Digital Signatures - Certification Process - Digital identity Documents and Remote Authentication.

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MODEL QUESTION PAPER

VI SEMESTER-B.COM (CA)/ B.A;B.Sc(CA)

(CHOICE BASED CREDIT SYSTEM)

E –PAYMENT SYSTEM

Time: 3 Hrs **Max Marks: 75**

SECTIONS –A

1. **Answer any FIVE questions, each question carries 3 marks** **5 X3=15**

a. Electronic Data Interchange (EDI)
b. Fed wire
c. E- Cash
d. Digital Signature
e. Online Payment
f. Payment Wallet
g. Electronic Statement Delivery
h. ATM

SECTION – B

Answer any ONE question from each unit.
Each question carries 12 marks **5X12 =60**

Unit-1

2. Explain about E-Cash? What are the issues to arising in E-Cash system?

Or

3. Explain about different types of electronic payment modes?

Unit -2

4. Describe the process of real time gross settlement system?

Or

5. Write an essay on CHIPS and SWIFT?

Unit- 3

6. Explain the methods of cryptography?

Or

7. Explain the functions of digital signature?

Unit- 4

8. Write the importance of wireless payments system in nowadays?

Or

9. Explain digital wallets and its types?

Unit- 5

10. Describe the biller service providers?

Or

11. Explain about scan based trading?

SEMESTER – VI – PROJECT WORK

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2. To enable the students to develop necessary insights into the practical field by making use of functional knowledge of different areas attained in the previous years.

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SRI VENKATESWARA UNIVERSITY : TIRUPATI

Table-6: B.Com (GEN); B.Com (Tax)- Semester – VI – W.E.F. 2017-18

Sl. No.	Course	Name of the subject	Total Marks	Mid. Sem. Exam	Sem. End Exam	Teaching Hours**	Credits
1.	DSC 1 G	6.1 Advanced Cost Accounting	100	25	75	6	4
2.	DSC 2 G	6.2 Auditing	100	25	75	6	4
3.	DSC 3 G	6.3 Management Accounting	100	25	75	6	4
4.	Elective-DSC 1 H/Inter-disp./Gen. Elec.	**Cluster Electives -1** ***Banking & Financial Services*** 6.4 Financial Services 6.5 Marketing of Financial Services 6.6 **Project Work#:** Working with Financial Services Firms on Documentation for Sanction of Loans and financial Services	100 100 100	25 25	75 75 100	5 5 5	4 4 5
Total			600			33	28
Grand Total							

***NOTE*: OPT ONE ELECTIVE FROM THE ABOVE ELECTIVES AND THAT SHOULD BE RELEVANT TO THE ELECTIVE IN THE V SEMESTER I.E. IF TAKEN FIRST ELECTIVE IN V SEMESTER IN VI SEMESTER ALSO SHOULD SELECT FIRST ELECTIVE VISE VERSA**

***NOTE*:# PROJECT WORK EVALUATED BY THE COMMERCE EXTERNAL EXAMINER**

TALLY PRACTICAL'S SHOULD BE EVALUATED BY THE COMMERCE BACKGROUND EXTERNAL EXAMINER

DSC 1 G 6.1 Advanced Cost Accounting

Unit-I: **Preparation of Reconciliation statement :** Reasons for the differences between the cost profit and Financial Profit – Reconciliation of the cost profit with the financial profit vice versa (including problems)

Unit-II: **Process Costing :** Introduction and meaning of process costing – Manufacturing companies with suitability of process costing – preparation of process accounts with loss in weight, normal loss, abnormal loss and abnormal gain (including problems)

Unit-III: Operating Costing : meaning and the various types of operating costing businesses i.e. Transport costing Problems with Transport Costing only, relating to – operating Cost per kilo meter and passenger Kilo meter.

Unit-IV: Standard Costing - meaning of standard cost and actual cost – variances – problems on Material variances only – Material cost variance, Material price variance, Material Quantity variance, Material Mix variance, Material sub usage variance, Material yield variance etc.

Unit-V: Budget Costing : Meaning of budget – Importance of budget costing – Preparation of budgets – Problems on the preparation of fixed budget and flexible budget only.

References:

1. Cost Accounting and Management Accounting – T.S. Reddy and Hariprasad Reddy, Margham publications, Chennai
2. Methods of costing – S.P. Jain and K.L.Narang Kalyani Publishers
3. M.N. Aurora – A test book of Cost Accounting, Vikas Publishing House Pvt. Ltd.
4. S.P. Iyengar – Cost Accounting, Sultan Chand & Sons.
5. Nigam & Sharma – Cost Accounting Principles and Applications, S.Chand & Sons.
6. S.N .Maheswari – Principles of Management Accounting.
7. I.M .Pandey – Management Accounting, Vikas Publishing House Pvt. Ltd.
8. Sharma & Shashi Gupta – Management Accounting, Kalyani Publishers. Ludhiana.
9. Cost Accounting problems – Khanna Ahuja Pandey

Sri Venkateswara University
Model Paper
III B.Com
Semester – VI, April, 2018
DSC 1G 6.1 – ADVANCED COST ACCOUNTING

Time: 3 hours **Max.Marks: 75 M**

Section – A

Answer any FIVE questions, each question carries 3 marks **5 X3=15**

1. a) Companies with suitability of process costing b) Abnormal Loss
c) Features of process costing d) Operating costing
e) Transport costing f) Standard costing
g) Material variance h) Budget

Section – B

Answer any ONE question from each unit.
Each question carries 12 marks **5X12 =60**

UNIT-I

2. Prepare a statement of reconciliation from the following:

	Rs.
Net loss as per cost accounts	34,500
Net loss as per financial accounts	40,950
Works overhead under recovered in costing	6,240
Administrative overhead recovered in excess	3,400
Depreciation recovered in costing	11,200
Depreciation charged in financial accounts	12,500
Interest on investments not included in costing	6,000
Goodwill written off	5,000
Provision for doubtful debts in financial accounts	1,260
Stores adjustment credit in financial accounts	950
Loss of stock charged in financial accounts	3,000

(OR)

3. In a factory, works overheads are absorbed at 100% of labour cost and office overheads at 20% of works cost.

Prepare i) Cost Sheet ii) Profit & loss account and iii) Reconciliation Statement if the total expenditure consists of :

	Rs.
Material	24,600
Wages	33,200
Factory expenses	32,840
Office expenses	22,420

10% of the output is in stock at the end and sales are Rs.1,38,400

UNIT-II

4. 100 units are introduced into process A at a cost of Rs.9,600 and an expenditure of Rs.4,800 is incurred. From the past experience, it is assessed that wastage normally arises to the extent of 15% of units introduced. The scrap value is at Rs.10 per unit. The actual output of process A is 90 units, transferred to process B. In process the output is 75 units which is transferred to Finished goods account and the scrap expected in B is 10%. The expenditure of Materials for Rs.4,800, Labour Rs.3,600 and other expenses Rs.5,400. The scrap value is at Rs.15 per unit Prepare Process Accounts, Abnormal Gain & Loss Account and Normal Loss Account.

(OR)

5. The product of a company passes through two processes to completion known as X and Y. From past experience it is ascertained that loss is incurred in each process as:

Process X – 2% Process Y – 5%

In each case, the percentage of loss is computed on the number of units entering the process concerned. The loss of each process possesses a scrap value. The loss of processes X and Y is sold at Rs. 5 per 100 units. The output of each process passes immediately to the next process and the finished units are passed into stock.

	Process X	Process Y
	Rs.	Rs.
Materials consumed	6,000	4,000
Direct labour	8,000	6,000
Manufacturing expenses	1,000	1,000

20,000 units have been issued to Process X at a cost of Rs.10,000. The output of each process has been as under:

Process X 19,500; Process Y 18,800

Prepare Process Accounts.

UNIT-III

6. Sri Lakshmi Travels, a transport company is running a fleet of six buses between two towns 75 kms.apart. The seating capacity of each bus is 40 passengers. The following particulars are available for the month of April 2017.

	Rs.
Wages of Drivers, Conductors, etc.	14,400
Salaries of office and supervisory staff	15,000
Diesel oil., etc.	20,320
Repairs and maintenance	1,200
Taxes and insurance	2,400
Depreciation	3,900
Interest and other charges	3,000

The actual passengers carried were 80% of the capacity. All the buses run all the days in the month. Each bus made one round trip per day. Find out the cost per passenger kilometre.

OR

7. Mr. Srinivasulu furnishes you the following data and wants you to compute the cost per running km of vehicle A.

	Rs.
Cost of vehicle	4,50,000
Road licence per year	1,800
Annual supervision & salaries	7,200
Driver's wages per hour	40
Cost of fuel per litre	52
Repairs & maintenance per km	22
Tyres cost per km	4
Insurance premium p.a.	1,700
Garage rent per year	15,300
Kms run per litre	20
Kms run during the year	15,000
Estimated life of vehicle in kms	1,00,000
Average tonnage carried	6

Charge interest at 5% per annum on cost of vehicle. The vehicle runs 20 kms per hour on an average.

UNIT-IV

8. From the following particulars Calculate a) Material price variance b) Material usage variance and c) Material cost variance

Material purchased - 3,000 kgs at Rs.6 per kg

Standard quantity of material fixed for one unit of finished product -25 kgs at Rs.4 per kg.

Opening stock of material - Nil

Closing stock of material - 500 kgs

Actual output during the period - 80 units.

(or)

9. From the following information of product No.888, calculate

i) Material cost variance ii) Material price variance iii) Material usage variance iv) Material mix variance

Material	Standard Qty. in Kgs	Standard Price Rs.	Actual quantity in Kgs	Actual price Rs.
X	20	5	24	4.00
Y	16	4	14	4.50
Z	12	3	10	3.25
	48		48	

UNIT-V

10. A company which supplies its output on contract basis as component to an assembling firm has a contract to supply 10,000 units of its only product during 2017. The following were the budgeted expenses and revenue.

Material	Rs. 15 per unit
Wages	Rs. 10 per unit
Works expenses – (Fixed)	Rs. 40,000
Variable	Rs. 4 per unit
General expenses (all fixed)	Rs.60,000

Profit is 20% on sale price.

Prepare the budget for 2017 showing the costs and profit.

(OR)

11. Draw up a flexible budget for production at 75% and 100% capacity on the basis of the following data for a 50% activity.

	Per unit in Rs.
Materials	100
Labour	50
Variable expenses (direct)	10
Administrative expenses (50% fixed)	40,000
Selling and Distribution expenses (60% fixed)	50,000
Present production (50% activity)	1,000 units

DSC 2G 6.2 AUDITING

Unit-I: Auditing: Meaning – Objectives – Errors and Frauds - Importance of Auditing – Auditing as a Vigil Mechanism – Role of Auditor in checking corporate frauds.

Unit-II: Types of Audit: Based on Ownership and time - Independent, Financial, Internal, Cost, Tax, Government, Secretarial audits.

Unit-III: Planning of Audit: Steps to be taken at the commencement of a new audit – Audit programme - Audit note book - Internal check, internal audit and internal control.

Unit-IV: Vouching and Investigation: Vouching of cash and trading transactions – Investigation, Auditing vs. Investigation

Unit-V: Company Audit and Auditors Report: Auditor's Qualifications – Appointment and Reappointment – Rights, duties, liabilities and disqualifications - Audit report: Contents.

References:

1. S.Vengadamani, "Practical Auditing", Margham Publications, Chennai.
2. Ghatalia, "Principles of Auditing", Allied Publishers Pvt. Ltd., New Delhi.
3. Pradeesh Kumar, Baldev Sachdeva & Jagwant Singh, "Auditing Theory and Practice, Kalyani Publications, Ludhiana.
4. N.D. Kapoor, "Auditing", S. Chand, New Delhi.
5. R.G. Saxena, "Principles and Practice of Auditing", Himalaya Publishing House, New Delhi.
6. Jagadesh Prakesh, "Principles and Practices of Auditing" Kalyani Publications, Ludhiana.
7. Kamal Gupta and Ashok Gupta, "Fundamentals of Auditing", Tata McGraw Hill
8. B.N. Tondan, "Practical Auditing", S.Chand, New Delhi.

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III B.Com
Semester – VI, April, 2018
DSC 2G 6.2 – AUDITING

Time: 3 hours **Max.Marks: 75 M**

Section - A

Answer any FIVE questions, each question carries 3 marks **5 X3=15**

1. a) Auditing
b) Auditing as a Vigil Mechanism
c) Internal Audit
d) Government Audit
e) Audit Note Book
f) Investigation
g) Vouching
h) Auditors qualifications

Section – B

Answer any ONE question from each unit.
Each question carries 12 marks **5X12 =60**

UNIT-I

2. Define Auditing. Explain objectives of Auditing

(or)

3. Describe the importance of Auditing.

UNIT-II

4. Describe the various types of Audit.

(or)

5. Distinguish between Cost Audit and Financial Audit

UNIT-III

6. What steps should be taken in to A/c vehicle commencement of New Audit?

(or)

7. What are the contents of Audit programme?

UNIT-IV

8. "Vouching is the essence of Auditing". Discuss?

(or)

9. Distinguish between Audit and Investigation?

UNIT-V

10. What are the Rights and duties of company Auditor?

(or)

11. What are the contents of Audit Report?

DSC 3G 6.3 MANAGEMENT ACCOUNTING

Unit–I: Management Accounting: Interface with Financial Accounting and Cost Accounting – Scope and limitations of management accounting - Functions of Management Accounting and its importance (Theory only)

Unit–II: **Financial statement analysis** - Financial Statement analysis and interpretation Comparative statements – Common size analysis and trend analysis (including problems).

Unit–III: Ratio Analysis: Classification, Importance and limitations - Analysis and interpretation of Accounting ratios - Liquidity, profitability, turnover or activity and solvency ratios (including problems).

Unit–IV: Fund Flow Statement: Concept of fund: Preparation of funds flow statement. Uses and limitations of funds flow analysis (including problems).

Unit–V: Cash Flow Statement: Concept of cash flow – Preparation of cash flow statement - Uses and limitations of cash flow analysis (including problems).

References:

1. Cost Accounting and Management Accounting – T.S. Reddy and Hariprasad Reddy, Margham publications, Chennai
2. S.N. Maheswari, A Textbook of Accounting for Management, S. Chand Publishing, New Delhi
3. I.M Pandey, "Management Accounting", Vikas Publishing House, New Delhi,
4. Shashi K. Gupta & R.K. Sharma, "Management Accounting: Principles and Practice", Kalyani Publishers, Ludhiana.
5. Jawahar Lal, Accounting for Management, Himalaya Publishing House, New Delhi.
6. Charles T. Horngren, et.al, "Introduction to Management Accounting" Person EducationIndia, New Delhi, 2002.
7. Murthy & Guruswamy – Management Accounting, Tata McGraw Hill, New Delhi.
8. Dr. Kulsreshtha & Gupta – Practical problems in Management Accounting.
9. Bhattacharya, D., "Management Accounting", Pearson Education India, New Delhi.
10. S.P. Gupta – Management Accounting, S. Chand Publishing, New Delhi.

Sri Venkateswara University
Model Paper
III B.Com
Semester – VI, April, 2018
DSC 3G 6.3 – MANAGEMENT ACCOUNTING

Time: 3 hours **Max.Marks: 75 M**

Section - A

Answer any FIVE questions, each question carries 3 marks **5 X3=15**

1. a) Liquidity Ratios
b) Gross Profit Ratio
c) Funds from operation
d) Operating Activities
e) Cash flow statement
f) Limitations of Ratio Analysis
g) Common size statement
h) Cost Accounting

Section – B

Answer any ONE question from each unit.
Each question carries 12 marks **5X12 =60**

UNIT-I

2. Explain scope and limitations of Management Accounting

(or)

3. Explain the functions & importance of Management Accounting

UNIT-II

4. Dhandapani & Co. Ltd., furnishes the following Balance Sheets for the years 2014 and 2015. Prepare common-size balance sheets.

Balance sheets

Liabilities	2014 Rs.	2015 Rs.	Assets	2014 Rs.	2015 Rs.
Share capital	2,00,000	3,00,000	Buildings	4,00,000	4,00,000
Reserves	6,00,000	7,00,000	Machinery	6,00,000	10,00,000
10% Debentures	2,00,000	3,00,000	Stock	2,00,000	3,00,000
Creditors	3,00,000	5,00,000	Debtors	2,00,000	2,50,000
Bills payable	1,00,000	80,000	Cash at Bank	1,00,000	50,000
Tax payable	1,00,000	1,20,000			
	15,00,000	20,00,000		15,00,000	20,00,000

(or)

5. The following are the extracts from the income statements of Bright Ltd., for the 6 years ending 2015. You are required to calculate trend percentages, taking 2014 as the base year and give two major conclusions you can draw.

(figures in thousands)

Particulars	2012	2013	2014	2015	2016	2017
Sales	300	340	420	480	520	600
Cost of goods sold	180	204	256	287	300	330
Office Expenses	40	42	45	50	55	60
Selling expenses	20	25	30	40	50	60
Net profit/loss	60	69	89	103	115	150

UNIT-III

6. The following figures relate to the trading activities of a company for the year ended 31-03-2016.

Particulars	Rs.	Particulars	Rs.
Sales	1,00,000	Salary of salesmen	1,800
Purchases	70,000	Advertising	700
Closing stock	14,000	Travelling expenses	500
Sales returns	4,000	Salaries (office)	3,000
Dividend received	1,200	Rent	6,000
Profit on sale of fixed assets	600	Stationery	200
Loss on sale of shares	300	Depreciation	1,000
Opening stock	11,000	Other expenses	2,000
		Provision for tax	7,000

You are required to calculate

1. Gross profit ratio
2. Operating profit ratio
3. Operating ratio
4. Net profit ratio

(or)

7. The following figures are extracted from the Balance Sheet of X Ltd., as on 31st December:

	2012 Rs.	2013 Rs.
Stock	25,000	40,000
Debtors	10,000	16,000
Cash at Bank	5,000	4,000
Creditors	8,000	15,000
Bills payable	2,000	3,000
Provision for Taxes	5,000	7,000
Bank Overdraft	5,000	15,000

Calculate the Current Ratio and Quick Ratio for the two years.

UNIT-IV

8. Prepare a schedule of changes in working capital from the following Balance Sheets:

Balance Sheets

Liabilities	2014 Rs.	2015 Rs.	Assets	2014 Rs.	2015 Rs.
Share capital	50,000	50,000	Fixed assets	18,000	28,000
10% Debentures	10,000	20,000	Investments:		
Bills payable	18,000	6,000	Non-trading	10,000	10,000
Outstanding expenses	6,000	9,000	Trading	8,000	9,000
Trade Creditors	33,000	40,000	Inventories	12,000	18,000
			Trade Debtors	40,000	48,000
			Accrued interest	4,000	6,000
			Unexpired insurance	-	3,000
			Cash at bank	17,000	2,000
			Cash in hand	8,000	1,000
	1,17,000	1,25,000		1,17,000	1,25,000

(or)

9. The following are the summarised Balance Sheets of Malar Industries Ltd., as on 31st December 2009 and 2010:

Balance Sheet

Liabilities	2009 Rs.	2010 Rs.	Assets	2009 Rs.	2010 Rs.
Capital:			Fixed Assets	41,000	40,000
7% Redeemable			*Less:* Depreciation	11,000	15,000
preference shares	-	10,000		30,000	
Equity shares	40,000	40,000	*Current assets:*		
General reserve	2,000	2,000	Debtors	20,000	24,000
Profit & Loss A/c	1,000	1,200	Stock	30,000	35,000
Debentures	6,000	7,000	Prepaid expenses	300	500
Current Liabilities:			Cash	1,200	3,500
Creditors	12,000	11,000			
Provision for tax	3,000	4,200			
Proposed dividend	5,000	5,800			
Bank overdraft	12,500	6,800			
	81,500	88,000		81,500	88,000

Prepare: i) Statement showing changes in the working capital.
ii) A statement of sources and applications of funds.

UNIT-V

10. From the following data you are required to calculate the cash from operations:
funds from operations for the year 1998 Rs.84,000. Current assets and liabilities as on 1-4-08 and 31-03-09 were as follows:

	1-4-08 Rs.	31-03-09 Rs.
Trade creditors	1,82,000	1,94,000
Trade debtors	2,75,000	3,15,000
Bills receivable	40,000	35,000
Bills payable	27,000	31,000
Inventories	1,85,000	1,70,000
Trade investments	40,000	70,000
Outstanding expenses	20,000	25,000
Prepaid expenses	5,000	8,000

(or)

11. From the following Balance Sheets as on 31-03-15 and 31-03-14, prepare a Cash Flow Statement:

Liabilities	31.03.2015 Rs.	1.04.2014 Rs.	Assets	31.03.2015 Rs.	1.04.2014 Rs.
Share capital	1,50,000	1,00,000	Fixed assets	1,50,000	1,00,000
Profit & Loss A/c	80,000	50,000	Goodwill	40,000	50,000
General reserve	40,000	30,000	Stock	80,000	30,000
6% Debentures	60,000	50,000	Debtors	80,000	50,000
Creditors	40,000	30,000	Bills Receivable	20,000	30,000
Outstanding exp.	15,000	10,000	Bank	15,000	10,000
	3,85,000	2,70,000		3,85,000	2,70,000

CLUSTER ELECTIVE– BANKING AND FINANCIAL SERVICES

DSC H 6.4 FINANCIAL SERVICES

Unit-I: Financial Services: Role of Financial Services - Banking and Non Banking Companies – Activities of Non Banking Finance Companies- Fund Based Activities - Fee Based Activities .

Unit-II: Merchant Banking Services: Scope and importance of merchant banking services - Venture Capital - Securitization - Demat services - Commercial Paper.

Unit-III: Leasing and Hire-Purchase: Types of Lease, Documentation and Legal aspects – Fixation of Rentals and Evaluation - Hire Purchasing- Securitization of debts - House Finance.

Unit-IV: **Credit Rating**: Purpose – Types – Credit Rating Symbols – Agencies: CRISIL and CARE – Equity Assessment vs. Grading – Mutual funds.

Unit-V: Other Financial Services: Factoring and Forfaeiting - Procedural and financial aspects - Installment System - Credit Cards - Central Depository Systems: NSDL, CSDL.

References:

1. B. Santhanam, Financial Services, Margham Publication, Chennai.
2.M.Y. Khan, Financial Services, Tata McGraw – Hill, New Delhi.
3. Machendra Raja, Financial Services, S.Chand Publishers, New Delhi.
4. V. A. Avdhani, Marketing of Financial Services.
5. Machiraji, “Indian Financial System”, Vikas Publishers.
6. Sandeep Goel, Financial Services, PHI Learning.
7. L.M. Bhole, Financial Institutions and Markets, Tata McGraw Hill.
8. SEBI Guidelines, Bharat Publications, New Delhi.
9. E. Gordon & H. Natarajan, Capital Market in India, Himalaya publishing House.

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CLUSTER ELECTIVE - BANKING AND FINANCIAL SERVICES

DSC H 6.4 FINANCIAL SERVICES

Time: 3 hours **Max.Marks: 75 M**

Section - A

Q.1. Answer any FIVE questions, each question carries 3 marks **5 X3=15**

a) Finance of NBFCs **b)** Merchant Banking **c)** commercial Paper **d)** Kinds of lease

e) Hire Purchase **f)** Objectives of CRISIL **g)** Open ended mutual funds

h) Credit cards

Section – B

Answer any ONE question from each unit.
Each question carries 12 marks **5X12 =60**

UNIT-I

Q.2. Briefly explain some of the innovative financial instruments introduced in the recent times in the financial services sector ?

OR

Q.3. Explain the Role of NBFCs in Economic development

UNIT-II

Q.4.What are the various types of merchant banking services

OR

Q.5. Explain the importance and scope of venture capital

UNIT-III

Q.6. What are the advantages and disadvantages of leasing

OR

Q.7. What is meant by Hire purchase system and explain its characteristics

UNIT-IV

Q.8. What do you mean by the term credit rating and describe its features and advantages

OR

Q.9. What is mutual fund and discuss how mutual fund business is regulated in India

UNIT-V

Q.10. What is factoring ? Write the mechanism involved in a factoring financial service

OR

Q.11. Discuss in detail the different types credit cards.

DSC H 6.5 MARKETING OF FINANCIAL SERVICES

Unit-I: Difference between Goods and Services: Managing Service Counters – Integrated Service Management – Service Elements.

Unit-II: Constructing Service Environment – Managing People for service Advantage – Service Quality and Productivity – Customer Loyalty.

Unit-III: Pricing and Promotion Strategies: Pricing strategies – Promotion strategies – B2B Marketing – Marketing Planning and Control for services.

Unit-IV: Distributing Services: Cost and Revenue Management – Approaches for providing services - Channels for Service provision – Designing and managing Service Processes.

Unit-V: Retail Financial Services - Investment services – Insurance services - Credit Services - Institutional Financial Services - Marketing practices in select Financial Service Firms.

References:

1. Aradhani "Marketing of Financial Services" Himalaya Publications
2. Sinha and Saho, Services Marketing, Himalaya Publishing House
3. Reddy Appanaiah, Anil Kumar and Nirmala, Services Marketing, Himalaya Publishing.
4. Shajahan, Services Marketing, Himalaya Publishing House.
5. Christopher lovelock, Services Marketing, Pearson Education Asia.
6. Helen Woodroffe – Services Marketing, McMillan India Ltd.
7. S.M. Jha, Services Marketing, New Delhi Himalaya Publishing House.
8. Valarie A. Zeithmal & Mary JoBitner, Services Marketing, New Delhi, Tata McGraw Hill

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CLUSTER ELECTIVE - BANKING AND FINANCIAL SERVICES

DSC H 6.5 - MARKETING OF FINANCIAL SERVICES

Time: 3 hours **Max.Marks: 75 M**

Section – A

Q.1. Answer any FIVE questions, each question carries 3 marks **5 X3=15**

a) Elements of service **b)** B2B marketing **c)** Service Marketing **d)** Pricing strategy
e) Promotion strategy **f)** Venture capital financing **g)** Factoring **h)** Customer Loyalty

Section-B

Answer any ONE question from each unit.
Each question carries 12 marks **5X12 =60**

Unit-I

Q.2. Explain the differences between the goods and services.

OR

Q.3. Write about the integrated service management.

Unit-II

Q.4. What are the key dimensions of service quality?

Or

Q.5.What are the various service quality gaps?

Unit-III

Q.6. What are the various pricing strategies?

Or

Q.7. What is marketing planning and write about the process of planning of marketing of services.

Unit-IV

Q.8. What are the various types of marketing channels?

Or

Q.9. What is Service Blueprint and what are the various components of it?

Unit-V

Q.10. What do you mean by financial services? And write about the types of financial services.

Or

Q.11.What is Insurance and mention the Marketing practices in Insurance Industry.

SEMESTER – VI – PROJECT WORK

Paper : 607 **Marks: Project work–70+Viva-voce-30 marks**

Objectives

1. To impart skills among the students to write a report of their choice in a given area / field.
2. To enable the students to develop necessary insights into the practical field by making use of functional knowledge of different areas attained in the previous years.

Internship

During the summer vacation, at the end of the second year, students have to undergo an internship for one month with companies and other Business organizations (including Chartered Accounting Firm).

The student should submit a brief report not exceeding 10 pages on learnings of internship and a certificate from the organization, along with the project work.

Project Work Guidelines

The students have to submit a Project report on a selected topic of their choice, selecting from the broad areas of their curriculum, guided by a Faculty member.

The students are expected to prepare a project report on a selected topic that should comprise of 50 to 80 pages. The project report is to be valued by the External Examiners suggested by the Board of Studies in Commerce. The project report is to be submitted at the college by 31st March of the year.

SRI VENKATESWARA UNIVERSITY : TIRUPATI

TABLE-6: B.COM (CA)- SEMESTER – VI – W.E.F. 2017-18

Sl. No.	Course	Name of the subject	Total Marks	Mid. Sem. Exam	Sem. End Exam	Teaching Hours**	Credits
1.	DSC 1 G	6.1 Advanced Cost Accounting	100	25	75	6	4
2.	DSC 2 G	6.2 Auditing	100	25	75	6	4
3.	DSC 3 G	6.3 Management Accounting	100	25	75	6	4
4. 5. 6.	Elective-DSC 1 H/Inter-disp./Gen. Elec. Elective-DSC 2 H/Inter-disp./Gen. Elec. Elective-DSC 3 H/Inter-disp./Gen. Elec.	**Cluster Electives** ***1. A e-Commerce*** 6.4 e-Payments System Practical's 6.5Tally Practical's 6.6 **Project Work:** Real time student project may be submitted **2. Computer Applications** 6.4 e-Commerce Applications 6.5 Tally Practical's (50+50) 6.6 Project work : Working on the application of Tally package in organisations/ Internship/ Projects in e- commerce companies on the Design and creation of websites	100 50 100 50 100	25 25	75 50 75 50 100	5 2 5 2 5	4 2 4 2 5
Total			700			37	29
Grand Total							

***NOTE** OPT ONE ELECTIVE FROM THE ABOVE ELECTIVES AND THAT SHOULD BE RELEVANT TO THE ELECTIVE IN THE V SEMESTER I.E. IF TAKEN FIRST ELECTIVE IN V SEMESTER IN VI SEMESTER ALSO SHOULD SELECT FIRST ELECTIVE VISE VERSA**

***NOTE*:# PROJECT WORK EVALUATED BY THE COMMERCE EXTERNAL EXAMINER**

TALLY PRACTICAL'S SHOULD BE EVALUATED BY THE COMMERCE EXTERNAL EXAMINER

DSC 1 G 6.1 ADVANCED COST ACCOUNTING

Unit-I: **Preparation of Reconciliation statement :** Reasons for the differences between the cost profit and Financial Profit – Reconciliation of the cost profit with the financial profit vice versa (including problems)

Unit-II: **Process Costing :** Introduction and meaning of process costing – Manufacturing companies with suitability of process costing – preparation of process accounts with loss in weight, normal loss, abnormal loss and abnormal gain (including problems)

Unit-III: Operating Costing : meaning and the various types of operating costing businesses i.e. Transport costing Problems with Transport Costing only, relating to – operating Cost per kilo meter and passenger Kilo meter.

Unit-IV: Standard Costing - meaning of standard cost and actual cost – variances – problems on Material variances only – Material cost variance, Material price variance, Material Quantity variance, Material Mix variance, Material sub usage variance, Material yield variance etc.

Unit-V: Budget Costing : Meaning of budget – Importance of budget costing – Preparation of budgets – Problems on the preparation of fixed budget and flexible budget only.

REFERENCES:

1. Cost Accounting and Management Accounting – T.S. Reddy and Hariprasad Reddy, Margham publications, Chennai
2. Methods of costing – S.P. Jain and K.L.Narang Kalyani Publishers
3. M.N. Aurora – A test book of Cost Accounting, Vikas Publishing House Pvt. Ltd.
4. S.P. Iyengar – Cost Accounting, Sultan Chand & Sons.
5. Nigam & Sharma – Cost Accounting Principles and Applications, S.Chand & Sons.
6. S.N .Maheswari – Principles of Management Accounting.
7. I.M .Pandey – Management Accounting, Vikas Publishing House Pvt. Ltd.
8. Sharma & Shashi Gupta – Management Accounting, Kalyani Publishers. Ludhiana.
9. Cost Accounting problems – Khanna Ahuja Pandey

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III B.Com
Semester – VI, April, 2018
DSC 1G 6.1 – ADVANCED COST ACCOUNTING

Time: 3 hours **Max.Marks: 75 M**

Section - A

Answer any FIVE questions, each question carries 3 marks **5 X3=15**

1. a) Companies with suitability of process costing b) Abnormal Loss
c) Features of process costing d) Operating costing
e) Transport costing f) Standard costing
g) Material variance h) Budget

Section - B

Answer any ONE question from each unit.
Each question carries 12 marks **5X12 =60**

UNIT-I

2. Prepare a statement of reconciliation from the following:

	Rs.
Net loss as per cost accounts	34,500
Net loss as per financial accounts	40,950
Works overhead under recovered in costing	6,240
Administrative overhead recovered in excess	3,400
Depreciation recovered in costing	11,200
Depreciation charged in financial accounts	12,500
Interest on investments not included in costing	6,000
Goodwill written off	5,000
Provision for doubtful debts in financial accounts	1,260
Stores adjustment credit in financial accounts	950
Loss of stock charged in financial accounts	3,000

(or)

3. In a factory, works overheads are absorbed at 100% of labour cost and office overheads at 20% of works cost.
Prepare i) Cost Sheet ii) Profit & loss account and iii) Reconciliation Statement if the total expenditure consists of :

	Rs.
Material	24,600
Wages	33,200
Factory expenses	32,840
Office expenses	22,420

10% of the output is in stock at the end and sales are Rs.1,38,400

UNIT-II

4. 100 units are introduced into process A at a cost of Rs.9,600 and an expenditure of Rs.4,800 is incurred. From the past experience, it is assessed that wastage normally arises to the extent of 15% of units introduced. The scrap value is at Rs.10 per unit. The actual output of process A is 90 units, transferred to process B. In process the output is 75 units which is transferred to Finished goods account and the scrap expected in B is 10%. The expenditure of Materials for Rs.4,800, Labour Rs.3,600 and other expenses Rs.5,400. The scrap value is at Rs.15 per unit Prepare Process Accounts, Abnormal Gain & Loss Account and Normal Loss Account.

(or)

5. The product of a company passes through two processes to completion known as X and Y. From past experience it is ascertained that loss is incurred in each process as:
Process X – 2% Process Y – 5%
In each case, the percentage of loss is computed on the number of units entering the process concerned. The loss of each process possesses a scrap value. The loss of processes X and Y is sold at Rs. 5 per 100 units. The output of each process passes immediately to the next process and the finished units are passed into stock.

	Process X	Process Y
	Rs.	Rs.
Materials consumed	6,000	4,000
Direct labour	8,000	6,000
Manufacturing expenses	1,000	1,000

20,000 units have been issued to Process X at a cost of Rs.10,000. The output of each process has been as under:
Process X 19,500; Process Y 18,800
Prepare Process Accounts.

UNIT-III

6. Sri Lakshmi Travels, a transport company is running a fleet of six buses between two towns 75 kms.apart. The seating capacity of each bus is 40 passengers. The following particulars are available for the month of April 2017.

	Rs.
Wages of Drivers, Conductors, etc.	14,400
Salaries of office and supervisory staff	15,000
Diesel oil., etc.	20,320
Repairs and maintenance	1,200
Taxes and insurance	2,400
Depreciation	3,900
Interest and other charges	3,000

The actual passengers carried were 80% of the capacity. All the buses run all the days in the month. Each bus made one round trip per day. Find out the cost per passenger kilometre.

OR

7. Mr. Srinivasulu furnishes you the following data and wants you to compute the cost per running km of vehicle A.

	Rs.
Cost of vehicle	4,50,000
Road licence per year	1,800
Annual supervision & salaries	7,200
Driver's wages per hour	40
Cost of fuel per litre	52
Repairs & maintenance per km	22
Tyres cost per km	4
Insurance premium p.a.	1,700
Garage rent per year	15,300
Kms run per litre	20
Kms run during the year	15,000
Estimated life of vehicle in kms	1,00,000
Average tonnage carried	6

Charge interest at 5% per annum on cost of vehicle. The vehicle runs 20 kms per hour on an average.

UNIT-IV

8. From the following particulars Calculate a) Material price variance b) Material usage variance and c) Material cost variance

Material purchased - 3,000 kgs at Rs.6 per kg

Standard quantity of material fixed for one unit of finished product - 25 kgs at Rs.4 per kg.

Opening stock of material - Nil

Closing stock of material - 500 kgs

Actual output during the period - 80 units.

(or)

9. From the following information of product No.888, calculate

i) Material cost variance

ii) Material price variance

iii) Material usage variance

iv) Material mix variance

Material	Standard Qty. in Kgs	Standard Price Rs.	Actual quantity in Kgs	Actual price Rs.
X	20	5	24	4.00
Y	16	4	14	4.50
Z	12	3	10	3.25
	48		48	

UNIT-V

10. A company which supplies its output on contract basis as component to an assembling firm has a contract to supply 10,000 units of its only product during 2017. The following were the budgeted expenses and revenue.

Material	Rs. 15 per unit
Wages	Rs. 10 per unit
Works expenses – (Fixed)	Rs. 40,000
Variable	Rs. 4 per unit
General expenses (all fixed)	Rs.60,000
Profit is 20% on sale price.	

Prepare the budget for 2017 showing the costs and profit.

(or)

11. Draw up a flexible budget for production at 75% and 100% capacity on the basis of the following data for a 50% activity.

	Per unit in Rs.
Materials	100
Labour	50
Variable expenses (direct)	10
Administrative expenses (50% fixed)	40,000
Selling and Distribution expenses (60% fixed)	50,000
Present production (50% activity)	1,000 units

DSC 2G 6.2 AUDITING

Unit-I: Auditing: Meaning – Objectives – Errors and Frauds - Importance of Auditing – Auditing as a Vigil Mechanism – Role of Auditor in checking corporate frauds.

Unit-II: Types of Audit: Based on Ownership and time - Independent, Financial, Internal, Cost, Tax, Government, Secretarial audits.

Unit-III: Planning of Audit: Steps to be taken at the commencement of a new audit – Audit programme - Audit note book - Internal check, internal audit and internal control.

Unit-IV: Vouching and Investigation: Vouching of cash and trading transactions – Investigation, Auditing vs. Investigation

Unit-V: Company Audit and Auditors Report: Auditor's Qualifications – Appointment and Reappointment – Rights, duties, liabilities and disqualifications - Audit report: Contents.

References:

1. S.Vengadamani, "Practical Auditing", Margham Publications, Chennai.
2. Ghatalia, "Principles of Auditing", Allied Publishers Pvt. Ltd., New Delhi.
3. Pradeesh Kumar, Baldev Sachdeva & Jagwant Singh, "Auditing Theory and Practice, Kalyani Publications, Ludhiana.
4. N.D. Kapoor, "Auditing", S. Chand, New Delhi.
5. R.G. Saxena, "Principles and Practice of Auditing", Himalaya Publishing House, New Delhi.
6. Jagadesh Prakesh, "Principles and Practices of Auditing" Kalyani Publications, Ludhiana.
7. Kamal Gupta and Ashok Gupta, "Fundamentals of Auditing", Tata McGraw Hill
8. B.N. Tondan, "Practical Auditing", S.Chand, New Delhi.

Sri Venkateswara University
Model Paper
III B.Com
Semester – VI, April, 2018
DSC 2G 6.2 – AUDITING

Time: 3 hours **Max.Marks: 75 M**

Section – A

Answer any FIVE questions, each question carries 3 marks **5 X3=15**

1. a) Auditing
b) Auditing as a Vigil Mechanism
c) Internal Audit
d) Government Audit
e) Audit Note Book
f) Investigation
g) Vouching
h) Auditors qualifications

Section – B

Answer any ONE question from each unit.
Each question carries 12 marks **5X12 =60**

UNIT-I

2. Define Auditing. Explain objectives of Auditing

(or)

3. Describe the importance of Auditing.

UNIT-II

4. Describe the various types of Audit.

(or)

5. Distinguish between Cost Audit and Financial Audit

UNIT-III

6. What steps should be taken in to A/c vehicle commencement of New Audit?

(or)

7. What are the contents of Audit programme?

UNIT-IV

8. "Vouching is the essence of Auditing". Discuss?

(or)

9. Distinguish between Audit and Investigation?

UNIT-V

10. What are the Rights and duties of company Auditor?

(or)

11. What are the contents of Audit Report?

DSC 3G 6.3 MANAGEMENT ACCOUNTING

Unit–I: Management Accounting: Interface with Financial Accounting and Cost Accounting – Scope and limitations of management accounting - Functions of Management Accounting and its importance (Theory only)

Unit–II: **Financial statement analysis** - Financial Statement analysis and interpretation Comparative statements – Common size analysis and trend analysis (including problems).

Unit–III: Ratio Analysis: Classification, Importance and limitations - Analysis and interpretation of Accounting ratios - Liquidity, profitability, turnover or activity and solvency ratios (including problems).

Unit–IV: Fund Flow Statement: Concept of fund: Preparation of funds flow statement. Uses and limitations of funds flow analysis (including problems).

Unit–V: Cash Flow Statement: Concept of cash flow – Preparation of cash flow statement - Uses and limitations of cash flow analysis (including problems).

References:

1. Cost Accounting and Management Accounting – T.S. Reddy and Hariprasad Reddy, Margham publications, Chennai
2. S.N. Maheswari, A Textbook of Accounting for Management, S. Chand Publishing, New Delhi
3. I.M Pandey, "Management Accounting", Vikas Publishing House, New Delhi,
4. Shashi K. Gupta & R.K. Sharma, "Management Accounting: Principles and Practice", Kalyani Publishers, Ludhiana.
5. Jawahar Lal, Accounting for Management, Himalaya Publishing House, New Delhi.
6. Charles T. Horngren, et.al, "Introduction to Management Accounting" Person EducationIndia, New Delhi, 2002.
7. Murthy & Guruswamy – Management Accounting, Tata McGraw Hill, New Delhi.
8. Dr. Kulsreshtha & Gupta – Practical problems in Management Accounting.
9. Bhattacharya, D., "Management Accounting", Pearson Education India, New Delhi.
10. S.P. Gupta – Management Accounting, S. Chand Publishing, New Delhi.

Sri Venkateswara University
Model Paper
III B.Com
Semester – VI, April, 2018
DSC 3G 6.3 – MANAGEMENT ACCOUNTING

Time: 3 hours **Max.Marks: 75 M**

Section – A

Answer any FIVE questions, each question carries 3 marks **5 X3=15**

1. a) Liquidity Ratios
b) Gross Profit Ratio
c) Funds from operation
d) Operating Activities
e) Cash flow statement
f) Limitations of Ratio Analysis
g) Common size statement
h) Cost Accounting

Section – B

Answer any ONE question from each unit.
Each question carries 12 marks **5X12 =60**

UNIT-I

2. Explain scope and limitations of Management Accounting

(or)

3. Explain the functions & importance of Management Accounting

UNIT-II

4. Dhandapani & Co. Ltd., furnishes the following Balance Sheets for the years 2014 and 2015. Prepare common-size balance sheets.

Balance sheets

Liabilities	2014 Rs.	2015 Rs.	Assets	2014 Rs.	2015 Rs.
Share capital	2,00,000	3,00,000	Buildings	4,00,000	4,00,000
Reserves	6,00,000	7,00,000	Machinery	6,00,000	10,00,000
10% Debentures	2,00,000	3,00,000	Stock	2,00,000	3,00,000
Creditors	3,00,000	5,00,000	Debtors	2,00,000	2,50,000
Bills payable	1,00,000	80,000	Cash at Bank	1,00,000	50,000
Tax payable	1,00,000	1,20,000			
	15,00,000	20,00,000		15,00,000	20,00,000

(or)

5. The following are the extracts from the income statements of Bright Ltd., for the 6 years ending 2015. You are required to calculate trend percentages, taking 2014 as the base year and give two major conclusions you can draw.

(figures in thousands)

Particulars	2012	2013	2014	2015	2016	2017
Sales	300	340	420	480	520	600
Cost of goods sold	180	204	256	287	300	330
Office Expenses	40	42	45	50	55	60
Selling expenses	20	25	30	40	50	60
Net profit/loss	60	69	89	103	115	150

UNIT-III

6. The following figures relate to the trading activities of a company for the year ended 31-03-2016.

Particulars	Rs.	Particulars	Rs.
Sales	1,00,000	Salary of salesmen	1,800
Purchases	70,000	Advertising	700
Closing stock	14,000	Travelling expenses	500
Sales returns	4,000	Salaries (office)	3,000
Dividend received	1,200	Rent	6,000
Profit on sale of fixed assets	600	Stationery	200
Loss on sale of shares	300	Depreciation	1,000
Opening stock	11,000	Other expenses	2,000
		Provision for tax	7,000

You are required to calculate

1. Gross profit ratio
2. Operating profit ratio
3. Operating ratio
4. Net profit ratio

(or)

7. The following figures are extracted from the Balance Sheet of X Ltd., as on 31st December:

	2012 Rs.	2013 Rs.
Stock	25,000	40,000
Debtors	10,000	16,000
Cash at Bank	5,000	4,000
Creditors	8,000	15,000
Bills payable	2,000	3,000
Provision for Taxes	5,000	7,000
Bank Overdraft	5,000	15,000

Calculate the Current Ratio and Quick Ratio for the two years.

UNIT-IV

8. Prepare a schedule of changes in working capital from the following Balance Sheets:

Balance Sheets

Liabilities	2014 Rs.	2015 Rs.	Assets	2014 Rs.	2015 Rs.
Share capital	50,000	50,000	Fixed assets	18,000	28,000
10% Debentures	10,000	20,000	Investments:		
Bills payable	18,000	6,000	Non-trading	10,000	10,000
Outstanding expenses	6,000	9,000	Trading	8,000	9,000
Trade Creditors	33,000	40,000	Inventories	12,000	18,000
			Trade Debtors	40,000	48,000
			Accrued interest	4,000	6,000
			Unexpired insurance	-	3,000
			Cash at bank	17,000	2,000
			Cash in hand	8,000	1,000
	1,17,000	1,25,000		1,17,000	1,25,000

(or)

9. The following are the summarised Balance Sheets of Malar Industries Ltd., as on 31st December 2009 and 2010:

Balance Sheet

Liabilities	2009 Rs.	2010 Rs.	Assets	2009 Rs.	2010 Rs.
Capital:			Fixed Assets	41,000	40,000
7% Redeemable			*Less:* Depreciation	11,000	15,000
preference shares	-	10,000		30,000	
Equity shares	40,000	40,000	*Current assets:*		
General reserve	2,000	2,000	Debtors	20,000	24,000
Profit & Loss A/c	1,000	1,200	Stock	30,000	35,000
Debentures	6,000	7,000	Prepaid expenses	300	500
Current Liabilities:			Cash	1,200	3,500
Creditors	12,000	11,000			
Provision for tax	3,000	4,200			
Proposed dividend	5,000	5,800			
Bank overdraft	12,500	6,800			
	81,500	88,000		81,500	88,000

Prepare: i) Statement showing changes in the working capital.
ii) A statement of sources and applications of funds.

UNIT-V

10. From the following data you are required to calculate the cash from operations:
funds from operations for the year 1998 Rs.84,000. Current assets and liabilities as on 1-4-08 and 31-03-09 were as follows:

	1-4-08 Rs.	31-03-09 Rs.
Trade creditors	1,82,000	1,94,000
Trade debtors	2,75,000	3,15,000
Bills receivable	40,000	35,000
Bills payable	27,000	31,000
Inventories	1,85,000	1,70,000
Trade investments	40,000	70,000
Outstanding expenses	20,000	25,000
Prepaid expenses	5,000	8,000

(or)

11. From the following Balance Sheets as on 31-03-15 and 31-03-14, prepare a Cash Flow

Statement:

Liabilities	31.03.2015 Rs.	1.04.2014 Rs.	Assets	31.03.2015 Rs.	1.04.2014 Rs.
Share capital	1,50,000	1,00,000	Fixed assets	1,50,000	1,00,000
Profit & Loss A/c	80,000	50,000	Goodwill	40,000	50,000
General reserve	40,000	30,000	Stock	80,000	30,000
6% Debentures	60,000	50,000	Debtors	80,000	50,000
Creditors	40,000	30,000	Bills Receivable	20,000	30,000
Outstanding exp.	15,000	10,000	Bank	15,000	10,000
	3,85,000	2,70,000		3,85,000	2,70,000

CLUSTER ELECTIVE 1 A – E COMMERCE

DSC H 6.4 E-PAYMENTS SYSTEM

Unit-I: e-Cash and Virtual Money: Electronic Data Interchange (EDI) - NEFT/RTGS/Electronic Payment modes - Foundations of e-Cash and Issues; Security, Anonymity, Untraceability, Virtual currencies, Bitcoin.

Unit-II: Automated Clearing and Settlement: Process of Real Time Gross Settlement System - Net Settlement -ATM Networks - Fedwire, CHIPS and SWIFT.

Unit-III: e-Payment Security and Digital Signature: Cryptographic Methods - Hash functions - Public/Private Key methods: RSA - Digital Signatures - Certification Process - Digital identity Documents and Remote Authentication.

Unit-IV: **Mobile Payments:** Wireless payments, Digital Wallets, Google Wallet – Obopay - Security Challenges.

Unit-V: Electronic Invoice and Payment System: Electronic Statement Delivery - EIPP providers - Biller service providers - Customer service providers - Reconciliation through Bank - Invoice Paper elimination - Scan-based trading (SBT).

References:

1. Domonique Rambure and Alec Nacamuli, "Payment Systems: From the Salt Mines to the Board Room", Palgrave MacMillan.
2. Weidong Kou, *"Payment Technologies for E-Commerce".* Springer, Germany.
3. Donal O'Mahony, Michael Peirce and Hitesh Tewari, "Electronic Payment Systems", Artech House, Inc.
4. M. H. Sherif, Protocols for Secure Electronic Commerce, Boca Raton, Fla, CRC Press.

MODEL QUESTION PAPER

VI SEMESTER-B.COM (CA)/ B.A;B.Sc(CA)

(CHOICE BASED CREDIT SYSTEM)

E –PAYMENT SYSTEM

Time: 3 Hrs **Max Marks: 75**

SECTIONS –A

1. **Answer any FIVE questions, each question carries 3 marks** **5 X3=15**

1. Electronic Data Interchange (EDI)
2. Fed wire
3. E- Cash
4. Digital Signature
5. Online Payment
6. Payment Wallet
7. Electronic Statement Delivery
8. ATM

SECTION – B

Answer any ONE question from each unit.
Each question carries 12 marks **5X12 =60**

Unit-1

2. Explain about E-Cash? What are the issues to arising in E-Cash system?

Or

3. Explain about different types of electronic payment modes?

Unit -2

4. Describe the process of real time gross settlement system?

Or

5. Write an essay on CHIPS and SWIFT?

Unit- 3

6. Explain the methods of cryptography?

Or

7. Explain the functions of digital signature?

Unit- 4

8. Write the importance of wireless payments system in nowadays?

Or

9. Explain digital wallets and its types?

Unit- 5

10. Describe the biller service providers?

Or

11. Explain about scan based trading?

CLUSTER ELECTIVE 1 A – E COMMERCE

DSC H 6.5 TALLY

Unit-I: Tally: Features of Tally accounting – Components of Gateway of Tally – Company creation – Creation of groups - Creation, display, and alteration of multiple and single ledgers – Various types of vouchers – Creation and alteration of vouchers – Configuration and print of financial statements and other reports, documents and vouchers.

Unit II: Tally Inventory - Configuration – Creation, display, and alteration of inventory masters – Recording various inventory vouchers – Display and print of inventory reports – Lab exercises.

Unit-III: GST: Enabling Tally for GST – Features and Classification of GST – Exemptions from GST – Exports and imports – Inter-state purchases and sales (IGST) – Lab exercises.

Unit-IV: TDS: Creation of ledgers and vouchers – Advance and balance payments of Tax – Generation of TDS reports – Enabling Service tax - Creation of ledgers and recording of vouchers – Lab exercises.

Unit-V: Payroll: Payroll features - Enabling payroll – Creation of Pay head ledgers – Creation of employee masters and pay roll voucher and attendance voucher – Display and print of various payroll reports - Lab exercises.

REFERENCE BOOKS: 1. Nadhani, A.K. and Nadhani, K.K. Implementing Tally 7.2 BPB Publication, New Delhi.
2. Kiran Kumar, K.Tally 9, Laasya Publishers, Hyderabad
3. Fire wall media, Tally 9.
4. Vishnu Priya Singh, tally 9, Computech Publications Ltd, New Delhi.
5. Sharma, KVS, Statistics mode simple, do it yourself and PC, Prentice Hall of India Pvt. Ltd., New Delhi
6. Goods and Services Tax, Himalaya Publishing House.

MODEL QUESTION PAPER

Third Year B.com - VI semester

TALLY

Time: 3hrs Max Marks: 75

I. Answer any **five** question from the following : 5X3=15

a) Accruals
b) Accrual Accounting
c) Audit Trail
d) what is meant by balance sheet
e) Double-Entry Bookkeeping
f) explain the Payroll
g) COMPANY CREATION
h) voucher entry

II. Answer any **one** question for the **each unit** from the following: 5X12=60

UNIT-I

1. Explain the company creation process in tally software? And write a note on company alteration and deletion in tally?

(OR)

2. Explain the single and multiple Group creation process in tally software? How to create sub Groups?

UNIT-II

3. Explain the inventory voucher creation and alteration process of inventory masters?

(OR)

4. Explain the Display and print of inventory reporting process?

(OR)

UNIT-III

5. Write the GST Ledger creation process in tally?

(OR)

6. Write the Features and Classification of GST in tally? Explain the Exemptions of GST?

UNIT-IV

7. Explain the TDS ledger and voucher creation process in tally?

(OR)

8. How to generate TDS reports in tally? And Explain enabling process of serves tax in tally?

UNIT-V

9. Write the Payroll features? And Creation of Pay head ledgers?

(OR)

10. Write the employee masters and payroll vouchers in tally?

B.COM. (CA.) DEGREE COURSE – III YEAR

SEMESTER – VI – PROJECT WORK

Marks: Project work–70+Viva-voce-30 marks

Objectives

1. To impart skills among the students to write a report of their choice in a given area / field.
2. To enable the students to develop necessary insights into the practical field by making use of functional knowledge of different areas attained in the previous years.

Internship

During the summer vacation, at the end of the second year, students have to undergo an internship for one month with companies and other Business organizations (including Chartered Accounting Firm).

The student should submit a brief report not exceeding 10 pages on learnings of internship and a certificate from the organization, along with the project work.

Project Work Guidelines

The students have to submit a Project report on a selected topic of their choice, selecting from the broad areas of their curriculum, guided by a Faculty member.

The students are expected to prepare a project report on a selected topic that should comprise of 50 to 80 pages. The project report is to be valued by the External Examiners suggested by the Board of Studies in Commerce. The project report is to be submitted at the college by 31st March of the year.

CLUSTER ELECTIVE 10 A – COMPUTER APPLICATIONS

DSC H 6.4 – E – COMMERCE APPLICATIONS

Unit-I: e-Commerce Frame work : Traditional vs. e-Business Applications – Anatomy of e-Commerce Applications – present day trends.

Unit-II: Net work Infrastructure of e-Commerce : Components of I-way – Global information distribution networks – Public policy issues – Internet as a network infrastructure – Business of the internet commercialization

Unit-III: Network Security : Client server network security – Firewalls and Network security – Data and message security – Encrypted documents and Electronic mail.

Unit-IV: Electronic Commerce and World Wide Web : Consumer oriented E- Commerce, Electronic Payments systems, Electronic Data Interchange (EDI) EDIapplications inbusiness EDI and E-Commerce EDI implementation

Unit-V: Intra-organisational e-Commerce : e-Commerce catalogs, Document Management and Digital libraries – Managing Supply Chain through e-Platform

Reference Books:

1. R. Kalakota and A.B. Whinston, Frontiers of Electronic Commerce, Addison Wesley
2. David Kosiur, Understanding Electronic Commerce, Microsoft Press
3. Soka, From EDI to Electronic Commerce, McGraw Hill.
4. Sailly Chan, Electronic Commerce Management, John Wiley

B.Com (CA)/B.A/B.Sc (CA) DEGREE EXAMINATION

MODEL QUESTION PAPER

VI SEMESTER

PAPER: E- COMMERCE APPLICATIONS

Time:3 Hours **Max. Marks: 75**

SECTION-A

1.Answer any FIVE questions, each question carries 3 marks **5 X3=15**

a. Define E-Commerce
b. Electronic marketing
c. Online payment
d. Smart card
e. Authentication
f. Encryption
g. WWW
h. Networking
i. Browsing
j. Online meeting

SECTION –B

Answer one question from each unit. Each question carries 12 marks (5x12=60)

UNIT-I

2.Explain merits and demerits of E-Commerce

(OR)

3.Explain different business models of E-Commerce

UNIT-II

4. explain the various components of I – way/

(Or)

5. What is internet explain the infrastructure of Inter net

UNIT-III

6.Explain the types of Encryption.

(OR)

7. Explain the functionality of firewall in detail.

UNIT-IV

8.What do you understand by online payment system

(OR)

9.What is meant by EDI? Explain uses and limitations of EDI

UNIT-V

10.Write about Supply Chain management.

(OR)

11.Explain digital and document management

CLUSTER ELECTIVE 1 A – E COMMERCE

DSC H 6.5 TALLY

Unit-I: Tally: Features of Tally accounting – Components of Gateway of Tally – Company creation – Creation of groups - Creation, display, and alteration of multiple and single ledgers – Various types of vouchers – Creation and alteration of vouchers – Configuration and print of financial statements and other reports, documents and vouchers.

Unit II: Tally Inventory - Configuration – Creation, display, and alteration of inventory masters – Recording various inventory vouchers – Display and print of inventory reports – Lab exercises.

Unit-III: GST: Enabling Tally for GST – Features and Classification of GST – Exemptions from GST – Exports and imports – Inter-state purchases and sales (IGST) – Lab exercises.

Unit-IV: TDS: Creation of ledgers and vouchers – Advance and balance payments of Tax – Generation of TDS reports – Enabling Service tax - Creation of ledgers and recording of vouchers – Lab exercises.

Unit-V: Payroll: Payroll features - Enabling payroll – Creation of Pay head ledgers – Creation of employee masters and pay roll voucher and attendance voucher – Display and print of various payroll reports - Lab exercises.

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5. Sharma, KVS, Statistics mode simple, do it yourself and PC, Prentice Hall of India Pvt. Ltd., New Delhi
6. Goods and Services Tax, Himalaya Publishing House.

Model Question paper
Third Year B.com - VI semester
TALLY

Time: 3hrs Max Marks: 75

II. Answer any **five** question from the following : 5X3=15

a) Accruals
b) Accrual Accounting
c) Audit Trail
d) what is meant by balance sheet
e) Double-Entry Bookkeeping
f) explain the Payroll
g) COMPANY CREATION
h) voucher entry

II. Answer any **one** question for the **each unit** from the following: 5X12=60

UNIT-I

11. Explain the company creation process in tally software? And write a note on company alteration and deletion in tally?

(OR)

12. Explain the single and multiple Group creation process in tally software? How to create sub Groups?

UNIT-II

13. Explain the inventory voucher creation and alteration process of inventory masters?

(OR)

14. Explain the Display and print of inventory reporting process?

(OR)

UNIT-III

15. Write the GST Ledger creation process in tally?

(OR)

16. Write the Features and Classification of GST in tally? Explain the Exemptions of GST?

UNIT-IV

17. Explain the TDS ledger and voucher creation process in tally?

(OR)

18. How to generate TDS reports in tally? And Explain enabling process of serves tax in tally?

UNIT-V

19. Write the Payroll features? And Creation of Pay head ledgers?

(OR)

20. Write the employee masters and payroll vouchers in tally?

B.COM. (CA) DEGREE COURSE – III YEAR

SEMESTER – VI – PROJECT WORK

Marks: Project work–70+Viva-voce-30 marks

Objectives

1. To impart skills among the students to write a report of their choice in a given area / field.
2. To enable the students to develop necessary insights into the practical field by making use of functional knowledge of different areas attained in the previous years.

Internship

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B. Sc. III – Semester VI

ELECTIVE

BTT- 601: PLANT AND **ANIMAL BIOTECHNOLOGY**

UNIT I:

Cell and tissue culture: Introduction to cell and Tissue culture Laboratory facilities Tissue culture media (composition and preparation) Callus and suspension cultures: initiation and maintenance of callus and suspension cultures; single cell clones.

UNIT II:

Tissue and micropropagation, regeneration, production of haploids, protoplast culture and somatic hybridization. Cloning in plants - Ti plasmid organization. Concept of transgenic plants Bt cotton and other plant applications.

UNIT III:

Various techniques of animal cell and tissue culture: Culture media, growth factors, laboratory facilities.

Characteristics of cells in culture: Contact inhibition, anchorage dependence, cell-cell communication etc.; Cell senescence; cell and tissue response to trophic factors. Primary culture, immortal cells, cell lines. d) Maintenance of cell lines in the laboratory.

UNIT IV:

rDNA products: Brief idea about recombinant DNA products in medicine (insulin, somatostatin, vaccines), Concept of Gene therapy, Production of recombinant vaccines – hepatitis. Concept of transgenic animals

In vitro fertilization and embryo transfer in humans and farm animals.

UNIT V:

IPR: Intellectual property rights. Protection of Copy rights. Patents and their significance. Management studies: society and ethical aspects of Biotechnology.

PRACTICALS: BTP- 602 PLANT AND ANIMAL BIOTECHNOLOGY

1.Establishing a plant cell culture (both in solid and liquid media) – seed germination, callus culture, suspension cell culture, regeneration from callus cells.
2. Suspension culture.
3.Cell count by hemocytometer.
4.Cytology of callus.
5.Establishing primary cell culture of chicken embryo fibroblasts.
6.Animal tissue culture – maintenance of established cell lines.
7.Animal tissue culture – virus cultivation.
8.Measurement of cell size.
9. Microphotography.
10. IMViC test.
11.Determination of seed viability.

B. Sc. III – Semester VI

CLUSTER ELECTIVE - 1

BTT: 603- ENVIRONMENTAL BIOTECHNOLOGY (theory)

Unit I:
Principles of Ecology, Water and terrestrial ecosystems, Bio-geo chemical cycles - Carbon, Nitrogen cycles. Role of microbes in bio-geochemical cycles.

Unit II:
Inorganic and Organic pollutants of air, land and water; maintenance of standards, Environmental monitoring. Detection, treatment and prevention of pollution. Biological indicators

Unit III:
Biocides, Four stage alternatives, Refuse disposal - Treatment methods, effluent from pharmaceuticals, fertilizers, pulp and paper industry.

Unit IV:
Waste water management - Aerobic and anaerobic treatment, primary, secondary and tertiary treatment of municipal wastes, Solid waste management.

Unit V:
Bioremediation, Biodegradation of recalcitrant compounds and the role of genetically engineered microbes and genetically modified organisms in the environmental management.

PRACTICALS BTP:604- ENVIRONMENTAL BIOTECHNOLOGY

1. Detection of coliforms for determination of the purity of potable water.
2. Determination of total dissolved solids of water
3. Determination of Hardness and alkalinity of water sample.
4. Determination of dissolved oxygen concentration of water sample
5. Determination of biological oxygen demand of sewage sample
6. Determination of chemical oxygen demand (COD) of sewage sample.
7. Isolation of xenobiotic degrading bacteria by selective enrichment technique
8. Estimation of heavy metals in water/soil
9. Estimation of nitrate in drinking water.
10. Preparation and formulation of microbial biopesticide (bacteria, fungi and viruses)
11. In vitro evaluation of medicinal plants against pathogenic microbes.
12. Effect of mycorrhizal fungi on growth promotion of plants.
13. Production of microbial fertilizers (Rhizobium, Azotobacter and AMF).

B. Sc. III – Semester VI

CLUSTER ELECTIVE - 2

BTT: 605 Industrial Biotechnology (theory)

Unit I:

Isolation, Screening, Preservation and Improvement of Industrially Important Microorganisms. Synthetic and Natural Medium, Precursors, Antifoams, Sterilization Methods and Inoculum Preparation.

Unit II:

Definition of bioreactor, basic principles of bioreactor. Classification of bioreactors. Analysis of batch, continuous, fed batch and semi-continuous bioreactors. Down stream processing.

Unit III:

Ethanol Production by Fermentation using Molasses, Starchy Substances. Production of Alcoholic Beverages like Beer and Wine. Production of Citric Acid by Submerged and Solid State Fermentations.

Unit IV:

Sources of Industrial Enzymes, Production of Microbial Enzymes like Amylase and protease. Backer's Yeast and SCP Production. Production of Antibiotics : Penicillin .

Unit V:

Biotechnology Products- Production of recombinant proteins having therapeutic and diagnostic applications(Insulin, Growth Harmone, Recombinant vaccines, Monoclonal Antibody).

PRACTICALS BTP: 606 Industrial Biotechnology (Lab)

1. Isolation of industrially important microorganisms from soil.
2. Isolation of amylase producing organisms from soil.
3. Production of α – amylase from *Bacillus Spp.* by shake flask culture.
4. Production of alcohol or wine using different substrates.
5. Estimation of alcohol by titrimetry.
6. Estimation of alcohol by calorimetric method .
7. Production of citric acid.
8. Citric acid production by submerged fermentation.
9. Estimation of citric acid by titrimetry.

B. Sc. III – Semester VI

CLUSTER ELECTIVE - 3

BTT- 607: GENETICS (Theory)

UNIT I

Mendels Laws and Inheritance: Mendel experiments, Mendel Laws and deviations: incomplete dominance and Co dominance Penetration and pleiotropism, Recessive and Dominant epistatic gene interactions. Concept of multiple alleles

UNIT II

Genes and their variations: Structure of gene, gene and environment, gene copies of prokaryotic and Eukaryotic chromosomes. Eukaryotic chromosome organization, histone proteins.

Unit III:

Gene mutations: Mutagenesis - Spontaneous and induced (Chemical and physical) mutations; Natural and induction of mutations, point mutations, frameshift mutations, auxotrophic conditional and suppressor mutations.

UNIT IV:

DNA Damage and DNA Repair: Light induced repair, Excision repair and mismatch repair, Post replication repair, Rec gene and its role in DNA repair, SOS repair and SOS response

Unit V:

Transposable elements: Structure and Molecular basis of AC-DS transposition in maize, "P" element of Drosophila and hybrid dysgenesis, Yeast "T_7" elements, Retroposans

CLUSTER ELECTIVE – 3

PRACTICALS BTP 608: GENETICS (Lab)

1. Study of different phases of mitosis in onion root tips and meiosis in *Allium cepa* flower buds.
2. Karyotyping in Allium or Drosophila.
3. Determination of multiple allele frequencies of leaf scars in Trifolium.
4. Problems and assignments in Mendilian genetics.
5. Determination of linkage and calculation of recombination frequencies (maize/ Drosophila).
6. Induction of chromosomal aberrations by chemical mutagenesis in Allium (or any plant).
7. Isolation of auxotrophic mutants (plants or insects).
8. Repair of DNA by Photo activation of Photolyase in bacteria.
9. Mutation of bacteria by UV.
10. Chemical induced mutation in bacteria

B.Sc Biotechnology - Semester-VI

[CORE] BTP-601: Plant and Animal Biotechnology

Time: 3hrs Max. Marks: 75

Section-A

Answer any five of the following 5×3 = 15

1. Callus
2. Protoplast culture
3. Suspension culture 4. Invitro fertilisation.
5. Cell lines. 6.
6. Culture Media
7. Copy Rights
8. Insulin.

Section-B

Answer all the following Questions 5×12 = 60

9. a) What is tissue culture? Explain in detail about the facilities required in tissue culture laboratory.

(or)

b) What is tissue culture? Explain different types of culture Media in plant and Animal tissue culture.

10) a) What are Transgenic plants? Explain the process of by taking Bt cotton as example.

(or)

b) Explain Micropropagation with suitable example.

[PTO]

11) a) write in detail about the Maintenie of cell lines.

(OR)

b) write short notes on i) cell senescence
ii) Growth factors
iii) primary coltue
iv) cell-cell communication.

12) a) Define r-DNA technology. Explain the production Insulin through r-DNA technology.

(OR)

b) Explain in detail about Invitro fertilisation and embryo transfer in humans and farm animals.

13. a) what are Intellectual Property Rights? Explain patents in detail.

(OR)

b) write about Social and ethical aspects in Biotechnology.

BOS Biotechnology Board

Prof. S.D.S. Murthy M.Sc., M.E.A.
BOS CHAIRMAN OF BIOTECHNOLOGY
DEPARTMENT OF BIOCHEMISTRY
SRI VENKATESWARA UNIVERSITY
TIRUPATI.

Prof. SDS Murthy (Chairman) Sdd/-

Mr. B. Balaji Kumar (member) Sdd/-

B.Sc Biotechnology - VI Semester

BTT-603 - Environmental Biotechnology [Elective theory]

Time: 3hrs Max. marks: 75

SECTION-A

Answer any five of the following 5×3 = 15

1. Ecological pyramids
2. Biotic component
3. Soil Erosion
4. Green house effect
5. Bio sensors
6. Xenobiotic compounds
7. Bio-geo chemical cycles.
8. GMO

SECTION-B

Answer all the following Questions 5×12 = 60

9. a) Define ecosystem. write a short Notes on terrestrial and water ecosystems.

(or)

b) Explain in detail the role of Microorganisms in geochemical cycles.

10) a) write a short notes on Inorganic and organic pollutants of air, soil and water.

(or)

b) Explain the methods of detection, treatment and prevention of pollution.

[P.T.O]

11. a) what are Biocides? Explain in detail.

(or)

b) Explain how effluents from pharamaceuticals, fertilizers, pulp and paper industries are treated?

12. a) write a short notes on waste water managment.

(or)

b) write a short note on solid waste management.

13. a) Explain in detail about Biodegradation.

(or)

b) what is the role of Genetically Engineered microbes in the ~~waste water~~ environmental management

Prof. S.D.S. Murthy, F.N.E.A.
BOS CHAIRMAN OF BIOTECHNOLOGY
DEPARTMENT OF BIOCHEMISTRY
SRI VENKATESWARA UNIVERSITY
TIRUPATI.

B.Sc Biotechnology - VI - semester

BTT: 605 Industrial Biotechnology [Elective theory]

Time 3hrs Max Marks: 75

SECTION-A

Answer any five of the following 5×3 = 15

1. Antifoam agents
2. Inoculum
3. SCP
4. Semi continous bioreactors
5. Yeast
6. Antibiotics
7. Fermentation
8. MABs

SECTION-B 5×12 = 60

Answer all the following Questions.

9.
a) write a short notes on Industrially important micro organisms.

(or)

b) what is sterilization? write various methods of sterilization.

10)
a) what is Bioreactor? write about various types of bioreactors.

(or)

b) write in detail about Down stream processing.

11) a) write a short notes on production of wine and beer.

(or)

b) write a short notes on production of citric acid.

12. a) write a short notes on production of Industrial enzymes with suitable example.

(or)

b) write a short notes on production of antibiotics with suitable example.

13) a) what are recombinant proteins? Explain the production of Growth hormone.

(or)

b) what are Recombinant Vaccines? Explain the various recombinant vaccines.

BOS Biotechnology Board.

Prof SDS Murthy (Chairman)

Prof. S.D.S. Murthy, F.N.E.A.
BOS CHAIRMAN OF BIOTECHNOLOGY
DEPARTMENT OF BIOCHEMISTRY
SRI VENKATESWARA UNIVERSITY
TIRUPATI.

Mr. B. Pawan Kumar (member)

B.Sc Biotechnology — Semester VI

BTT-607 Genetics

Time: 3h

Max: 75

Section - A

Answer any five of the following 5X3=15

1) Concept of multiple alleles
2) Codominance
3) Histone proteins
4) Gene Copy
5) Mutagens
6) Frame shift
7) SOS repair
8) Rec gene

Section - B

5X12=60

Answer all the questions

9) a) Explain the Mendel experiments about codominance

or

b) Describe the Mendel laws and deviations

10) a) Discuss the structure of gene

or

b) Explain Eukaryotic chromosome organization

11) a) What is mutation and explain various mutagenic agents

or

b) How to induce mutation using chemical substances

12) a) What is the role of Rec gene in DNA repair

or

b) Describe light induced repair in DNA damage

13) a) Describe structure and molecular basis of AC-DS transposition

or

b) What are yeast "Ty" elements

SNR

III B. Sc - BOTANY SYLLABUS SEMESTER- VI
PAPER – VII – ELECTIVE
W.E.F. 2017-18

Paper VII-(B): Nursery, Gardening and Floriculture.

Total hours of teaching 60hrs @ 3hrs per week

Unit I: Nursery: **(12 hrs.)**

1. Definition, objectives, scope and building up of infrastructure for nursery.
2. Planning and seasonal activities - Planting - direct seeding and transplants.
3. Nursery Management and Routine Garden Operations.

Unit III: Gardening **(12 hrs.)**

1. Definition, objectives and scope - different types of gardening.
2. Landscape and home gardening - parks and its components, plant materials and design .
3. Computer applications in landscaping.
4. Gardening operations: soil laying, manuring, watering.
5. Landscaping Places of Public Importance: Landscaping highways and Educational Institutions)
6. Some Famous gardens of India.

Unit III: Propagation methods (12 **hrs.)**

1 Sowing/raising of seeds and seedlings, transplanting of seedlings.
2. Air-layering, cutting, selection of cutting ,propagule collecting season, treatment of cutting rooting medium and planting of cuttings - Hardening of plants.
3. Propagation of ornamental plants by rhizomes, corms tubers, bulbs and bulbils.
4. Green house - mist chamber, shed root, shade house and glass house for propagation.

Unit IV: Floriculture: **(12 hrs.)**

1. Ornamental Plants: Flowering annuals; herbaceous, perennials; Divine vines; Shade and ornamental trees.
2. Ornamental bulbous and foliage plants; Cacti and succulents.
3. Ornamentals-palms.
4. Cultivation of plants in pots; Indoor gardening; Bonsai.

Unit V: Commercial Floriculture (12 hrs.)

1. Factors affecting flower production; Production and packaging of cut flowers; Flower arrangements; Methods to prolong vase life of flowers
2. Cultivation of Important cut flowers (Carnation, Aster, Dahlia, Gerbera, Anthuriams, Gladiolous, Marigold, Rose, Lilium)
3. Management of pests, diseases and harvesting.
4. Methods of harvesting.

Books for Reference:

1. Bose T.K. & Mukherjee, D., 1972, Gardening in India, Oxford & IBH Publishing Co., New Delhi.
2. Sandhu, M.K., 1989, Plant Propagation, Wile Eastern Ltd., Bangalore, Madras.
3. Kumar, N., 1997, Introduction to Horticulture, Rajalakshmi Publications, Nagercoil. institution)
4.Randhawa, G.S. and Mukhopadhyay, A. 1986. Floriculture in India. Allied Publishers.

Suggested Activities: Raising a nursery, managing it, studying and drawing various land scaping designs, practicing layering methods, using shade nets to protect horticultural crops, practicing indoor gardening techniques, visiting florists and recording their methods of prolonging vase life of commercial cut flowers.

III B. Sc - BOTANY SYLLABUS SEMESTER- VI (Elective)
Practical Syllabus, Paper VII-(B): Nursery, Gardening and Floriculture
Total hours of teaching 30hrs @ 2hrs per week

1. Tools, implements and containers used for propagation and nursery techniques.
2. Propagation by cutting, layering, budding and grafting
3. Seed propagation- preparation of portable trays, seed treatments, sowing and seedling production.
4. Identification and description of annuals, herbaceous perennials, climbers, creepers, foliage and flowering shrubs, trees, palms, ferns, ornamental grasses; cacti and succulents..
5. Planning and designing of gardens, functional uses of plants in the landscape
6. Preparation of land for lawn and planting.
7. Identification of commercially important flower crops and their varieties.
8. Propagation practices in flower crops, sowing of seeds and raising of seedlings of annuals.
9. Use of chemicals and other compounds for prolonging the vase life of cut flowers.
10. Grading, packing and marketing of cut flowers.
11. Visit to commercial nurseries and commercial tissue culture laboratory
12. Study project under supervision of lecturer – nursery/ornamental flowers/ plants/lawn designing/ landscape designing

Expected domain skills to be achieved: Ability to use a variety of garden tools and implements, proficiency in layering and grafting techniques (cleft grafting and bud grafting), land scape drawings using computers, raising of healthy nurseries of flowering plants, managing vase life of cut flowers etc.

PRACTICAL MODEL PAPER

Paper-VII-(B): Nursery, Gardening and Floriculture

Q1. Project report (A) **- 15 marks**

Viva-voce on study project **-05 marks**

Q2. Identify and write notes on B, C, D, and E (4x5) **-20 marks**

B- Tool/instrument/container used in nursery

C-Seed propagation technique

D- Plant used in lawn (plant specimen/photograph)

E-ornamental flower (photograph/live specimen)

Q4. Field report **- 05 marks**

Q5. Record **- 05 marks**

50 marks

III B.Sc.: BOTANY SYLLABUS SEMESTER- VI
Paper VIII, CLUSTER ELECTIVE
W.E.F. 2017-18

Paper VIII-A-1 : PLANT DIVERSITY AND HUMAN WELFARE

Total hours of teaching 60hrs @ 3hrs per week

Unit- I: Plant diversity and its scope: **(12hrs)**

i. Genetic diversity, Species diversity, Plant diversity at the ecosystem level, Agro biodiversity and cultivated plant taxa, wild taxa.

ii. Values and uses of biodiversity: Ethical and aesthetic values,

iii. Methodologies for valuation, Uses of plants.

Unit -II: Loss of biodiversity: **(12hrs)**

i. Loss of genetic diversity, Loss of species diversity, Loss of ecosystem diversity, Loss of agro biodiversity, projected scenario for biodiversity loss

ii. Management of plant biodiversity: Organizations associated with biodiversity management-Methodology for execution-IUCN, UNEP, UNESCO, WWF, NBPGR; Biodiversity legislation and conservations, Biodiversity information management and communication.

Unit-III: Contemporary practices in resource management: **(12hrs)**

i. Environmental Impact Assessment (EIA), Geographical Information System GIS, Participatory resource appraisal, Ecological footprint with emphasis on carbon footprint, Resource accounting;

ii. Solid and liquid waste management

Unit -IV: Conservation of biodiversity **(12hrs)**

i. Conservation of genetic diversity, species diversity and ecosystem diversity, *In situ* and *ex situ* conservation,

ii. Social approaches to conservation, Biodiversity awareness programmes, Sustainable development.

Unit- V: Role of plants in relation to Human Welfare (12hrs)

i. Importance of forestry, their utilization and commercial aspects-

a) Avenue trees, b) ornamental plants of India. c) Alcoholic beverages through ages.

ii. Fruits and nuts: Important fruit crops their commercial importance. Wood, fiber and their uses.

Suggested Readings:

1. Krishnamurthy, K.V. (2004). An Advanced Text Book of Biodiversity - Principles and Practices. Oxford and IBH Publications Co. Pvt. Ltd. New Delhi.
2. Singh, J. S., Singh, S.P. and Gupta, S. (2006). Ecology, Environment and Resource Conservation. Anamaya Publications, New Delhi.
3. Rogers, P.P., Jalal, K.F. and Boyd, J.A. (2008). An Introduction to Sustainable Development. Prentice Hall of India Private Limited, New Delhi.

Suggested activities: Study of flora and its diversity in the college campus or local area,enumerating wild and exotic species(*Parthenium*, Water hyacinth etc.)

Project work on any one of the International organizations striving for preservation of biodiversity, study of conservation efforts of local people, and civic bodies, study of locally available fruits in different seasons, enumerating the avenue plantations and their diversity in your town/city

Paper – VIII-A-1 : Practicals: PLANT DIVERSITY AND HUMAN WELFARE

1) Study of plant diversity (flowering plants).

2) Study of exotic species- Identification and morphological characteristics.

3) Identification of forest trees through bark, wood, flowers, leaves and fruits.

4) Maceration, Study of wood (Tracheary elements, fibres).

5) Methods of preservation and canning of fruits.

6) Visit to the local ecosystem to study the plants.

7) Write up on the conservation efforts of International organizations.

8) Study of Solid and Liquid waste management systems in rural/urban areas.

Domain skills expected to achieve: Identification of exotic plant species, identification of forest trees based on the characteristics of bark, flowers and fruits, understanding the preservation methods of fresh and dry fruits, understanding the methods of safe disposal of biodegradable and non-biodegradable wastes

SCHEME OF PRACTICAL EXAMINATION

PRACTICAL- VIII-A-1 : Cluster Elective (MODEL QUESTION PAPER)
PLANT DIVERSITY AND HUMAN WELFARE

Time: 3hrs Max. Marks: 50

I. Assign the plants **A, B and C** to their respective families, giving reasons, family name and classification-2 marks, important diagrams- 3 marks.
15 marks

II. Give the protocol of **D** **10 marks**

III. Comment on specimens **E, F and G** **3x3 = 9 marks**

IV. Report on Field visit **6 marks**
To study sources of firewood (10 plants), timber-yielding trees (10trees) and bamboos.

V. Viva-Voce **5 marks**

VI. Practical Record **5 marks**

KEY

A-Cultivated Plant
B- Wild Plant
C –Exotic plant
D- Preservation and canning of fruits, solid and liquid waste management systems in rural/urban areas
E. Bark/wood/fruit yielding plant
F. Nuts/ Alcoholic beverage plant
G. wood /Fibre yielding plant

III B. Sc - BOTANY SYLLABUS

SEMESTER- VIII : CLUSTER ELECTIVE -A

Paper VIII-A-2 : ETHNOBOTANY AND MEDICINAL BOTANY
Total hours of teaching 60hrs @ 3hrs per week

Unit –I: Ethnobotany (12hrs)

i. Introduction, concept, scope and objectives; Ethnobotany as an interdisciplinary science. The relevance of ethnobotany in the present context

ii. Major and minor ethnic groups or Tribals of India, and their life styles.

iii. Plants used by the tribal populations: a) Food plants, b) intoxicants and beverages, c) Resins and oils and miscellaneous uses.

Unit -II: Role of ethnobotany in modern Medicine: (12hrs)

i. Role of ethnobotany in modern medicine with special example *Rauvolfia sepentina*, *Trichopus zeylanicus*, *Artemisia annua, Withania somnifera.*

ii. Medico-ethnobotanical sources in India

iii. Significance of the following plants in ethno botanical practices (along with their habitat and morphology)

a) *Azadirachta indica*, b*) Ocimum sanctum*, c) *Vitex negundo*, d) *Gloriosa superba*, e) *Tribulus terrestris,* f) *Phyllanthus niruri ,* g) *Cassia auriculata,* h) *Indigofera tinctoria ,* i) *Senna auriculata* j).*Curcuma longa*.

iv. Role of ethnic groups in the conservation of plant genetic resources.

Unit-III: Ethnobotany as a tool to protect interests of ethnic groups (12hrs)

i. Sharing of wealth concept with few examples from India.

ii. Biopiracy, Intellectual Property Rights and Traditional Knowledge.

Unit -IV: History, Scope and Importance of Medicinal Plants. indigenous Medicinal Sciences (12hrs)

i. Definition and Scope-**Ayurveda**: History, origin, panchamahabhutas, saptadhatu and tridosha concepts, Rasayana, plants used in ayurvedic treatments.
ii. **Siddha**: Origin of Siddha medicinal systems, Basis of Siddha system, plants used in Siddha medicine.
iii. **Unani**: History, concept: Umoor-e- tabiya, tumors treatments/ therapy, polyherbal formulations (in brief).

Unit -V: Conservation of endangered and endemic medicinal plants: **(12hrs)**

i. Definition: endemic and endangered medicinal plants,
ii. Red list criteria
iii. In situ conservation: Biosphere reserves, sacred groves, National Parks
iv. Ex situ conservation: Botanical Gardens.

Suggested Activities: Studying plant utilization methods by tribal/rural/migrant populations for their beverages, food,medicinal and uses, seminars on role of ethnic groups in conservation of plant genetic resources, project work on traditional knowledge about plant medicines, study of indigenous medicinal sciences and their efficacy.

Suggested Readings:

1) S.K. Jain, Manual of Ethnobotany, Scientific Publishers, Jodhpur, 1995.
2) Glimpses of Indian. Ethnobotny, Oxford and I B H, New Delhi – 1981.
3) S.K. Jain (ed.) 1989. Methods and approaches in ethnobotany. Society of ethnobotanists, Lucknow, India.
4) S.K. Jain, 1990. Contributions of Indian ethnobotny.Scientific publishers, Jodhpur.
5) Colton C.M. 1997. Ethnobotany – Principles and applications. John Wiley and sons – Chichester
6) Rama Ro, N and A.N. Henry (1996). The Ethnobotany of Eastern Ghats in Andhra Pradesh, India.Botanical Survey of India. Howrah.
7. Trivedi P C, 2006. Medicinal Plants: Ethnobotanical Approach, Agrobios, India.
8. Purohit and Vyas, 2008. Medicinal Plant Cultivation: A Scientific Approach, 2nd edn. Agrobios, India.
9. Pal, D.C. & Jain, S.K., 1998. Tribal Medicine. Naya Prakash Publishers, Calcutta
10. Raychudhuri, S.P., 1991. (Ed.) Recent advances in Medicinal aromatic and spice crops. Vol.1, Today& Tomorrow's printers and publishers, New Delhi

Cluster Elective VIII-A-2: Practical:

ETHNOBOTANY AND MEDICINAL BOTANY

1. Ethnobotanical specimens as prescribed in theory syllabus
2. Detailed morphological and anatomical study of medicinally important part(s) of locally available plants (Minimum 8 plants) used in traditional medicine.
3. Field visits to identify and collect ethno medicinal plants used by local tribes/folklore.

Domain skills expected to achieve: Identification of various plant parts used as medicines by ethnic groups, understanding the difference between ancient wisdom and modern system of medicine, traditional medicine at the rescue of curing drug resistant maladies like malaria and viral diseases, understanding the role of spices in Indian kitchens, their therapeutic role

PRACTICAL- VIII-A-2 Cluster Elective: MODEL QUESTION PAPER

Paper VIII-A-2: ETHNOBOTANY AND MEDICINAL BOTANY

Time: 3 Hours **Max. Marks- 50**

I. Identify the specimen A- Give reasons (morphological and anatomical) and draw labeled sketches 15marks

II. Identify and write about the medicinal uses of B-and C- 2x5= 10 marks.

III. Comment on D and E. 2x 4=8 marks

IV. Report on Field visit: 7 marks

List to be prepared mentioning special features of plants used by tribal populations as Medicinal Plants & Spices. Write their botanical and common names, parts used and diseases/disorders for which they are prescribed.

V. Viva-voce 5 marks

VI. Record 5 marks

Total = 50 marks

KEY

A-Plants given in unit II (i)

B-Plants used in Ayurvedic prearations (Amla in Chyavanprash, Senna in Laxatives)

C - - Do -

D. Photographs of National parks, Biosphere reserves and Botanical gardens.

E. Photograph of famous personalities in Ayurveda/Siddha medicine.

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III B. Sc - BOTANY SYLLABUS SEMESTER- VIII
CLUSTER ELECTIVE, Paper VIII-A-3

Paper VIII-A-3: Pharmacognosy and Phytochemistry

Total hours of teaching 60hrs @ 3hrs per week

Unit-I: Pharmacognosy (12hrs)

Definition, Importance, Classification of drugs - Chemical and Pharmacological, Drug evaluation methods

Unit –II: Organoleptic and microscopic studies: (12hrs)

Organoleptic and microscopic studies with reference to nature of active principles and common adulterants of *Alstonia scholaris* (bark), *Adhatoda vasica*(leaf), *Strychnos nuxvomica* (seed), R*auwolfia serpentina*(root) and *Zinziber officinalis* C*atharanthus roseus.*

Unit-III: Secondary Metabolites: (12hrs)

i. Definition of primary and secondary metabolites and their differences, major types - terpenes, phenolics, alkaloids, terpenoids, steroids.

ii. A brief idea about extraction of alkaloids.Origin of secondary metabolites – detailed account of acetate pathway, mevalonate pathway, shikimate pathway.

UNIT-IV: Phytochemistry: (12hrs)

Biosynthesis and sources of drugs:

(i) Phenols and phenolic glycosides : structural types, biosynthesis, importance of simple phenolic compounds, tannins, anthraquinones, coumarins and furanocoumarins, flavones and related flavonoid glycosides, anthocyanins, betacyanins, stilbenes, lignins and lignans).

(ii) Steroids, sterols, saponins, withanolides, ecdysones, cucurbitacins: Biosynthesis, commercial importance.

(iii) Alkaloids: Different groups, biosynthesis, bioactivity.

(v) Volatile oils, aromatherapy.

UNIT-V: Enzymes, proteins and amino acids as drugs: **(12hrs)**

i. Vaccines, toxins and toxoids, antitoxins, immune globulins, antiserums,

ii. Vitamins, Antibiotics – chemical nature, mode of action.

iii. Pharmacological action of plant drugs – tumor inhibitors, PAF antagonists, antioxidants, phytoestrogens and others.

iv. Role of different enzyme inhibitors.

Suggested Activities: Isolation techniques of active principles from various parts of popular medicinal plants, debates on the efficacy of plant medicines and palliative cure, volatile oils from plants-extraction methods, project work on crude drugs

BOOKS FOR REFERENCE:

1. Wallis, T. E. 1946. Text book of Pharmacognosy, J & A Churchill Ltd. 2. Roseline, A. 2011. Pharmacognosy. MJP Publishers, Chennai.

2. Gurdeep Chatwal, 1980. Organic chemistry of natural productis.

Vol.I.Himalaya Publishing house.

3. Kalsi, P. S. and Jagtap, S., 2012. Pharmaceutical medicinal and natural product chemistry N.K. Mehra . Narosa Publishing House Pvt. Ltd. New Delhi.

4. Agarwal, O. P. 2002. Organic chemistry–Chemistry of organic natural products. Vol. II. Goel publishing house , Meerut.
5. Harborne, J. B. 1998. Phytochemical methods –a guide to modern techniques of plant analysis 3 rd edition, Chapman and Hall
6. Datta & Mukerji, 1952. Pharmacognosy of Indian roots of Rhizome drugs. Bulletin No.1 Ministry of Health, Govt. of India.

VIII-A-3: Pharmacognosy and Phytochemistry: PRACTICALS

1. Physical and chemical tests for evaluation of unorganized drugs- Asaphoetida. Honey, Castor oil. Acacia
2. Identification of bark drugs – cinchona, cinnamom
3. Identification of fruit drugs – Cardamom, Coriander
4. Identification of root and rhizome drugs- Ginger, Garlic, Turmeric
5. Identification of whole plant – Aloes,Vinca, Punarnava
6. Herbarium of medicinal plants (minimum of 20 platns)
7. Collection of locally available crude drugs from local venders (minimum of 20)

Domain skills expected to achieve: Identification of various plant parts used as medicines, extraction of active principles from them, isolation by chromatographic techniques, learning callus culture techniques for secondary metabolite enrichment and understanding ethno-pharmacological principles

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PRACTICAL: VIII-A-3 Cluster Elective: MODEL QUESTION PAPER
Pharmacognosy and Phytochemistry

Time: 3hrs. Max. Marks=50

I. Identify the given crude drugs **A& B** by morphological study and chemical tests. **10 marks**

II. Perform suitable chemical test and identify the given phytochemical **C** **10 marks**

III. Comment on D and E **2x5=10 marks**

IV. Herbarium and submission of drugs **10 marks**
IV. Viva-Voce **5 marks**
V. Practical Record **5 marks**

Total = 50 marks

KEY

A-Flower/fruit drugs

B-Rhizome/whole plant drugs

C- Tannins/ phenolics/steroids/ isoprenoids /Asaphoetida/ Honey/ Castor oil/ Acacia

D. Column Chromatography/ Gas Chromatogram/HPLC (photograph/ instrument used for chemical analysis of drugs

E. photograh/instrument used for tissue culture

III. B.Sc – Botany, Semester – VI

Paper – VII – Elective (B) – Nursery Gardening and Floriculture

Theory model Question Paper.

Time: 3hrs Max Marks: 75

Section – A (short answer questions)

సెక్షన్-A లఘు రూప ప్రశ్నలు

Answer any five of the following questions 5x5 = 25

ఏవైనా ఐదు ప్రశ్నలకు జవాబులు వ్రాయుము

1. Planting. : మొక్కలను నాటడం.
2. Computer applications in land scaping. లాండ్ స్కేపింగ్ లో కంప్యూటర్ అప్లికేషన్స్
3. Green House. : హరితగృహము.
4. Ornamental trees. : అలంకారపు వృక్షాలు
5. Factors affecting flower production. : పుష్పాల ఉత్పత్తికి తోడ్పడు కారకాలు
6. Air – layering. : గాలిలో అంటు తొక్కడం
7. Perennials. : బహు వార్షికాలు
8. Packing of cut flowers. : కట్ పుష్పాలు (పుష్పాలు) ప్యాకింగ్

Section – B (Essay Questions) :

సెక్షన్-B వ్యాసరూప ప్రశ్నలు

Answer all of the following questions 5x10=50

అన్ని ప్రశ్నలకు సమగ్రంగా సమాధానములు వ్రాయుము

9 a.) Discuss about objectives and building up of infrastructure for nursery.

నారు మడి ఉద్దేశాలు నిర్మాణం విధానమును చర్చించండి.

(Or)

b.) Write an essay on Nursery management and Routine Garden operations.

నర్సరీ నిర్వహణ మరియు సాధారణ తోటపనులపై వ్యాసము వ్రాయండి.

10. a.) Enumerate and discuss about different types of gardening.

వివిధ రకాల తోటల పెంపక పద్ధతులను వివరించండి.

(Or)

b.) Explain gardening operations.

తోటల పెంపకే విధానము గూర్చి వివరించండి

11. a.) Explain Raising of seeds and seedling and transplanting of seedlings.

నారు పోసే విధానము, నారును పొలాలలో ప్రవేశపెట్టే పద్ధతిని వివరించండి.

(Or)

b.) Discuss about propagation of ornament plants.

అలంకరణ మొక్కల వ్యాప్తిని గూర్చి వర్ణించండి

12. a.) Write an essay on ornamental bulbous and foliage plants.

అలంకరణ దుంప మొక్కలు మరియు అందమైన పత్రాల నిచ్చే మొక్కలపై వ్యాసము రాయుము.

(Or)

b.) Discuss about cultivation of plants in pots.

కుండీలలో మొక్కలను పెంచే విధానమును గూర్చి వర్ణించండి.

13. a.) Discuss about management of pests and diseases.

పెంపుడు మొక్కలకే సోకే మరియు వ్యాధుల నివారణా పద్ధతులను గూర్చి వివరించండి.

(Or)

b.) Write an essay on methods of harvesting.

ఫలసాయము మరియు పూలు పొందే విధానము గూర్చి వ్యాసము వ్రాయుండి.

1. Dr. K. SUJATHA.
K. Sujatha B.O.S chairperson.

2. B.O.S. Member.
G. GOVINDARAJULU

III B.sc – Botany, Semester – VI

Paper – VIII – Cluster elective, Cluster – A

Paper – VIII A – I, Plant diversity and Human welfare

Theory model Question paper

Time: 3hrs Max Marks: 75

Section – A (short answer questions)

సెక్షన్ – A లోని రూపు ప్రశ్నలు

Answer any five of the following questions 5x5=25

ఏవైనా ఐదు ప్రశ్నలకు జవాబులు రాయుము

1. Uses of plants. : మొక్కల ప్రయోజనాలు
2. NBPGR. : ఎన్. బి. పి. జి. ఆర్.
3. Biodiversity Conservation. : జీవవైవిధ్య సంరక్షణ.
4. Resource accounting. : వనరుల మూల్యాంకన
5. Social approaches to conservation. : సాంఘిక విధానాలే- సంరక్షణ.
6. Geographical information system. : భూ భౌగోళిక సమాచార వ్యవస్థ
7. Wild taxa. : వన్య జాతులు
8. Avenue trees. : రహదారి వృక్షాలు

Section – B (Essay Questions)

సెక్షన్. బి. (వ్యాసరూప ప్రశ్నలు)

Answer all of the following questions 5x10=50

రెండు ప్రశ్నలన్నింటికి సమాధానములు రాయండి.

9. a) Write about species diversity and Agro biodiversity.

జాతి వైవిధ్యము మరియు సేద్యపు వైవిధ్యమును గూర్చి రాయండి.

(Or)

b) Discuss about values and uses of biodiversity.

జీవవైవిధ్యం యొక్క మోగాలు విలువలను గూర్చి చర్చించండి.

10. a) Explain loss of genetic diversity and ecosystem diversity.

జన్యు వైవిధ్యం, పర్యావరణ వ్యవస్థ వైవిధ్యం మనకు ఎలా నష్టాలను వివరించండి.

(Or) లేక

b.) write an essay on biodiversity information management and communication.

జీవ వైవిధ్య సమాచార నిర్వహణ మరియు వ్యాసము వ్రాయండి

11. a) Discuss about environmental impact assessment.

వాతావరణ ప్రభావమును గురించి చర్చించండి.

(Or)

b.) write about solid and liquid waste management.

ఘన, ద్రవ వ్యర్థ పదార్థాల యాజమాన్య పద్ధతులను గురించి వ్రాయండి.

12. a.) write an essay on *in situ* and *ex situ* conservation.

స్థానీయ, పరస్థానీయ సంరక్షణను గురించి వ్రాయుము.

(Or)

b.) write about biodiversity awareness programmes and sustainable development

జీవవైవిధ్య అవగాహన ప్రోగ్రామ్స్ మరియు సుస్థిరాభివృద్ధి డెవలప్‌మెంట్ గురించి వ్రాయుము.

13. a.)Discuss about importance and utilization of forestry.

అటవీ సంపద ప్రాముఖ్యత ఈ పై యొక్క ముఖ్యమైన వినియోగమును గురించి వ్రాయండి.

(Or)

b.) write an essay on important fruit crops and their commercial importance.

ఫలాల నిచ్చు పంటలను మరియు వాణిజ్య ప్రాముఖ్యమును వివరించండి.

Dr. K. SUJATHA

1. K. Sujatha B.O.S chairperson.

2. C.D. GOVINDARAJULU. B.O.S. member

BOTANY

MODEL THEORY QUESTION PAPER

III B.Sc., SEMESTER – VI

PAPER VIII A – 2: ETHNOBOTANY AND MEDICINAL BOTANY

Time : 3 Hrs. Max. Marks:75 Marks

Section – A సెక్షన్-A 5x5=25 Marks

Answer any five of the following.
ఏవైనా ఐదు ప్రశ్నలకు జవాబులు వ్రాయుము
Draw neat and labelled diagrams where ever necessary.
అవసరమైన చోట పటములు గీయుండి.

1. Concept and scope of Ethnobotany : ఎథనోబొటనీ పరిచయము.
2. Intoxicant plants : మత్తుకలిగించు మొక్కలు
3. *Rauvolfia serpentina* : రావల్ఫియా సర్పెంటైనా.
4. *Curcuma longa* : కుర్కుమా లాంగ
5. Bio piracy : బయో-పైరసీ
6. Umoor – e – tabiya : ఉమూర్-ఇ-తబియ
7. Tridosha Concept : త్రిదోష మూలాలు.
8. Botanical Gardens : బొటానికల్ గార్డెన్స్

Section – B సెక్షన్-B 5x10=50 Marks

Answer all Questions. : అన్నిప్రశ్నలకు సమాధానములువ్రాయుము.

Draw neat and labelled diagrams where ever necessary.
అవసరమైనచోట పటములుగీయుండి.

9. (a) Write an essay on major ethnic groups of India.
భారతదేశములోని కొన్ని ముఖ్యమైన జాతుల గురించి వ్యాసము వ్రాయండి
(or)
(b) Write a detailed account on Food plants used by tribal populations.
గిరిజన జాతులు ఉపయోగించు ఆహార పదార్థముల గురించి
క్లుప్తంగా వివరించండి.

10. (a) Write about medico-ethno botanical resources in India

భారత దేశములోని వై ద్యోపరముగా నిమ్న జాతుల ఉపయోగించు
(or) మొక్క వనరులను సూచించుము.

(b) Write about the role of ethnic groups in the conservation of Plant genetic resources

మొక్క జన్యు పరిరక్షణలో నిమ్న జాతుల పాత్రను వివరించండి.

11. (a) write about sharing of wealth concept with examples from India

భారత దేశములో సంపదను పంచుకొనుట విధానమును సూచి
(or) ంచండి.

(b) Write an essay on Intellectual Property Rights (IPR).

మేధో సంపద హక్కులను సూచిస్తూ వ్యాసము వ్రాయండి.

12. (a) What is Ayurveda? Describe the plants used in Ayurveda treatments.

ఆయుర్వేదము అనగానేమి? ఆయుర్వేదములో ఉపయోగించు
(or) మొక్కలను వర్ణించండి.

(b) Write about the origin and basis of Siddha medicinal systems.

సిద్ధ వైద్య విధానము యొక్క ధృష్టి ప్రారంభ్యత్వ కాలను సూచిస్తూ వ్యాసం రాయండి

13. (a) Write about endemic and endangered medicinal plants

భారత దేశములోస్థానిక మరియు అంతరించిపోతున్న మొక్కలను సూచిస్తూ వ్యాసం రాయండి.
(or)

(b). Write an essay on *in – situ* conservation of Biodiversity.

జీవ వైవిధ్య స్థానిక మరియు సంరక్షణను సూచిస్తూ వ్యాసము
వ్రాయండి.

*****

1. Dr. K. SUJATHA
K. Sujatha B.O.S chairperson.

2. B.O.S. member
(D. GOVINDARAJULU)

III BSc SEMESTER VI

Botany paper –VIII

Cluster Elective, Paper VIII-A-3- Pharmacognosy & Phytochemistry

Theory **Model Question Paper**

SECTION-A
సెక్షన్ – A

Answer any five of the following ***5x5=25***

ఏవని 5 ప్రశ్నలకు జవాబులు వ్రాయుము

1. Importance of Pharmacognosy

   ఫార్మకాగ్నసి ప్రాముఖ్యత

2. Common adulterants of *Catharanthus Roseus*

   కదరాంధస్ రోసియస్ మొక్క భాగాలతో కల్తీ చేసే పదార్థాలు

3. Differences between primary and secondary metabolites

   ప్రాథమిక మరియు ద్వితీయ మెటబొలైట్స్ మధ్య బేదాలు

4. Commercial importance of Saponins and Withanolides

   సపోనిన్స్ మరియు విధనోలైడ్స్ వాణిజ్య ప్రాముఖ్యత

5. Vaccines and toxins

   వాక్సిన్స్ మరియు టాక్సిన్స్

6. Aroma therapy

   అరోమా థెరపీ

7. Anthocyanins and Betacyanins

   ఆంథోసయనిన్స్ మరియు బీటాసయనిన్స్

8. Role of Enzyme inhibitors

   ఎంజైమ్ నిరోధకాల పాత్ర

SECTION-B
సెక్షన్ – B

Answer all the questions ***5x10=50***

అన్ని ప్రశ్నలకు సమాధానం వ్రాయుము

9. (a) Explain chemical and pharmacological drug evaluation methods.

   రసాయనిక మరియు ఔషధ మూల్యాంకన పద్ధతులను వివరించండి.

   (OR)

   (b) Define pharmacognosy. Write an essay on classification of drugs.

   ఫార్మకాగ్నసిని నిర్వచించండి. ఔషదాల వర్గీకరణపై ఒక వ్యాసం వ్రాయండి.

10. (a) Write an essay on organoleptic and microscopic studies.

ఆర్గనేలెప్టిక్ మరియు మైక్రోస్కోపిక్ అధ్యయనాలపై ఒక వ్యాసం వ్రాయండి.

(OR)

(b) Explain about common adulterants of medicinal plant parts like bark, leaf, seed, stem, root and other parts.

ఔషధ మొక్కల బెరడు, పత్రం, విత్తనం, కాండం, వేరు మరియు ఇతర భాగాలతో కల్తీ చేసే పదార్థాల గురించి వివరించండి.

11. (a) Write an essay on Acetate pathway, Mevalonate pathway and Shikimate pathway of secondary metabolites.

ద్వితీయ జీవక్రియ ఉత్పన్న విధానాలైన అసిటేట్, మెవలోనేట్ మరియు షికిమేట్ పాథ్ వేల గురించి ఒక వ్యాసం వ్రాయండి.

(OR)

(b) Write an essay on Terpenes, Phenolics, Alkaloids, Terpenoids and Steroids.

టెర్పీన్స్, ఫినాలిక్స్, ఆల్కలాయిడ్స్, టెర్పినాయిడ్స్ మరియు స్టెరాయిడ్స్ పై ఒక వ్యాసం వ్రాయండి.

12. (a) Write an essay on biosynthesis and bioactivity of Alkaloids.

ఆల్కలాయిడ్స్ యొక్క జీవసంశ్లేషణ మరియు బయోఆక్టివిటీల గురించి ఒక వ్యాసం వ్రాయండి.

(OR)

(b) Write an essay on biosynthesis of phenolic compounds-Tannins, Anthraquinones, Coumarins and Furanocoumarins.

ఫినాలిక్ సమ్మేళనాలైన టానిన్స్, ఆంత్రాక్వినోన్స్, కౌమారిన్స్ మరియు ఫ్యురనోకౌమారిన్స్ జీవసంశ్లేషణ గురించి ఒక వ్యాసం వ్రాయండి.

13. (a) Write an essay on chemical nature and mode of action of vitamins and antibiotics.

విటమిన్లు మరియు యాంటీబయాటిక్స్ యొక్క రసాయన స్వభావం మరియు క్రియాశీలతను గురించి ఒక వ్యాసం వ్రాయండి.

(OR)

(b) Explain the Pharmacological action of tumour inhibitors, antioxidants, phytoestrogens and other plant drugs.

కణితి నిరోధకాలు, యాంటీఆక్సిడెంట్స్, ఫైటోఈస్ట్రోజెన్లు మరియు ఇతర మొక్క ఔషధాల చర్యలను వివరించండి.

D Sarada
Asst. Professor, SVA GDC
Srikalahasthi

Dr. K. SUJATHA
K. Sujatha
B.O.S chairperson

SEMESTER-VI - Electives

ELECTIVE Paper – VII-(A) : ANALYTICAL METHODS IN CHEMISTRY **45hrs (3h / w)**

UNIT-I

Quantitative analysis: **10h**

a) Importance in various fields of science, steps involved in chemical analysis. Principles of volumetric analysis :. Theories of acid-base, redox, complexometric, iodometric and precipitation titrations - choice of indicators for these titrations.

b) Principles of gravimetric analysis: precipitation, coagulation, peptization, coprecipitation, post precipitation, digestion, filtration and washing of precipitate, drying and ignition.

UNIT-II

Treatment of analytical data: **7h**

Types of errors, significant figures and its importance, accuracy - methods of expressing accuracy, error analysis and minimization of errors, precision - methods of expressing precision, standard deviation and confidence limit.

UNIT-III

SEPARATION TECHNIQUES IN CHEMICAL ANALYSIS: **8h**

SOLVENT EXTRACTION : Introduction,principle,techniques,factors affecting solvent extraction, Batch extraction, continuous extraction and counter current extraction. Synergism., Application - Determination of Iron (III)

ION EXCHANGE :Introduction,action of ion exchange resins,separation of inorganic mixtuers,applications, Solvent extraction: Principle and process,

UNIT – IV **10h**

Chromatography: Classification of chromatography methods, principles of differential migration adsorption phenomenon, Nature of adsorbents, solvent systems, R_f values, factors effecting R_f values.

Paper Chromatography: Principles, R_f values, experimental procedures, choice of paper and solvent systems, developments of chromatogram - ascending, descending and radial. Two dimensional chromatography, applications.

UNIT -V **10h**

Thin layer Chromatography (TLC): Advantages. Principles, factors effecting R_f values. Experimental procedures. Adsorbents and solvents. Preparation of plates. Development of the chromatogram. Detection of the spots. Applications.

Column Chromatography: Principles, experimental procedures, Stationary and mobile Phases, Separation technique. Applications

HPLC : Basic principles and applications.

List of Reference Books

1. Analytical Chemistry by Skoog and Miller
2. A textbook of qualitative inorganic analysis by A.I. Vogel
3. Nanochemistry by Geoffrey Ozin and Andre Arsenault
4. Stereochemistry by D. Nasipuri
5. Organic Chemistry by Clayden

(Dr. K. ARUNA)
B.OS

LABORATORY COURSE – VI

Practical Paper – VII-(A) (at the end of semester VI) 30hrs (2 h / W)

50M

1. Identification of aminoacids by paper chromatography.
2. Determination of Zn using EDTA
3. Determination of Mg using EDTA

(BOS)

CLUSTER ELECTIVES: Cluster Elective – I
Analytical and Physical
SEMESTER-VI
PAPER – VIII-A-1: POLYMER CHEMISTRY

45 hrs (3 h / w)

UNIT-I **12h**

Introduction of polymers:

Basic definitions, degree of polymerization ,classification of polymers- Natural and Synthetic polymers, Organic and Inorganic polymers, Thermoplastic and Thermosetting polymers, Plastics, Elastomers , Fibers and Resins, Linear ,Branched and Cross Linked polymers, Addition polymers and Condensation Polymers, mechanism of polymerization. Free radical, ionic and Zeigler – Natta polymerization.

UNIT-II **10h**

Techniques of Polymerization : Bulk polymerization , solution polymerization , suspension and Emulsion polymerization.

Molecular weights of polymers: Number average and weight average molecular weights Determination of molecular weight of polymers by Viscometry , Osmometry and light scattering methods.

UNIT-III **6h**

Kinetics of Free radical polymerization, Glass Transition temperature(Tg) and Determination of Tg:

Free volume theory, WLF equation, factors affecting glass transition temperature (Tg).

UNIT-IV **9h**

Polymer additives:

Introduction to plastic additives – fillers, Plasticizers and Softeners , Lubricants and Flow Promoters, Anti aging additives , Flame Retardants , Colourants , Blowing agents , Cross linking agents ,Photo stabilizers , Nucleating agents.

UNIT-V **8h**

Polymers and their applications:

Preparation and industrial applications of Polyethylene, Polyvinyl chloride, Teflon, Polyacrylonitrile, Terelene , Nylon6.6 silicones.

Reference Books:

1. Seymour, R.B. & Carraher, C.E. *Polymer Chemistry: An Introduction,* Marcel Dekker, Inc. New York, 1981.
2. Odian, G. *Principles of Polymerization*, 4th Ed. Wiley, 2004.
3. Billmeyer, F.W. *Textbook of Polymer Science*, 2nd Ed. Wiley Interscience, 1971.
4. Ghosh, P. *Polymer Science & Technology*, Tata McGraw-Hill Education, 1991.34
5. Lenz, R.W. *Organic Chemistry of Synthetic High Polymers.* Interscience Publishers, NewYork, 1967.

(BOS)

SEMESTER-VI

PAPER – VIII-A-2: INSTRUMENTAL METHODS OF ANALYSIS

45 hrs (3 h / w)

UNIT – I

Introduction to spectroscopic methods of analysis: **4 h**

Recap of the spectroscopic methods covered in detail in the core chemistry syllabus: Treatment of analytical data, including error analysis. Classification of analytical methods and the types of instrumental methods. Consideration of electromagnetic radiation.

UNIT – II

Molecular spectroscopy: **8h**

Infrared spectroscopy:

Interactions with molecules: absorption and scattering. Means of excitation (light sources), separation of spectrum (wavelength dispersion, time resolution), detection of the signal (heat, differential detection), interpretation of spectrum (qualitative, mixtures, resolution), advantages of Fourier Transform (FTIR). Samples and results expected. Applications: Issues of quality assurance and quality control, Special problems for portable instrumentation and rapid detection.

UNIT – III **10h**

UV-Visible/ Near IR – emission, absorption, fluorescence and photoaccoustic. Excitation sources (lasers, time resolution), wavelength dispersion (gratings, prisms, interference filters,laser, placement of sample relative to dispersion, resolution), Detection of signal (photocells, photomultipliers, diode arrays, sensitivity and S/N), Single and Double Beam instruments, Interpretation (quantification, mixtures, absorption vs. fluorescence and the use of time, photoaccoustic, fluorescent tags).

UNIT – IV

Separation techniques

Chromatography: Gas chromatography, liquid chromatography, supercritical fluids, Importance of column technology (packing, capillaries), Separation based on increasing number of factors (volatility, solubility, interactions with stationary phase, size, electrical field), Detection: simple vs. specific (gas and liquid), Detection as a means of further analysis (use of tags and coupling to IR and MS), Electrophoresis (plates and capillary) and use with DNA analysis. 46 *Immunoassays and DNA techniques* **8h**

Mass spectroscopy: Making the gaseous molecule into an ion (electron impact, chemical ionization), Making liquids and solids into ions (electrospray, electrical discharge, laser desorption, fast atom bombardment), Separation of ions on basis of mass to charge ratio, Magnetic, Time of flight, Electric quadrupole. Resolution, time and multiple separations, Detection and interpretation (how this is linked to excitation). **8h**

(BOS)
(Dr. K. Aruna)

UNIT – V

Elemental analysis: **10h**

Mass spectrometry (electrical discharges).

Atomic spectroscopy: Atomic absorption, Atomic emission, and Atomic fluorescence. Excitation and getting sample into gas phase (flames, electrical discharges, plasmas), Wavelength separation and resolution (dependence on technique), Detection of radiation (simultaneous/scanning, signal noise), Interpretation (errors due to molecular and ionic species, matrix effects, other interferences).

NMR spectroscopy: **P**rinciple, Instrumentation, Factors affecting chemical shift, Spin coupling, Applications. **4h**

Electroanalytical Methods: Potentiometry & Voltammetry **4h**

Radiochemical Methods **4h**

X-ray analysis and electron spectroscopy (surface analysis)

Reference books:

1. Skoog, D.A. Holler F.J. & Nieman, T.A. *Principles of Instrumental Analysis*, Cengage Learning India Ed.
2. Willard, H.H., Merritt, L.L., Dean, J. & Settoe, F.A. *Instrumental Methods of Analysis*, 7th Ed. Wadsworth Publishing Company Ltd., Belmont, California, USA, 1988.
3. P.W. Atkins: Physical Chemistry.
4. G.W. Castellan: Physical Chemistry.
5. C.N. Banwell: Fundamentals of Molecular Spectroscopy.
6. Brian Smith: Infrared Spectral Interpretations: A Systematic Approach.
7. W.J. Moore: Physical Chemistry

SEMESTER-VI

PAPER – VIII-A-3 : ANALYSIS OF DRUGS, FOODS , DAIRY PRODUCTS & BIO-CHEMICAL ANALYSIS

45 hrs (3 h / w)

UNIT- I

Analysis of the following drugs and pharmaceuticals preparations:
(Knowledge of molecular formula, structure and analysis)
Analysis of anlgesics and antipyretics like aspirin and paracetamol
Analysis of antimalerials like choloroquine .
Analysis of drugs in the treatment of infections and infestations :Amoxycillin., chloramphenicol, metronidazole, penicillin, tetracycline, cephalexin(cefalexin).
Anti tuberculous drug- isoniazid.

UNIT - II

Analysis of the following drugs and pharmaceuticals preparations:
(Knowledge of molecular formula, structure and analysis)
Analysis of antihistamine drugs and sedatives like: allegra, zyrtec(citirizine), alprazolam, trazodone, lorazepem, ambien(zolpidem), diazepam,

UNIT - III

Analysis of anti epileptic and anti convulsant drugs like phenobarbital and phenacemide.
Analysis of drugs used in case of cardiovascular drugs:atenolol, norvasc(amlodipine),
Analysis of lipitor(atorvastatin) a drug for the preventin of productin of cholesterol.
Analysis of diuretics like: furosemide (Lasix), triamterene
Analysis of prevacid(lansoprazole) a drug used for the prevention of production of acids in stomach.

UNIT - IV

Analysis of Milk and milk products: Acidity, total solids, fat, total nitrogen, protenines,lactose, phosphate activity, casein, choride. Analysis of food materials- Preservatives: Sodium carbonate, sodium benzoate sorbic acid Coloring matters, - Briliant blue FCF, fast green FCF, tertrazine, erytrhosine , sunset yellow FCF.
Flavoring agents - Vanilla , diacetyl, isoamyl acetate, limonene, ethylpropionate , allyl hexanoate and Adulterants in rice and wheat, wheat floo0r, sago,coconut oil, coffee powder, tea powder, milk..

UNIT - V

Clinical analysis of blood:Composition of blood,clinical analysis,trace elements in the body.Estimation of blood chlolesterol,glucose,enzymes,RBC & WBC ,Blood gas analyser.

REFERENCE BOOKS :

1.F.J.Welcher-Standard methods of analysis,
2.A.I.Vogel-A text book of quantitative Inorganic analysis-ELBS,
3.F.D.Snell & F.M.Biffen-Commercial methods of analysis-D.B.Taraporavala & sons,
4.J.J.Elving and I.M.Kolthoff- Chemical analysis - A series of monographs on analytical chemistry and its applications -- Inter Science- Vol I to VII.,

5.Aanalytical Agricultrual Chemistry by S.L.Chopra & J.S.Kanwar -- Kalyani Publishers

6. Quantitative analysis of drugs in pharmaceutical formulations by P.D.Sethi, CBS Publishers and Distributors, New Delhi
7. G.Ingram- Methods of organic elemental micro analysis- Chapman and Hall.,
8. H.Wincciam and Bobbles (Henry J)- Instrumental methods of analysis of food additives.,
9. H.Edward-The Chemical analysis of foods;practical treatise on the examination of food stuffs and the detection of adulterants,
10. The quantitative analysis of drugs- D.C.Garratt-Chapman & Hall.,
11. A text book of pharmaceutical analysis by K.A.Connors-Wiley-International.,
12. Comprehensive medicinal chemistry-Ed Corwin Hansch Vol 5,Pergamon Press.,

I. LABORATORY COURSE – VIII

Practical Paper – VIII-A-1: (at the end of semester VI) **30 hrs (2 h / W)**

1. Preparation of Aspirin
2. Preparation of Paracetamol
3. Preparation of Acetanilide
4. Preparation of Barbutiric Acid
5. Preparation of Phenyl Azo β-naphthol

II. LABORATORY COURSE – VIII

Practical Paper – VIII-A-2 (at the end of semester VI)

30 hrs (2 h / W)

1.Green procedure for organic qualitative analysis: Detection of N, S andhalogens
2.Acetylation of 1^0 amine by green method: Preparation of acetanilide
3. Rearrangement reaction in green conditions: Benzil-Benzilic acid rearrangement
4. Electrophilic aromatic substitution reaction: Nitration of phenol
5. Radical coupling reaction: Preparation of 1,1-bis -2-naphthol
6. Green oxidation reaction: Synthesis of adipic acid
7. Green procedure for Diels Alder reaction between furan and maleic anhydride

List of Reference Books

1. Green Chemistry Theory and Practice. P.T.Anatas and J.C. Warner
2. Green Chemistry V.K. Ahluwalia Narosa, New Delhi.
3. Real world cases in Green Chemistry M.C. Cann and M.E. Connelly
4. Green Chemistry: Introductory Text M.Lancaster: Royal Society of Chemistry (London)
5. Green Chemistry: Introductory Text, M.Lancaster
6. Principles and practice of heterogeneous catalysis, Thomas J.M.,Thomas M.J., John Wiley
7. Green Chemistry: Environmental friendly alternatives R S Sanghli and M.M Srivastava, Narosa Publications

VII-A-3 Practical:- Project Work

SRI VENKATESWARA UNIVERSITY

CHEMISTRY - SEMESTER-VI

ELECTIVE Paper- VII-(A): ANALYTICAL METHODS IN CHEMISTRY

MODEL PAPER

SECTION-A

I)ANSWER ANY FIVE QUESTIONS 5X5=25 Marks

1)Explain Accuracy & Precision ?

2)Write about R_f factor?

3)Explain about Complexometric Titrations?

4)What are Significant Figures?

5)Write a short note on Synergism?

6)Explain about the types of Ion exchange Resins?

7)Write a short note on Redox Titrations ?

8) Write the applications of Thin Layer Chromatography and Paper Chromatography?

SECTION-B

II)ANSWER ALL QUESTIONS 5X10=50Marks

9.(a) What are Acid-Base Titrations? Explain the choice of indicator in Acid-Base Titrations?

(OR)

(b) Write the principles involved in gravimetric analysis?

10.(a) What are Errors? Explain different types of errors?

(OR)

(b) Write a short note on Standard deviation and Confidence limit?

11.(a) Write the principle, technique used in Batch extraction and determine Fe^{3+} ion in a given mixture?

(OR)

(b) Write a short note on Counter and Counter current extraction?

12.(a) Write the Principle and explain different types of experimental procedures involved in Paper chromatography?

(OR)

(b) Write the principle and applications of column chromatography?

13.(a) Write the Principle and explain different experimental steps involved in TLC?

(OR)

(b) Write the principle and applications of HPLC?

CHEMISTRY - MODEL PAPER

THREE YEAR DEGREE B.SC EXAMINATION

THIRD YEAR EXAMIANATION

SEMESTER –VI

PAPER VIII-A-1: POLYMER CHEMISTRY

TIME :3 hrs Max.Marks :75

PART –A

Answer any FIVE from the following questions. 5x5=25 M

1 What are polymers and write a short note on natural and synthetic polymers.
2 Explain the technique of emulsion polymerization.
3 What are the factors affecting the glass transition temperature(Tg)
4 Write short notes on a) Photo stabilizer b) Nucleating agents.
5 Write the preparation of polyethylene.
6 Explain briefly about the Zeigler-Natta Catalyst.
7 Write the technique of Bulk polymerization
8 Discuss the free volume theory of polymers.

PART – B

Answer the following questions. 5x10=50 M

9 Define degree of polymerization and write the mechanism of free radical polymerization.

(Or)

Explain the classification polymers.

10 Explain the types of molecular weight of polymers.

(Or)

Determine the molecular weight of polymer by Viscometry.

11 Write the kinetics of Ionic polymerisation

(Or)

Determine the glass transition temperature (Tg) and write the WLF equation.

12 Define additives and write the different types of additives.

(Or)

Explain briefly addition polymerization and condensed polymerization.

13 Write the preparation and industrial application PVC

(Or)

Write the preparation and Industrial application of Nylon 66

CHEMISTRY - MODEL PAPER
THREE YEAR B.S_C DEGREE EXAMINATION
THIRD YEAR EXAMINATIONS
SEMESTER -VI

Paper VIII A-2 INSTRUMENTAL METHODS OF ANALYSIS

Time : 3hrs **Max .Marks : 75**

PART- A

Answer any five of the following .
Each question carries FIVE marks **5 X 5 =25 M**

1. **Discuss any five types of analytical methods based on measurement property.**
2. **Write notes on the advantages of Fourier transform (FTR).**
3. **Discuss any three applications of absorption spectra.**
4. **Discuss the factors which affect column efficiency.**
5. **Write short notes on resolution.**
6. **Give the principle of liquid chromatography and explain its advantages.**
7. **Give a brief account of photomultipliers.**
8. **Write notes onVibrational spectrum.**

PART- B

Answer ALL the questions
Each question carries TEN marks **10 x 5 =50 M**

9. **Write the classification of instrumental methods of analysis.**

Or

Define errors. Explain different types of errors .How to determine Expression for errors.

10. **What are the different types of detectors used in the detection of signal?**

Or

How the separation of spectrum occurs in IR based on wavelength dispersion?

11. **Explain the construction and working of single and double beam spectrophotometers.**

Or

What are the different hard ware techniques for the enhancement of signal to Noise ratio (S/N) ?

12. What is the principle and working of Gas Chromatography . Explain diagrammatically.

Or

Explain briefly electrophoresis . How it is used in DNA analysis.

13. How a gaseous molecule is converted into Ion based on chemical ionization.

Or

Explain the separation of ions based on

a) Mass to charge ratio

b) Time of flight.

$$$$$$$$$$

CHEMISTRY - MODEL PAPER

THREE YEAR B.Sc, DEGREE EXAMINATION

3rd YEAR B.Sc EXAMINATIONS

SEMESTER – VI

PAPER – VIII–A-3: ANALYSIS OF DRUGS, FOODS, DAIRY PRODUCTS & BIO–CHEMICAL ANALYSIS

Time : 3 hours **Maximum Marks : 75**

PART – A

Answer any **FIVE** of the following questions

Each Question carries **FIVE** marks **5 x 5 = 25 Marks**

1. Write the structure and molecular formula of Aspirin and paracetamol ?
2. Define what is meant by a drug ,infections and infestations?
3. Explain what is the role of antihistamine drugs and sedatives?
4. Explain the importance the drug Lansoprazole in prevention of production of acids in stomach?
5. Write a brief note on the drug Lipitor (atorvastatin) which prevents the production of cholesterol ?
6. Define what is meant by preservatives give suitable examples?
7. How do you know the adulterants in rice, wheat and wheat floor?
8. Explain what is meant clinincal analysis and discuss its role in blood analysis ?

PART – B

Answer **ALL** the questions

Each Question carries **TEN** marks **5 x 10 = 50 Marks**

09.(a) Define antimalerials , write the structure and preparation of chloroquine?

(OR)

(b) Write the preparations of Amoxycillin and tetracycline?

10.(a) Write the formula and preparation of alprazolam and diazepam ?

(OR)

(b) Write the structure and analysis of allegra and lorazepem?

11. (a) Define what is meant by Epileptic and anti convulsant drugs ? write the analysis method of phenobarbital?

(OR)

(b) Write the preprative methods of atenolol and triamterene?

12.(a) How do you estimate acidity , fat content and Lactose in milk?

(OR)

(b) Describe the importance of flavoring agents namely vanilla, isoamyl acetate and ethyl propionate in milk and milk products ?

13. (a) Define what is meant by clinical analysis of blood and how do you estimate trace elements in the Blood?

(OR)

(b) Write the composition of blood, how the glucose, cholesterol and enzymes in blood is estimated?

B.SC. COMPUTER SCIENCE/INFORMATION TECHNOLOGY (IT) UNDER CBCS

VI SEMESTER - W.E.F.2017-18

Structure of Computer Science/Information Technology (IT) Syllabus

Semester	Paper	Subject	Hrs.	Credits	IA	ES	Total
SEMESTER VI	VII (A/B/C)	**Elective-I**					
		A. Operating Systems	3	3	25	75	100
		Operating Systems Lab	3	2	0	50	50
		B. Computer Networks	3	3	25	75	100
		Computer Networks Lab	3	2	0	50	50
		C. Web Technologies	3	3	25	75	100
		Web Technologies Lab	3	2	0	50	50
	VIII Cluster – A- A1,A2 or Cluster-B- B1,B2 Or Cluster – C – C1,C2	**Elective-II(Cluster A)**					
		A1.Foundations of Data Science	3	3	25	75	100
		Foundations of Data Science Lab (through R)	3	2	0	50	50
		A2.Big Data Technology	3	3	25	75	100
		Big Data Technology Lab (Hadoop)	3	2	0	50	50
		Elective-II(Cluster B)					
		B1. Distributed Systems	3	3	25	75	100
		Distributed Systems Lab	3	2	0	50	50
		B2. Cloud Computing	3	3	25	75	100
		Cloud Computing Lab	3	2	0	50	50
		Elective-II(Cluster C)					
		C1. PHP – MySql & Wordpress	3	3	25	75	100
		PHP-MySql & Wordpress Lab	3	2	0	50	50
		C2. Advanced JavaScript : JQuery, Ajax, Angular JS & JSON	3	3	25	75	100
		Advanced JavaScript Lab	3	2	0	50	50
		Project – 2	5	5	25	75	100

Structure of Computer Science/Information Technology (IT) Syllabus

III YEAR VI SEMESTER
Paper-VII: Elective-A
OPERATING SYSTEMS

COURSE OBJECTIVES

1. To understand the services provided by and the design of an operating system.
2. To understand the structure and organization of the file system.
3. To understand what a process is and how processes are synchronized and scheduled.
4. To understand different approaches to memory management.
5. Students should be able to use system calls for managing processes, memory and the file system.

COURSE OUTCOMES

1. Analyze the concepts of processes in operating system and illustration of the scheduling of processor for a given problem instance.
2. Identify the dead lock situation and provide appropriate solution so that protection and security of the operating system is also maintained.
3. Analyze memory management techniques, concepts of virtual memory and disk scheduling.
4. Understand the implementation of file systems and directories along with the interfacing of IO devices with the operating system.

UNIT - I

Operating System Introduction: Operating Systems Objectives and functions, Computer System Architecture, OS Structure, OS Operations, Evolution of Operating Systems - Simple Batch, Multi programmed, time shared, Parallel, Distributed Systems, Real-Time Systems, Operating System services.

UNIT - II

Process and CPU Scheduling - Process concepts - The Process, Process State, Process Control Block, Threads, Process Scheduling - Scheduling Queues, Schedulers, Context Switch, Preemptive Scheduling, Dispatcher, Scheduling Criteria, Scheduling algorithms, Case studies: Linux, Windows.

Process Coordination - Process Synchronization, The Critical section Problem, Synchronization Hardware, Semaphores, and Classic Problems of Synchronization, Monitors, Case Studies: Linux, Windows.

UNIT - III

Memory Management and Virtual Memory - Logical & physical Address Space, Swapping, Contiguous Allocation, Paging, Structure of Page Table. Segmentation, Segmentation with Paging, Virtual Memory, Demand Paging, Performance of Demanding Paging, Page Replacement Page Replacement Algorithms, Allocation of Frames.

UNIT - IV

File System Interface - The Concept of a File, Access methods, Directory Structure, File System Mounting, File Sharing, Protection, File System Structure,

Mass Storage Structure - Overview of Mass Storage Structure, Disk Structure, Disk Attachment, Disk Scheduling.

UNIT - V

Deadlocks - System Model, Deadlock Characterization, Methods for Handling Deadlocks, Deadlock Prevention, Deadlock Avoidance, Deadlock Detection and Recovery from Deadlock.

REFERENCES BOOKS:

1. Operating System Principles, Abraham Silberchatz, Peter B. Galvin, Greg Gagne 8th Edition, Wiley Student Edition.
2. Principles of Operating Systems by Naresh Chauhan, OXFORD University Press
3. Operating systems - Internals and Design Principles, W. Stallings, 6th Edition, Pearson.
4. Modern Operating Systems, Andrew S Tanenbaum 3rd Edition PHI.
5. Operating Systems A concept - based Approach, 2nd Edition, D. M. Dhamdhere, TMH.
6. Principles of Operating Systems, B. L. Stuart, Cengage learning, India Edition.
7. Operating Systems, A. S. Godbole, 2nd Edition, TMH

STUDENT ACTIVITY:

1. Load any new operating system into your computer.
2. Partition the memory in your system
3. Create a semaphore for process synchronization

Code No:

SRI VENKATESWARA UNIVERSITY: TIRUPATI
B.Sc (CBCS)
Sixth Semester Examinations
OPERATING SYSTEMS

Time: 3 Hours **Max. Marks: 75**

Note: This question paper contains two parts A and B.
Part A is compulsory which carries 25 marks. Answer any five of the following Questions in Part A.
Part B consists of 5 Units. Answer any one full question from each unit.
Each question carries 10 marks

PART - A

Answer any Five of the following. All questions carry equal marks

5 x 5 = 25 Marks

1. Write about Operating System
2.Explain Process states
3.What is Synchronization?
4.Write short notes on paging.
5.Write short notes on frames.
6. What is file System?
7. Write about Memory Management
8. What is deadlock?

PART - B

Answer one question from each Unit. All questions carry equal marks

5 x 10 = 50 Marks

UNIT – I

9. Explain the Operating Systems Objectives and functions.

OR

10.Explain in detail about Evolution of Operating Systems.

UNIT-II

11.Briefly explain about Scheduling algorithms.

OR

12. Write short notes on
a.) Semaphores b.) Monitors c.) Critical Section d.) Message Passing

UNIT-III

13. Explain Page Replacement Algorithm.

OR

14. Explain Memory management in detail?

UNIT-IV

15. Write about File System Interface.

OR

16. Write about Disk Scheduling with an example

UNIT-V

17. What is deadlock? Explain characteristics of Deadlock.

OR

18. Explain Methods for Handling Deadlocks in detail.

III YEAR VI SEMESTER
Paper-VII: Elective-A
OPERATING SYSTEMS LAB

OBJECTIVES:

- To use linux operating system for study of operating system concepts.
- To write the code to implement and modify various concepts in operating systems

OUTCOMES:

- The course objectives ensure the development of students applied skills in operating systems related areas.
- Students will gain knowledge in writing software routines modules or implementing various concepts of operating system.

LIST OF EXPERIMENTS:

1. 1.Usage of following commands
   Ls,pwd,tty,cat,who,who am I,rm, mkdir,rmdir,touch,cd.
2. Usage of following commands
   Cal,cat(append),cat(concatenate),mv,cp,man,date.
3. Usage of following commands
   Chmod,grep,tput(clear,highlight),bc.
4. Write a shell script to check if the number entered at the command line is Prime or not.
5. Write a shell script to modify "cal" command to display calendars of the specified months.
6. Write a shell script to modify "cal" command to display calendars of the specified range of months.
7. Write a shell script to accept a login name. If not a valid login name display message "entered login name is invalid"
8. Write a shell script to display date in the mm/dd/yy format.
9. To implement the FCFS Algorithm.
10. To implement the shortest job First Algorithm.
11. To implement the priority algorithm.
12. To implement the round robin Algorithm.
13. To implement the FIFO page replacement algorithm
14. To implement the LRU page replacement Algorithm.
14. To implement the Resource request Algorithm.
15. To implement the First-Fit, Best-Fit, Worst-Fit Algorithm.
16. To implement the sequential file organization.
17. To implement the Random file organization
18. Simulate Page Replacement Algorithms FIFO
19. Simulate Page Replacement Algorithms LRU
20. Simulate Page Replacement Algorithms OPTIMAL
21. Simulate Algorithm For Deadlock Prevention

III YEAR VI SEMESTER
Paper-VII: Elective-B
COMPUTER NETWORKS

COURSE OBJECTIVES

1. To provide an introduction to the fundamental concepts on data communication and the design of computer networks.
2. To get familiarized with the basic protocols of computer networks.

COURSE OUTCOMES

After this course, the student will be able to
1. Identify the different components in a Communication System and their respective roles.
2. Describe the technical issues related to the local Area Networks
3. Identify the common technologies available in establishing LAN infrastructure.

UNIT – I

Introduction: Uses of Computer Networks, Network Hardware, Network Software, Reference Models, Example Networks.

The Physical Layer: The Theoretical Basis for Data Communication, Guided Transmission Media, Wireless transmission, the public switched telephone network

UNIT – II

The Data Link Layer: Data Link Layer Design Issues, Error Detection and Correction, Sliding Window Protocols.

The Medium Access Control Sub-layer: The channel allocation problem, **Multiple Access Protocols**, **Ethernet,** Data Link Layer Switching.

UNIT – III

The Network Layer: Network Layer Design Issues, Routing Algorithms, Congestion control algorithms, Quality of Service.

Internet Working, The Network Layer in the Internet

UNIT – IV:

The Transport Layer: The Transport Service, Elements of Transport Protocols, Congestion Control Algorithms, The Internet Transport Protocols, The Internet Transport Protocols: TCP, Delay Tolerant Networks.

UNIT – V:

The Application Layer: DNS – The Domain Name System, Electronic Mail, The World Wide Web, Real Time Audio & Video, Content Delivery & Peer-to-Peer.

REFERENCE BOOKS:

1. Andrew S. Tanenbaum, "Computer Networks", Fifth Edition, Pearson Education.
2. Bhushan Trivedi, Computer Networks , Oxford University Press
3. James F.Kurose, Keith W.Ross, "Computer Networking", Third Edition, Pearson Education
4. Behrouz A Forouzan, "Data Communications and Networking", Fourth Edition, TMH (2007).
5. Kurose & Ross, "***COMPUTER NETWORKS***" – A Top-down approach featuring the Internet", Pearson Education – Alberto Leon – Garciak.

STUDENT ACTIVITY:

1. **Study the functioning of network devices available in your organization .**
2. **Prepare a pictorial chart of LAN connections in your organization**

Code No:

SRI VENKATESWARA UNIVERSITY: TIRUPATI
B.Sc (CBCS)
Sixth Semester Examinations
COMPUTER NETWORKS

Time: 3 Hours **Max. Marks: 75**

Note: This question paper contains two parts A and B.
Part A is compulsory which carries 25 marks. Answer any five of the following Questions in Part A.
Part B consists of 5 Units. Answer any one full question from each unit.
Each question carries 10 marks

PART - A

Answer any Five of the following. All questions carry equal marks

5 x 5 = 25 Marks

1. Write about Networks
2.Explain Physical Layer
3.Uses of Network.
4.Write short notes on switching.
5.Write short notes on Error Correction.
6. What is TCP?
7. Write about DNS
8. What is protocol?

PART - B

Answer one question from each Unit. All questions carry equal marks

5 x 10 = 50 Marks

UNIT – I

9. Explain in detail about Network hardware & Network Software.

OR

10.Explain in detail about Reference Model with examples.

UNIT-II

11.Briefly explain about Data Link Layer.

OR

12. Explain in detail about Medium Access Control (MAC)

UNIT-III

13. Explain Congestion control Algorithm.

OR

14. Briefly explain how network layer works in internet?

UNIT-IV

15. Write about Internet Transport Protocols.

OR

16. Write about Delay in Tolerant Networks

UNIT-V

17. Explain in detail about usage of Application layer in Networks.

OR

18. Explain Content Delivery & Peer-to-Peer Delivery in application layer.

III YEAR VI SEMESTER
Paper-VII: Elective-B
COMPUTER NETWORKS LAB

OBJECTIVES:

1. Analyze the different layers in networks.
2. Define, use, and differentiate such concepts as OSI-ISO,TCP/IP.
3. How to send bits from physical layer to data link layer
4. Sending frames from data link layer to Network layer
5. They can understand how the data transferred from source to destination
6. They can come to know that how the routing algorithms worked out in network layer

LIST OF EXPERIMENTS:

1. Analyze the different layers in networks.
2. Define, use, and differentiate such concepts as OSI-ISO,TCP/IP.

LIST OF EXPERIMENTS:

1. Write a program to implement data link layer framing method bit stuffing.

2. Write a program to implement data link layer framing method character stuffing.

3. Write a program to implement data link layer framing method character count.

4. Write a program to implement Cyclic Redundancy Check (CRC 12, CRC 16 and CRC CCIR) on a data set of characters.

5. Write a program to implement Dijkstra's algorithm to compute the shortest path through a graph.

6. Write a program to implement subnet graph with weights indicating delay between

7. Write a program to implement subnet

III Year B.Sc – VI Semester

Paper-VII: Elective-C - WEB TECHNOLOGIES

To provide knowledge on web architecture, web services, client side and server side scripting technologies to focus on the development of web-based information systems and web services. To provide skills to design inter active and dynamic web sites.

COURSEOUTCOME

1. To understand the web architecture and web services.
2. To practice latest web technologies and tools by conducting experiments.
3. To design inter active web pages using HTML and Style sheets.
4. To study the frame work and building blocks of NET Integrated Development Environment.
5. To provide solutions by identifying and formulating IT related problems.

UNIT –I

HTML: Basic HTML, Document body, Text ,Hyperlinks, adding more formatting tags, Lists, Tables and images.

More HTML: Multimedia objects, Frames, Forms towards interactive, HTML document heading detail

UNIT –II

Cascading Style Sheets: Introduction, using Styles, simple examples, your own styles, properties and values in styles, style sheet, formatting blocks of information, layers.

UNIT– III

Introduction to JavaScript: What is DHTML, JavaScript, basics, variables, string manipulations, mathematical functions, statements, operators, arrays and functions.

UNIT – IV

Objects in JavaScript: Data and objects in JavaScript, regular expressions, exception handling

DHTML with JavaScript: Data validation, opening a new window, messages and confirmations

UNIT –V

XML: defining data for web applications, basic XML, document type definition, presenting XML, document object model. Web Services

REFERENCES:

1. HarveyM.DeitelandPaulJ.Deitel,**"Internet&WorldWideWebHowtoProgram", 4/e,**Pearson Education.
2. Uttam Kumar Roy, Web Technologies from Oxford University Press.

STUDENTACTIVITIES:

1. **Prepare a website for your college**
2. **Prepare your personal website**

Code No:

SRI VENKATESWARA UNIVERSITY: TIRUPATI
B.Sc (CBCS)
Sixth Semester Examinations
WEB TECHNOLOGIES

Time: 3 Hours **Max. Marks: 75**

Note: This question paper contains two parts A and B.
Part A is compulsory which carries 25 marks. Answer any five of the following Questions in Part A.
Part B consists of 5 Units. Answer any one full question from each unit.
Each question carries 10 marks

PART - A

Answer any Five of the following. All questions carry equal marks

5 x 5 = 25 Marks

1. Write about HTML
2. Write short notes on CSS
3. What is DHTML?
4. Write short notes about Objects in JavaScript.
5. Write short notes on Data validation.
6. What is Web Services?
7. Write about web applications
8. What is XML?

PART - B

Answer one question from each Unit. All questions carry equal marks

5 x 10 = 50 Marks

UNIT – I

9. Briefly describe about Lists, Tables using images in HTML.

OR

10. Explain in detail about Multimedia objects, Frames in HTML.

UNIT-II

11. Briefly explain about how to create your own styles with example.

OR

12. Explain in detail about properties and values in styles with an example.

UNIT-III

13. Explain string manipulations, mathematical functions in java Script with example

OR

14. Briefly explain about exception handling with example?

UNIT-IV

15. Write about opening a new window, messages and confirmations.

OR

16. Write about moving images with Program.

UNIT-V

17. Explain in detail about presenting XML.

OR

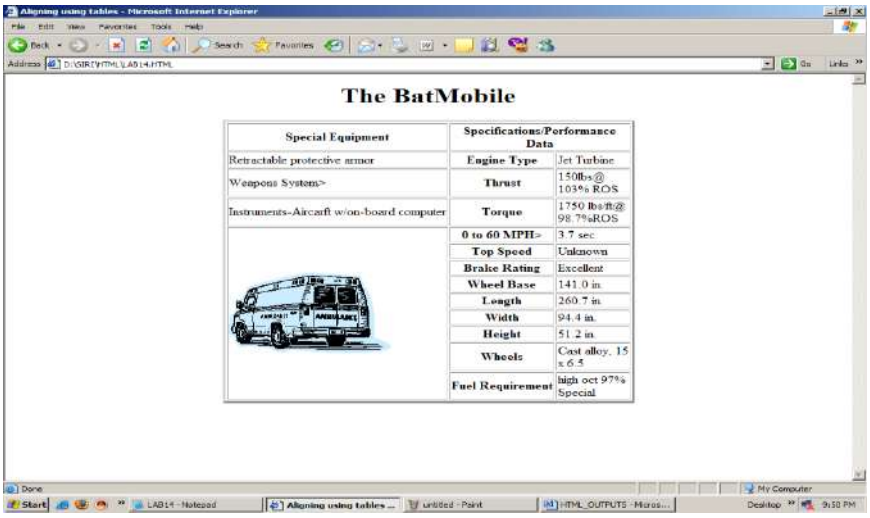
18. Explain about defining data for web applications in XML.

III YEAR VI SEMESTER

Paper-VII : Elective-C

WEB TECHNOLOGIES LAB

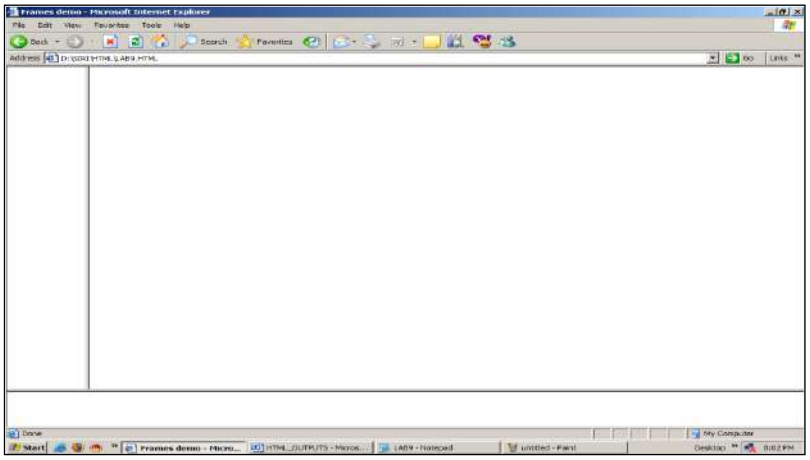
1. Write a HTML program illustrating text formatting.
2. Illustrate font variations in your HTML code.
3. Prepare a sample code to illustrate links between different sections of the page.
4. Create a simple HTML program to illustrate three types of lists.
5. Embed a calendar object in your web page.
6. Create an applet that accepts two numbers and perform all the arithmetic operations on them.
7. Create nested table to store your curriculum.
8. Create a form that accepts the information from the subscriber of a mailing system.
9. Design the page as follows:



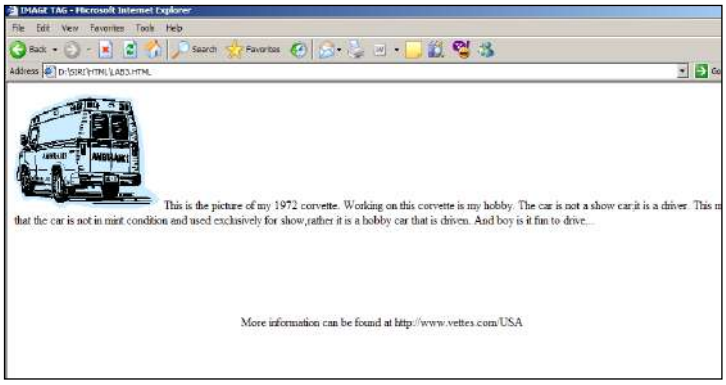
11. Using "table" tag, align the images as follows:



12. Divide the web page as follows:



13. Design the page as follows:



14. Illustrate the horizontal rulers in your page.

15. Create a help file as follows:



16. Create a form using form tags(assume the form and fields).
17. Create a webpage containing your biodata(assume the form and fields).
18. Write a html program including style sheets.
20. Write a html program to layers of information in web page.
21. Create a static webpage.

III YEAR VI SEMESTER

(Cluster 1) Paper-VIII: Elective –A-1

FOUNDATIONS OF DATA SCIENCE

COURSE OBJECTIVES

Modern scientific, engineering, and business applications are increasingly dependent on data, existing traditional data analysis technologies were not designed for the complexity of the modern world. Data Science has emerged as a new, exciting, and fast-paced discipline that explores novel statistical, algorithmic, and implementation challenges that emerge in processing, storing, and extracting knowledge from Big Data**.**

COURSE OUTCOMES

1. Able to apply fundamental algorithmic ideas to process data.
2. Learn to apply hypotheses and data into actionable predictions.
3. Document and transfer the results and effectively communicate the findings using visualization techniques**.**

UNIT I

INTRODUCTION TO DATA SCIENCE : Data science process – roles, stages in data science project – working with data from files – working with relational databases – exploring data – managing data – cleaning and sampling for modelling and validation – introduction to NoSQL.

UNIT II

MODELING METHODS : Choosing and evaluating models – mapping problems to machine learning, evaluating clustering models, validating models – cluster analysis – K-means algorithm, Naïve Bayes – Memorization Methods – Linear and logistic regression – unsupervised methods.

UNIT III

INTRODUCTION TO R Language: Reading and getting data into R – ordered and unordered factors – arrays and matrices – lists and data frames – reading data from files.

UNIT IV

PROBABILITY DISTRIBUTIONS in R - Binomial, Poisson, Normal distributions. - Manipulating objects - data distribution.

UNIT V

DELIVERING RESULTS : Documentation and deployment – producing effective presentations– Introduction to graphical analysis – plot() function – displaying multivariate data – matrix plots – multiple plots in one window - exporting graph - using graphics parameters in R Language. Case studies.

REFERENCE BOOKS

1.Nina Zumel, John Mount, "Practical Data Science with R", Manning Publications, 2014.
2.Jure Leskovec, Anand Rajaraman, Jeffrey D.Ullman, "Mining of Massive Datasets", Cambridge University Press, 2014.
3.Mark Gardener, "Beginning R - The Statistical Programming Language", John Wiley & Sons, Inc., 2012.
4.W. N. Venables, D. M. Smith and the R Core Team, "An Introduction to R", 2013.
5.Tony Ojeda, Sean Patrick Murphy, Benjamin Bengfort, Abhijit Dasgupta, "Practical Data Science Cookbook", Packt Publishing Ltd., 2014.
6.Nathan Yau, "Visualize This: The FlowingData Guide to Design, Visualization, and Statistics", Wiley, 2011.
7.Boris lublinsky, Kevin t. Smith, Alexey Yakubovich, "Professional Hadoop Solutions", Wiley, ISBN: 9788126551071, 2015.

STUDENT ACTIVITY:

1. **Collect data from any real time system and create clusters using any clustering algorithm**
2. **Read the student exam data in R perform statistical analysis on data and print results.**

Code No:

SRI VENKATESWARA UNIVERSITY: TIRUPATI
B.Sc (CBCS)
Sixth Semester Examinations
Foundations of Data Science

Time: 3 Hours **Max. Marks: 75**

Note: This question paper contains two parts A and B.
Part A is compulsory which carries 25 marks. Answer any five of the following Questions in Part A.
Part B consists of 5 Units. Answer any one full question from each unit.
Each question carries 10 marks

PART - A

Answer any Five of the following. All questions carry equal marks

5 x 5 = 25 Marks

1. Write about Data science process
2. Write short notes relational databases
3.What is mapping?
4. Write short notes on Linear and logistic regression.
5. Write short notes on lists and data frames.
6. What is Normal distribution?
7. Write about Manipulating objects
8. What is plot() function?

PART - B

Answer one question from each Unit. All questions carry equal marks

5 x 10 = 50 Marks

UNIT – I

9. Explain in detail about cleaning and sampling for modeling and validation.

OR

10. Explain in detail about stages in data science project.

UNIT-II

11. Briefly explain about evaluating clustering models.

OR

12. Explain in detail about K-means algorithm.

UNIT-III

13. Explain Reading and getting data into R – Language

OR

14. Briefly explain about ordered and unordered factors?

UNIT-IV

15. Describe in detail about R - Binomial.

OR

16. Write about on data distribution in Data Scince.

UNIT-V

17. Explain in detail about using graphics parameters in R Language.

OR

18. Explain about displaying multivariate data.

III YEAR VI SEMESTER
(Cluster 1) Paper-VIII: Elective –A-1
FOUNDATIONS OF DATA SCIENCE LAB

OBJECTIVES :

- R is a well-developed, simple and effective programming language which includes conditionals, loops, user defined recursive functions and input and output facilities.
- R has an effective data handling and storage facility,
- R provides a suite of operators for calculations on arrays, lists, vectors and matrices.
- R provides a large, coherent and integrated collection of tools for data analysis.

OUTCOMES:

1) At end student will learn to handle the data through R.
2) Student will familiar with loading and unloading of packages.

I. Installing R and R studio

II. Basic Operations in r

1. Arthematic Operations
2. Comments and spacing
3. Logical Operators - <, <=, >, >=, = , !=, &&, 1

III.
1. Getting data into R, Basic data manipulation
2. Vectors, Materials, operation on vectors and matrices.

IV.
1. Basic Plotting
2. Quantitative data
3. Frequency plots
4. Box plots
5. Scatter plot
6.Categorial data
7. Bar charts
8. Pie charts

V. Loops and functions

1. if, if else, while, for break, next, repeat.
2. Basic functions- Print(), exp( ), Log( ), sqrt( ), abs( ), sin( ), Cos( ), tan( ), factorial( ), rand ().

III YEAR VI SEMESTER

(Cluster 1) Paper-VIII : Elective –A-2

BIG DATA TECHNOLOGY

COURSE OBJECTIVE

The Objective of this course is to provide practical foundation level training that enables immediate and effective participation in big data projects. The course provides grounding in basic and advanced methods to big data technology and tools, including MapReduce and Hadoop and its ecosystem.

COURSE OUTCOME

1. Learn tips and tricks for Big Data use cases and solutions.

2. Learn to build and maintain reliable, scalable, distributed systems with Apache Hadoop.

3. Able to apply Hadoop ecosystem components.

UNIT I

INTRODUCTION TO BIG DATA: Introduction – distributed file system – Big Data and its importance, Four V's in bigdata, Drivers for Big data, Big data analytics, Big data applications. Algorithms using map reduce, Matrix-Vector Multiplication by Map Reduce.

UNIT II

INTRODUCTION HADOOP : Big Data – Apache Hadoop & Hadoop EcoSystem – Moving Data in and out of Hadoop – Understanding inputs and outputs of MapReduce - Data Serialization.

UNIT- III

HADOOP ARCHITECTURE: Hadoop Architecture, Hadoop Storage: HDFS, Common Hadoop Shell commands , Anatomy of File Write and Read., NameNode, Secondary NameNode, and DataNode, Hadoop MapReduce paradigm, Map and Reduce tasks, Job, Tasktrackers - Cluster Setup – SSH & Hadoop Configuration – HDFS Administering – Monitoring & Maintenance.

UNIT-IV

HIVE AND HIVEQL, HBASE:-Hive Architecture and Installation, Comparison with Traditional Database, HiveQL - Querying Data - Sorting And Aggregating, Map Reduce Scripts, Joins & Subqueries,

UNIT-V

HBase concepts- Advanced Usage, Schema Design, Advance Indexing - Zookeeper - how it helps in monitoring a cluster, HBase uses Zookeeper and how to Build Applications with Zookeeper.

REFERENCE BOOKS

1. Boris lublinsky, Kevin t. Smith, Alexey Yakubovich, "Professional Hadoop Solutions", Wiley, ISBN: 9788126551071, 2015.

2 .Big Data Black Book(Covers Hadoop 2, Map Reduce, Hive, Yarn, Pig & Data Visualization)- Dream Tech Publications

3.Chris Eaton, Dirk deroos et al. , "Understanding Big data ", McGraw Hill, 2012.

4. Tom White, "HADOOP: The definitive Guide" , O Reilly 2012.
5. Vignesh Prajapati, "Big Data Analytics with R and Haoop", Packet Publishing 2013.
6. Tom Plunkett, Brian Macdonald et al, "Oracle Big Data Handbook", Oracle Press, 2014.
7. Jy Liebowitz, "Big Data and Business analytics",CRC press, 2013.

STUDENT ACTIVITY:

1. Collect real time data and justify how it has become Big Data

2. Reduce the dimensionality of a big data using your own map reducer

Code No:

SRI VENKATESWARA UNIVERSITY: TIRUPATI
B.Sc (CBCS)
Sixth Semester Examinations
BIG DATA TECHNOLOGY

Time: 3 Hours **Max. Marks: 75**

Note: This question paper contains two parts A and B.
Part A is compulsory which carries 25 marks. Answer any five of the following Questions in Part A.
Part B consists of 5 Units. Answer any one full question from each unit.
Each question carries 10 marks

PART - A

Answer any Five of the following. All questions carry equal marks

5 x 5 = 25 Marks

1. Write about Big Data
2. Write short notes on distributed file system
3.What is Data Serialization?
4. Write short notes on Shell commands.
5. Describe about Monitoring & Maintenance.
6. What is Hive Architecture?
7. Write about HiveQL.
8. What is Zookeeper?

PART - B

Answer one question from each Unit. All questions carry equal marks

5 x 10 = 50 Marks

UNIT – I

9. Explain in detail about distributed file system.

OR

10. Explain in detail about Algorithms using map reduce.

UNIT-II

11. Briefly explain about Hadoop EcoSystem.

OR

12. Explain in detail about Hadoop.

UNIT-III

13. Explain briefly about Hadoop Architecture in detail.

OR

14. Briefly explain about cluster setup in Hadoop?

UNIT-IV

15. Describe in detail about Comparison with Traditional Database.

OR

16. Write about Joins & Subqueries.

UNIT-V

17. Explain in detail about Advance Indexing.

OR

18. Explainhow to Build Applications with Zookeeper.

III YEAR VI SEMESTER

(Cluster 1) Paper-VIII : Elective –A-2

BIG DATA TECHNOLOGY LAB

OBJECTIVES :

- Understand what Hadoop is
- Understand what Big Data is
- Learn about other open source software related to Hadoop

OUTCOMES:

i) Get help on the various Hadoop commands

ii) Observe a Map-Reduce job in action

1. Implement the following Data Structures in Java
a) Linked Lists
b) Stacks
c) Queues
d) Set
e) Map

2. (i) Perform setting up and Installing Hadoop in its three operating modes: Standalone
Pseudo distributed
Fully distributed
(ii) Use the web based tools to monitor your Hadoop setup.

3. Implement the following file management tasks in Haddop.
Adding files and directories
Retrieving files
Deleting files

III YEAR VI SEMESTER
(Cluster 2) Paper-VIII : Elective –B-1

DISTRIBUTED SYSTEMS

COURSE OBJECTIVES

To expose the fundamentals of distributed computer systems, assuming the availability of facilities for data transmission.

To discuss multiple levels of distributed algorithms, distributed file systems, distributed databases, security and protection.

COURSE OUTCOMES

Create models for distributed systems.
Apply different techniques learned in the distributed system.

UNIT I

Introduction to Distributed Computing Systems, System Models, and Issues in Designing a Distributed Operating System, Examples of distributed systems.

UNIT II

Features of Message Passing System, Synchronization and Buffering, Introduction to RPC and its models, Transparency of RPC, Implementation Mechanism, Stub Generation and RPC Messages, Server Management, Call Semantics, Communication Protocols and Client Server Binding.

UNIT III

Introduction, Design and implementation of DSM system, Granularity and Consistency Model, Advantages of DSM, Clock Synchronization, Event Ordering, Mutual exclusion, Deadlock, Election Algorithms.

UNIT IV

Task Assignment Approach, Load Balancing Approach, Load Sharing Approach, Process Migration and Threads.

UNIT V

File Models, File Accessing Models, File Sharing Semantics, File Caching Schemes, File Replication, Atomic Transactions, Cryptography, Authentication, Access control and Digital Signatures.

REFERENCE BOOKS

1.Pradeep. K. Sinha: " Distributed Operating Systems: Concepts and Design " , PHI, 2007.
2 .George Coulouris, Jean Dollimore, Tim Kindberg: " Distributed Systems" , Concept and Design, 3rd Edition, Pearson Education, 2005.

STUDENT ACTIVITY

1. Implementation of Distributed Mutual Exclusion Algorithm.

2. Create a Distributed Simulation Environment.

Code No:

SRI VENKATESWARA UNIVERSITY: TIRUPATI
B.Sc (CBCS)
Sixth Semester Examinations
Distributed Systems

Time: 3 Hours **Max. Marks: 75**

Note: This question paper contains two parts A and B.
Part A is compulsory which carries 25 marks. Answer any five of the following Questions in Part A.
Part B consists of 5 Units. Answer any one full question from each unit.
Each question carries 10 marks

PART - A

Answer any Five of the following. All questions carry equal marks

5 x 5 = 25 Marks

1. Write about distributed systems with examples.
2.Features of Message Passing System
3.Call Semantics
4. Write short notes on Communication Protocols.
5. Describe about DSM system.
6. What is Mutual exclusion?
7. Write about Threads.
8. What is File Sharing?

PART - B

Answer one question from each Unit. All questions carry equal marks

5 x 10 = 50 Marks

UNIT – I

9. Briefly describe about System Models in distributed systems.

OR

10. Explain in detail about design issues in distributed systems.

UNIT-II

11. Briefly explain about Synchronization and Buffering.

OR

12. Explain in detail about Transparency of RPC .

UNIT-III

13. Explain briefly about Consistency Model.

OR

14. Briefly explain about Election Algorithms?

UNIT-IV

15. Describe in detail about Election Algorithms.

OR

16. Write about Load Sharing Approach.

UNIT-V

17. Explain in detail about File Models.

OR

18. Explain in detail about Access control and Digital Signatures.

III YEAR VI SEMESTER

(Cluster 2) Paper-VIII : Elective –B-1

DISTRIBUTED SYSTEMS LAB

OBJECTIVE:

It covers all the aspects of distributed system. It introduce its readers to basic concepts of middleware, states of art middleware technology

OUTCOMES:

1. Students will get the concepts of Inter-process communication
2. Students will get the concepts of Distributed Mutual Exclusion and Distributed Deadlock Detection algorithm.

1. To study client server based program using RPC.
2. To study Client server based program using RMI.
3. To study Implementation of Clock Synchronization (Logical/Psysical)
4. To study Implementation of Election algorithm.
5. To study Implementation of Mutual Exclusion algorithms.
6. To write program multi-threaded client/server processes.
7. To write program to demonstrate process/code migration.

III YEAR VI SEMESTER
(Cluster 2) Paper-VIII : Elective –B-2

CLOUD COMPUTING

COURSE OBJECTIVES:

The student will learn about the cloud environment, building software systems and components that scale to millions of users in modern internet, cloud concepts capabilities across the various cloud service models including Iaas, Paas, Saas, and developing cloud based software applications on top of cloud platforms.

COURSE OUTCOMES

1. Compare the strengths and limitations of cloud computing
2. Identify the architecture, infrastructure and delivery models of cloud computing
3. Apply suitable virtualization concept.
4. Choose the appropriate cloud player , Programming Models and approach.
5. Address the core issues of cloud computing such as security, privacy and interoperability
6. Design Cloud Services and Set a private cloud

UNIT 1

Cloud Computing Overview – Origins of Cloud computing – Cloud components - Essential characteristics – On-demand self-service , Broad network access , Location independent resource pooling , Rapid elasticity , Measured service

UNIT II

Cloud scenarios – Benefits: scalability , simplicity , vendors ,security. Limitations – Sensitive information - Application development – Security concerns - privacy concern with a third party - security level of third party - security benefits Regularity issues: Government policies

UNIT III

Cloud architecture: Cloud delivery model – SPI framework , SPI evolution , SPI vs. traditional IT Model

Software as a Service (SaaS): SaaS service providers – Google App Engine, Salesforce.com and google platfrom – Benefits – Operational benefits - Economic benefits – Evaluating SaaS **Platform as a Service** (PaaS): PaaS service providers – Right Scale – Salesforce.com – Rackspace – Force.com – Services and Benefits

UNIT IV

Infrastructure as a Service (IaaS): IaaS service providers – Amazon EC2 , GoGrid – Microsoft soft implementation and support – Amazon EC service level agreement – Recent developments – Benefits

Cloud deployment model : Public clouds – Private clouds – Community clouds - Hybrid clouds - Advantages of Cloud computing

UNIT V

Virtualization: Virtualization and cloud computing - Need of virtualization – cost, administration , fast deployment , reduce infrastructure cost - limitations

Types of hardware virtualization: Full virtualization - partial virtualization - para virtualization

Desktop virtualization: Software virtualization – Memory virtualization - Storage virtualization – Data virtualization – Network virtualization **Microsoft Implementation**: Microsoft Hyper V – Vmware features and infrastructure – Virtual Box - Thin client

REFERENCE BOOKS

1. Cloud computing a practical approach - Anthony T.Velte , Toby J. Velte Robert Elsenpeter TATA McGraw- Hill , New Delhi - 2010
2. Cloud Computing: Web-Based Applications That Change the Way You Work and Collaborate Online - Michael Miller - Que 2008
3. Cloud Computing, Theory and Practice, Dan C Marinescu, MK Elsevier.
4. Cloud Computing, A Hands on approach, Arshadeep Bahga, Vijay Madisetti, University Press
5. Mastering Cloud Computing, Foundations and Application Programming, Raj Kumar Buyya, Christenvecctiola, S Tammarai selvi, TMH

STUDENT ACTIVITY:

1. Prepare the list of companies providing cloud services category wise.
2. Create a private cloud using local server

Code No:

SRI VENKATESWARA UNIVERSITY: TIRUPATI
BCA (CBCS)
Sixth Semester Examinations
CLOUD COMPUTING

Time: 3 Hours **Max. Marks: 75**

Note: This question paper contains two parts A and B.
Part A is compulsory which carries 25 marks. Answer any five of the following Questions in Part A.
Part B consists of 5 Units. Answer any one full question from each unit.
Each question carries 10 marks

PART - A

Answer any Five of the following. All questions carry equal marks
5 x 5 = 25 Marks

1.Origin of Cloud computing?
2.Broad network access
3.Explain privacy concern with a third party?
4.Write about security levels in third party?
5.Write about Economic benefits?
6. Explain Private Clouds?
7. Write about Hybrid clouds?
8. Explain Vmware?

PART - B

Answer one question from each Unit. All questions carry equal marks
5 x 10 = 50 Marks

UNIT – I

9. Briefly describe components of Cloud computing?

OR

10.Explain the characteristics of cloud computing ?

UNIT-II

11.Explain in detail about the cloud scenarios?

OR

12. Briefly describe about limitations of Cloud computing?

UNIT-III

13. Explain about Cloud computing Architecture?

OR

14. Write about SaaS in detail?

UNIT-IV

15. Describe briefly about IaaS.

OR

16. Explain about Cloud development model?

UNIT-V

17. Write about need of virtualization in cloud computing?

OR

18. Explain in detail about Vmware features and infrastructure?

1200

III YEAR VI SEMESTER
(Cluster 2) Paper-VIII : Elective –B-2

CLOUD COMPUTING LAB

OUTCOMES: LEARNER WILL BE ABLE TO…

1. Appreciate cloud architecture
2. Create and run virtual machines on open source OS
3. implement Infrastructure , storage as a Service.

USE EUCALYPTUS OR OPEN NEBULA OR EQUIVALENT TO SET UP THE CLOUD AND DEMONSTRATE.

1. Find procedure to run the virtual machine of different configuration. Check how many virtual machines can be utilized at particular time.
2. Find procedure to attach virtual block to the virtual machine and check whether it holds the data even after the release of the virtual machine.
3. Install a C compiler in the virtual machine and execute a sample program.
4. Show the virtual machine migration based on the certain condition from one node to the other.
5. Find procedure to install storage controller and interact with it.

1. Introduction to cloud computing.
2. Creating a Warehouse Application in Sales Force.com.
3. Creating an Application in Sales Force.com using Apex programming Language.
4. Implementation of SOAP web services in C#/ JAVA Applications.
5. Implementation of Para- Virtualization using VM ware's workstation/ Oracle's Virtual Box and Guest O.S.
6. Case study: PAAS (Face book, Google App Engine)
7. Case Study: Amazon web services.

III YEAR VI SEMESTER

(Cluster C) Paper-VIII : Elective–C-1

Paper-VIII: PHP & MySql, Wordpress

COURSEOBJECTIVES

To introduce the concept of PHP and to give basic Knowledge of PHP. Learn about PHP Syntax. Arrays, PHP Loops, PHP and MySQL connectivity, PHP form validation, PHP form handling.
Overview of MySQL and PHP MyAdmin, Understand basic concepts of how a data base stores information via tables, Understanding of SQL syntax used with MySQL, Learn how to retrieve and manipulate data from one or more tables, Know how to filter data based upon multiple conditions, Updating and inserting data into existing tables, Learning how the relationships between tables will affect the SQL, The advantages of store procedures with storing data using variables and functions, How SQL can be used with programming languages like PHP. to create dynamic websites for visitors, Review of some sample PHP projects interacting with MySQL.

COURSEOUTCOMES

After completing this course satisfactorily, a student will be able to:

1. Introduction to web development with PHP
2. How to code a PHP application
3. Introduction to relational databases and MySQL
4. How to use PHP with a MySQL database
5. How to use the MVC pattern to organize your code
6. How to test and debug a PHP application
7. How to work with form data
8. How to code control statements
9. How to work with strings and numbers
10. How to work with dates
11. How to create and use arrays
12. How to work with cookies and sessions
13. How to create and use functions
14. How to use regular expressions, handle exceptions, and validate data

UNIT I

Introduction PHP and MYSQL, features, merits and demerits of PHP and MYSQL.

The Basics of PHP scripts: The Building blocks of PHP: Variables, Data Types, Operators and Expressions, Constants. Flow Control Functions in PHP: Switching Flow, Loops, Code Blocks and Browser Output.

UNIT II

Working with Functions: What is function?, Calling functions, Defining Functions, Returning the values from User-Defined Functions, Variable Scope, Saving state between Function calls with the static statement, more about arguments.

Working with Arrays: What are Arrays?, Creating Arrays, Some Array-Related Functions. Working with Objects: Creating Objects, Object Instance Working with Strings, Dates and Time: Formatting strings with PHP, Investigating Strings with PHP, Manipulating Strings with PHP, Using Date and Time Functions in PHP.

UNIT III

Working with Forms: Creating Forms, Accessing Form Input with User defined Arrays, Combining HTML and PHP code on a single Page, Using Hidden Fields to save state, Redirecting the user, Sending Mail on Form Submission, Working with File Uploads.

Introducing Cookies, Setting a Cookie with PHP, Session Function Overview, Starting a Session, Working with session variables, passing session IDs in the Query String, Destroying Sessions and Unsetting Variables, Using Sessions in an Environment with Registered Users.

UNIT IV

Working with Files: Including Files with inclue(), Validating Files, Creating and Deleting Files, Opening a File for Writing, Reading or Appending, Reading from Files, Writing or Appending to a File.

Introduction to MySQL and Interfacing with Databases through PHP Understanding the database design process: The Importance of Good Database Design, Types of Table Relationships, Understanding Normalization. Learning basic SQL Commands: MySQL Data types, Table Creation Syntax, Using INSERT, UPDATE , DELETE, REPLACE, SELECT commands, WHERE in your Queries, Selecting from Multiple Tables, Date and Time Functions in MySQL.

UNIT V

Using Transaction and stored procedures in MySQL: What is Transaction?, What are Stored Procedures? Interacting with MySQL using PHP: MySQL Versus MySQLi Functions, Connecting to MySQL with PHP, Working with MySQL Data.

Creating an Online Address Book: Planning and Creating Database Tables, Creating Menu, Creating Record Addition Mechanism, Viewing Records, Creating the Record Deletion Mechanism, Adding Sub-entities to a Record.

Word press: About Word press, features and advantages of word press.

REFERENCEBOOKS

1. JulieC.Meloni,PHPMySQLandApache,SAMSTeachyourself,PearsonEducation(2007).
2. XueBai Michael Ekedahl, The web warrior guide to Web Programming, Thomson(2006).

STUDENT ACTIVITY:

1. **Installing and Configuring MySQL:** Current and Future Versions of MySQl, How to Get MySQL, Installing MySQL on Linux, Windows, Trouble Shooting your Installation, Basic Security Guidelines, Introducing MySQL Privilege System, Working with User Privileges.

2. Installing and Configuring Apache: Current and future versions of Apache, Choosing the Appropriate Installation Method, Windows, Apache Configuration File Structure, Apache Log Files, Windows, php in Basics,

3. Creation of a web page using word press

4. Creation of student data base of the college

Code No:

SRI VENKATESWARA UNIVERSITY: TIRUPATI
BCA (CBCS)
Sixth Semester Examinations
PHP & MySql, Wordpress

Time: 3 Hours **Max. Marks: 75**

Note: This question paper contains two parts A and B.
Part A is compulsory which carries 25 marks. Answer any five of the following Questions in Part A.
Part B consists of 5 Units. Answer any one full question from each unit.
Each question carries 10 marks

PART - A

Answer any Five of the following. All questions carry equal marks

5 x 5 = 25 Marks

1.Write about User Privileges?
2.Trouble Shooting
3.What are Arrays?
4.Write about Working with Strings?
5.Write about User defined Arrays?
6. Explain passthru()?
7. What is Transaction?
8. Explain working with posts?

PART - B

Answer one question from each Unit. All questions carry equal marks

5 x 10 = 50 Marks

UNIT – I

9. Briefly describe Current and Future Versions of MySQl?

OR

10.Explain Building PHP on Linux with Apache?

UNIT-II

11.What is function?Explain User-Defined Functionsin detail.

OR

12. Briefly describe about Manipulating Strings with PHP?

UNIT-III

13. Explain about Working with forms?

OR

14. Write about Running Commands with system() or passthru().?

UNIT-IV

15. Describe briefly about Using Transaction and stored procedures in MySQL.

OR

16. Explain about Working with MySQL Data in detail?

UNIT-V

17. Explain in detail about servers like wamp, bitnami?

OR

18. Explain in detail about extending word press with plug-ins?

PHP, MySql & Wordpress LAB

MySQL Lab Cycle

CYCLE -1

An Enterprise wishes to maintain the details about his suppliers and other corresponding details. For that he uses the following details.
Suppliers (sid: Integer, sname: string, address: string)
Parts (pid: Integer, pname: string, color: string)
Catalog (sid: integer, pid: integer, cost: real)

THE CATALOG RELATION LISTS THE PRICES CHARGED FOR PARTS BY SUPPLIERS.

Write the following queries in SQL:

1. Find the pnames of parts for which there is some supplier.
2. Find the snames of suppliers who supply every part.
3. Find the snames of supplier who supply every red part.
4. Find the pnames of parts supplied by London Supplier abd by no one else.
5. Find the sid's of suppliers who charge more for some part than the average cost of that part.
6. For each part, find the sname of the supplier who charges the most for that part.
7. Find the sid's of suppliers who supply only red parts.
8. Find the sid's of suppliers who supply a red and a green part.
9. Find the sid's of suppliers who supply a red or green part.
10. Find the total amount has to pay for that suppler by part located from London.

CYCLE – 2

An organisation wishes to maintain the status about the working hours made by his employees. For that he uses the following tables.

Emp (eid: integer, ename: string, age: integer, salary: real)
Works (eid: integer, did: integer, pct_time: integer)
Dept (did: integer, budget: real, managerid: integer)
An employee can work in more than one department; the pct_time field of the works relation shows the percentage of time that a given employee works in a given department.

1206

RESOLVE THE FOLLOWING QUERIES.

1. Print the names and ages of each employee who works in both Hardware and Software departments.
2. For each department with more than 20 full time equivalent employees (i.e., where the part-time and full-time employees add up to at least that many full-time employees), print the did's together with the number of employees that work in that department.
3. Print the name of each employee whose salary exceeds the budget of all of the departments that he or she work in.
4. Find the managerid's of managers who manage only departments with budgets greater than 1,000,000.
5. Find the enames of managers who manage the departments with largest budget.
6. If a manager manages more than one department, he or she controls the sum of all the budgets for those departments. Find the managerid's of managers who control more than 5,000,000.
7. Find the managerid's of managers who control the highest amount.
8. Find the average manager salary.

PHP Lab Cycle

1. Write a PHP program to Display "Hello"
2. Write a PHP Program to display the today's date.
3. Write a PHP Program to read the employee details.
4. Write a PHP Program to display the
5. Write a PHP program to prepare the student marks list.
6. Write a PHP program to generate the multiplication of two matrices.
7. Write a PHP Application to perform demonstrate the college website.
8. Write a PHP application to add new Rows in a Table.
9. Write a PHP application to modify the Rows in a Table.
10. Write a PHP application to delete the Rows from a Table.
11. Write a PHP application to fetch the Rows in a Table.
12. Develop an PHP application to make following Operations
    i. Registration of Users.
    ii. Insert the details of the Users.
    iii. Modify the Details.
    iv. Transaction Maintenance.
        a) No of times Logged in
        b) Time Spent on each login.
        c) Restrict the user for three trials only.
        d) Delete the user if he spent more than 100 Hrs of transaction.

WORDPRESS LAB

1. Installation and configuration of word press.
2. Create a site and add a theme to it.

(Cluster C) Paper-VIII: Elective –C-2
Paper-VIII: Advanced Java Script
JQUERY /AJAX / JSON / Angular JS

COURSE OBJECTIVE:

To impart knowledge in designing a webpage in a structured way by using advanced java script ie., using different scripting languages.

COURSE OUTCOMES

On completing the subject, students will be able to: create a dynamic website using advanced features of JavaScript and create a website with good and attractive design

UNIT I

JQuery – Basics: String, Numbers, Boolean, Objects, Arrays, Functions, Arguments, Scope, Built-in Functions. jQuery – Selectors: CSS Element Selector, CSS Element ID Selector, CSS Element Class Selector, CSS Universal Selector, Multiple Elements E, F, G Selector, Callback Functions. jQuery – DOM Attributes: Get Attribute Value, Set Attribute Value. jQuery – DOM Traversing : Find Elements by index, Filtering out Elements, Locating Descendent Elements, JQuery DOM Traversing Methods.

UNIT II

jQuery – CSS Methods : Apply CSS Properties, Apply Multiple CSS Properties, Setting Element Width & Height, JQuery CSS Methods. jQuery – DOM Manipulation Methods: Content Manipulation, DOM Element Replacement, Removing DOM Elements, Inserting DOM elements, DOM Manipulation Methods. jQuery – Events Handling: Binding event handlers, Removing event handlers, Event Types, The Event Object, The Event Attributes. jQuery – Effects: JQuery Effect Methods, jQuery Hide and Show, jQuery Toggle, jQuery Slide – slideDown, slideUp, slideToggle, jQuery Fade – fadeIn, fadeOut, fadeTo, jQuery Custom Animations

UNIT III

Intro to **jQuery UI**, Need of jQuery UI in real web sites, Downloading jQuery UI, Importing jQuery UI, Draggable, Droppable, Resizable, Selectable, Sortable, Accordion, Auto Complete, Button Set ಠ, Date Picker, Dialog, Menu, Progress Bar, Slider, Spinner, Tabs, Tooltip, Color Animation, Easing Effects, addClass, removeClass, Effects, jQuery UI themes, Customizing jQuery UI widgets / plug-ins, jQuery UI with CDN, Consuming jQuery Plug-ins from 3rd party web sites jQuery Validations, Intro to jQuery validation plug-in, Using jQuery validation plug-in, Regular expressions.

UNIT IV

Intro to AJAX, Need of AJAX in real web sites, Getting database data using jQuery-AJAX, Inserting, Updating, Deleting database data using jQuery-AJAX Grid Development using jQuery-AJAX Intro to **JSON** JSON syntax, Need of JSON in real web sites, JSON object, JSON array, Complex JSON objects, Reading JSON objects using jQuery.

UNIT V

Intro to **AngularJS,** Need of AngularJS in real web sites, Downloading AngularJS, AngularJS first example, AngularJS built-in directives, AngularJS expressions, AngularJS modules, AngularJS controllers, AngularJS scope AngularJS dependency injection AngularJS, bootstrapping AngularJS data bindings, AngularJS $watch, AngularJS filters, AngularJS events, AngularJS AJAX, Ng-repeat, AngularJS with json arrays, AngularJS registration form and login form, AngularJS CRUD operations, AngularJS Animations, AngularJS validationsϖ AngularJS $q, AngularJS custom values, AngularJS custom factories, AngularJS custom services, AngularJS custom directives, AngularJS custom providers, AngularJS Routing, AngularUI Routing.

REFERENCE BOOKS

1. jQuery UI 1.8: The User Interface Library for jQuery by Dan Wellman
2. jQuery Fundamentals by Rebecca Murphey
3. Ajax: The Complete Reference by Thomas A. Powell
4. Pro AngularJS by Adam Freeman Kindle Edition

STUDENT ACTIVITY:

1. Creation of website for a small scale company
2. Creation of website for a student database

Code No:

SRI VENKATESWARA UNIVERSITY: TIRUPATI
BCA (CBCS)
Sixth Semester Examinations
Advanced Java Script
JQUERY /AJAX / JSON / Angular JS

Time: 3 Hours **Max. Marks: 75**

Note: This question paper contains two parts A and B.
Part A is compulsory which carries 25 marks. Answer any five of the following Questions in Part A.
Part B consists of 5 Units. Answer any one full question from each unit.
Each question carries 10 marks

PART - A

Answer any Five of the following. All questions carry equal marks
5 x 5 = 25 Marks

1.Write about Built-in Functions?
2.Wire about JQuery.
3.Multiple CSS Properties?
4.Write about DOM Element?
5.Write about Event Object?
6. Explain jQuery UI?
7. Need of AJAX?
8. Explain Need of AngularJS?

PART - B

Answer one question from each Unit. All questions carry equal marks
5 x 10 = 50 Marks

UNIT – I

9. Briefly describe JQuery DOM Traversing Methods?

OR

10.Explain CSS Universal Selector?

UNIT-II

11.Explain in detail about Binding event handlers, Removing event handlers.

OR

12. Briefly describe about jQuery – Effects?

UNIT-III

13. Explain about jQuery Validations?

OR

14. Write aboutDownloading jQuery UI and importing jQuery?

UNIT-IV

15. Describe briefly about Getting database data using jQuery.

OR

16. Explain about Grid Development using jQuery-AJAX?

UNIT-V

17. Explain in detail about AngularJS built-in directives?

OR

18. Explain in detail about AngularJS registration form and login form with example?

III YEAR VI SEMESTER

Advanced Java Script
JQUERY /AJAX / JSON / Angular JS

1. Using jQuery find all textareas, and makes a border. Then adds all paragraphs to the jQuery object to set their borders red.

2. Using jQuery add the class "w3r_font_color" and w3r_background to the last paragraph element.

3. Using jQuery add a new class to an element that already has a class.

4. Using jQuery insert some HTML after all paragraphs.

5. Using jQuery insert a DOM element after all paragraphs.

6. Convert three headers and content panels into an accordion. Initialize the accordion and specify the animate option

7. Convert three headers and content panels into an accordion. Initialize the accordion and specify the height.

8. Create a pre-populated list of values and delay in milliseconds between a keystroke occurs and a search is performed.

9. Initialize the button and specify the disable option.

10. Initialize the button and specify an icon on the button.

11. Initialize the button and do not show the label.

12. Create a simple jQuery UI Datepicker. Now pick a date and store it in a textbox.

13. Initialize the datepicker and specify a text to display for the week of the year column heading.

III YEAR VI SEMESTER

PROJECT-2

Follow SDLC process for real time applications and develop real time application project

The objective of the project is to motivate them to work in emerging/latest technologies, help the students to develop ability, to apply theoretical and practical tools/techniques to solve real life problems related to industry, academic institutions and research laboratories.

The project is of 5 hours/week for one (semester VI) semester duration and a student is expected to do planning, analyzing, designing, coding, and implementing the project. The initiation of project should be with the project proposal. The synopsis approval will be given by the project guides.

The project proposal should include the following:

Title

Objectives

Input and output

Details of modules and process logic

Limitations of the project

Tools/platforms, Languages to be used

Scope of future application

The Project work should be either an individual one or a group of not more than three members and submit a project report at the end of the semester. The students shall defend their dissertation in front of experts during viva-voce examinations.

SRI VENKATESWARA UNIVERSITY

DEPARTMENT OF CT& HM (Catering Tourism & Hotel Management)

Choice Based Credit System (C.B.C.S) Syllabus and Scheme Of Examination

Course: BSc (WITH EFFECT FROM THE ACADEMIC YEAR 2015 -2016) Subject: CT&HM

Semester VI	Part 2	CTHM 601	Food production -III	4	-	4	25	75	100
			Practicals	-	3	2	-	50	50
		CTHM 602	Food Beverage Service - III	4	-	4	25	75	100
			Practicals	-	3	2	-	50	50
		CTHM 603	Front office Management - III	4	-	4	25	75	100
			Practicals	-	3	2	-	50	50
		CTHM 604	Accommodation Operation - III	4	-	4	25	75	100
			Practicals	-	3	2	-	50	50
		CTHM 605	Hotel Law	4	-	4	25	75	100
			Seminar	-	3	2	-	50	50
		CTHM 606	Travel & Tour Management- IV	4	-	4	25	75	100
			Praticals	-	3	2	-	50	50
	SK		Communication Practice – III (Writing Skills)	1	2	2	25	25	50
			Total Marks	**25**	**19**	**38**			**950**

THIRD YEAR

VI SEMESTER CT&HM-601 FOOD PRODUCTION - III

Theory: 4 hrs/week Practicals : 3 hrs/week

THEORY:

Unit-I

Lander work – responsibilities – Lander Chef and duties and common terms - Continental cuisine: Countries included and their stylesof cooking

Unit – II

Herbs and Wines used in cooking

Unit – III

Known about appetizers, Garnishes, Sandwiches – Different types of storages managements in Hotels – Establishment and Kitchen Planning.

Unit – IV

Continental Cuisine: France, Italian, Chinese, Portuguese regional
Influence and specialities and recipes of above maintained cuisines

Unit – V

Spices and basic ingredients used, fats, flour, pastaSoups, salads, pancakes, sauces - Meats, vegetables, Herbs, utensil, grilling, stewing Poaching, oils, wine, shortbread

PRACTICALS:

1. Table Arrangements
2. Cutlery & Crockery
3. Production practicals (6)
4. Continental Cuisine: France, Italian, Chinese, Portuguese regional

REFERENCES:

1. Mordern cookery vol.i :Thangam Philip
2. mordern cookery vol ii :Thangam Philip
3. Continental Cooking: For the Indian PalatePaperback– 31 Dec 2003by Chand Sur
4. The Basics: The Techniques of Continental Cooking by Filip Verheyden

B.Sc. (CT & HM) Second Year : VI-Semester

THIRD YEAR

CT& HM-601 FOOD PRODUCTION - III Model Question Paper

Time : 3 Hrs Marks : 75

Section-A

Answer any Five Questions Each question carries 5 marks **5 × 5 = 25 M**

1. What is continental cookery?
2. Name the countries included in continental cooking?
3. Name the basic oil used in continental cooking?
4. Prepare a 7 course continental menu ?
5. What type of utensil are used in continental cooking?
6. How is continental cookery different from IndianCookery?
7. What is a pasta explain?
8. What is the importance of wine in continental cookery?

Section-B

Answer ALL Questions Each question carries 10 marks **5 × 10 = 50 M**

9. a) Write the role of bread and pasta in continental cookery

(or)

b) Write about wines and its role in continental cooking?

10. a) Write about different method of cooking used in continental cooking ?

(or)

b) Write in detail about the types of oil,herbs and saucesUsed in continental cooking?

11. a) Write about the 5 basic sauces

(or)

b) What is the importance of mis-en scene &mis-en placein any cuisine?

12. a) Write about French classical menu in detail?

(or)

b) Discuss about continental cookery in your point ofView?

13. a) What is the role of fruit ,vegetables and meat inContinental cookery?

(or)

b) Classify meat ?

THIRD YEAR

VI SEMESTER CT&HM-602 FOOD AND BEVERAGE SERVICES - III

Theory: 4 hrs/week

Practicals : 3 hrs/week

THEORY:

Unit-I

Food and Beverage service outlet and maintenance of outlet - Description of layout of F & B outlet - Objectives of good layout - Planning of laying an outlet - Space requirement of various food and beverage service outlet and staff requirement.

Unit – II

Cost reducing methods - Need of training and importance - Total quality management -KOT - Different types of registers used in Hotels

Unit – III

Define banquet and types of function to be held in banquets and staff - About the specimen of function confirmation form - Draw various table plan and explain seating arrangement - Outdoor catering -Planning and organizing of buffet - Different equipment required for buffet and guerdon service

Unit – IV

Different types of cutlery, crockery and glassware - Bar operation - Types of bars - Bar equipments - Planning of bar – Service of Wine - Beverage control - Taking order of alcoholic beverages - About transfer books, bill cards, requisition form- Cellar control.

Unit – V

Function catering – Banquets – Buffets – Arranging of Bar – Bar Manager – Duties Role – responsibilities – Execution of Functions – Banquet an Buffets – Services for formal functions – factors considering planning of buffets.

PRACTICALS:

1. Arrangements and Supervising formal function
2. Demonstration of crepe suzette & Banana Flambe
3. Supervising meals service for Lunch, Dinner, Buffet, Bar Operations
4. Services for formal functions

REFERENCES:

1. Modern cookery part 1 and 2
2. Basic banking S.D. Dubey
3. Food production manual - Sudhir Andrews
4. Food production

B.Sc. (CT & HM) Third Year : VI-Semester

CT&HM 602 – FOOD AND BEVERAGES SERVICE - III Model Question Paper

Time : 3 Hrs **Section-A** **Marks : 75**

Answer any Five Questions Each question carries 5 marks **5 × 5 = 25 M**

1. Give the organization of Snack Bar.

2. Describe the KOT

3. Different types of registers in restaurant

4. Write about classification of food and beverages

5. What do you meant by outdoor catering and explain

6. What type of equipment required of buffet services?

7. Write about different types of cutlery and crockery?

8. Explain Cellar Control

Section-B

Answer ALL Questions Each question carries 10 marks **5 × 10 = 50 M**

9. a) Describe various food and beverages service outlet and staff requirement

(or)

b) Explain the training importance

10. a) Draw the various table plan and explain seating arrangements.

(or)

b) Write about bar equipments and uses

11. a) Explain the transfer books, bill cards, requisition forms.

(or)

b) Explain Job description of restaurant manager.

12. a) Write about basic etiquettes in food any service profession

(or)

b) How to arrangements of banquet hall.

13. a) Describe the fast food restaurant

(or)

b) Explain the bar planning.

THIRD YEAR

VI SEMESTER CT&HM-603
FRONT OFFICE MANAGEMENT – III

Theory: 4 hrs/week
Practicals : 3 hrs/week

THEORY:

Unit-I
Front Office cashier introduction – Duties of front office cashier – Key terms – Introduction Night Audit – Organization chart – Duties of Night Auditor – Task a night Auditor.

Unit – II
Yield management Introduction – Opportunity Analysis – Strategies and Tactics – Yield management - Key terms – Front Office Accounting – Types of Accounts – Non formal, Semi Formal and Fully Formal

Unit – III
Introduction to quality Guest service – total quality management – Practices in total quality management – Quality control circles. Business Process – Engineering.

Unit – IV
Human Resource Management – Human Resource Planning – Human Resource Development – Job Analysis – Recruitment – Selection – HR Challenges in Hospitality Industry – Employee presentation, Employee Motivation.

Unit – V
Safety and Security – Hotel security staff and system, Role of Front Office – Security and control of room keys – Fire safety – Classification of file – Procedure in the Event of fire and accidents – Accidents in Hotels, Accident report – First Aid.

PRACTICALS:-
1. Processing of Foreign Exchange
2. Passport, VISA procedures
3. Planning and Evaluating
4. Developing a service management programmes
5. Evaluating Room rates
6. Budgeting for operation forecasting room.

REFERENCES:

1. Front Office procedures – Michael L. Kasavana (Fifth Edition), 2003. Richard M Books. AH & LA, U.S.A.
2. A Manual of Hotel Reception – Heeves and Medlik, Heinemann, London.
3. Front Office Management – John Wiley
4. Case study in room operations and management Jeremy Hyton& Sue Baker.
5. Front Office Management – John Wiley

B.Sc. (CT & HM) Third Year : VI-Semester
CT&HM-603 FRONT OFFICE MANAGEMENT - III
Model Question Paper

Time : 3 Hrs Marks : 75

Section-A

Answer any Five Questions Each question carries 5 marks **5 × 5 = 25 M**

1. Write short notes on potential bad debts.
2. Explain briefly the marketing concepts.
3. Write about control of bell boy and attitude
4. Write the procedures followed to a guest with scanty baggage.
5. Draw the format of guest history card and explain
6. Explain the concept of sales and marketing in relation to hospitality
7. Explain encashment certificate
8. Write short notes on landing permis.

Section-B

Answer ALL Questions Each question carries 10 marks **5 × 10 = 50 M**

9. a) What is guest history card and write the maintenance of guest history in detail with format.

(or)

b) Explain the different types of room rates and discount and discounting policy.

10. a) Explain the term hospitality and how do you relate the term "Hospitality cannot be touched or felt" in both front office and service sector.

(or)

b) Give the concept and importance of hospitality in todays fast developing society.

11. a) Explain in detail CVGR and TAV.

(or)

b) With the procedure of AP and EP

12. a) Write about room statistics (House Count, ARR, Rev PAR, ARP)

(or)

b) Who is right auditor? Give his duties and responsibilities

13. a) Explain about right auditor reports in detail

(or)

b) What are the files and formats maintained in bell desk?

THIRD YEAR
VI SEMESTER CT&HM-604
ACCOMMODATION OPERATION – III

Theory:4 hrs/week
Practicals : 3 hrs/week

THEORY:

Unit-I

Ergonomics in Housekeeping – Dealing with Emergenceis – Scanty Baggage – Guest and Employee Theft – Sickness and Death – Lost and found articles.

Unit – II

Pest control and waste disposal – Common pests and their control – Integrated pest management. Waste disposal – Internal environment Noise - Air – Conditioning – Light.

Unit – III

Objectives of Interior Design – Basic types of Design – Elements of Design – Principles of Design – Units of Design – Designing for the physically challenged Planning in Star Hotels.

Unit – IV

Interior Decorations – Colour – Lighting – Floor coverings and Finishes – types, Characteristics and cleaning of Floor coverings, carpets, importance of floor maintenance – ceilings and their maintenance wall coverings – windows and window treatments.

Unit – V

Flower arrangement in Hotels –Flower Arrangement – Basis – Designing Flower Arrangement Japanese/Oriental Flower Arrangement – Common Flower and Foliage. Essential Components of Horticulture Land scaping – Indoor Plants – Bonsai in Hotel properties.

PRACTICALS:-

1. Principles of Flower arrangement.
2. Types of patterns, Equipment, Tools and use of dry plant material
3. Cleaning equipments
4. Cleaning Agents
5. Cleaning methods
6. Control of Odours

REFERENCES:

1. Hospitality today – An introduction – Row M. Angelos, Andrew N. Vladimir
2. Hotel Housekeeping operations and management Second Exition – SmriteeRaghubalan – Oxford university press 2007-, 2009.
3. Professional Housekeeping – Schneider, Madillou, Tucher
4. Housekeeping management – Margaret Kappa – AH & LS, USA
5. Commercial Housekeeping and maintenance – Iris Jones (StanlyThorw Pub)

B.Sc. (CT & HM)
Third Year : VI-Semester
CT&HM-604 ACCOMMODATION OPERATION – III
Model Question Paper

Time : 3 Hrs **Marks : 75**

Section-A

Answer any Five Questions Each question carries 5 marks **5 × 5 = 25 M**

1. Write the importance of hygiene in hotel industry.
2. Write the advantages and disadvantages of contract maintenance
3. Write the advantages of carpets.
4. Explain the purchase procedure for guest supplies
5. Write the cleaning procedures or schedule adopted in housekeeping department.
6. Discuss the different cleaning agents
7. What is a duty rooster
8. Write the purchase procedure?

Section-B

Answer ALL Questions
Each question carries 10 marks **5 × 10 = 50 M**

9. a) Explain the functions of HR explain the selection process of staff for house keeping department.

(or)

b) Write the measures taken for Inventory control

10. a) Classify the different wall covering and write how do you maintain them

(or)

b) What are the basic components of a carpet? Classify the different types of carpets.

11. a) Write briefly the importance of maintenance in hotel industry

(or)

b) Draw the organisational chart of maintenance department and explain the duties.

12. a) What is Horticulture and explain its importance of it in hotel.

(or)

b) What are the advantages and disadvantages of carpets.

13. a) Discuss the sanitary procedure to be followed by house keeping personal

(or)

b) Discuss the role and importance of hygiene in hotel industry

THIRD YEAR
VI SEMESTER
CT&HM-605 HOTEL LAW

Theory: 4 hrs/week
Practicals : 3 hrs/week

THEORY:

Unit-I
Law & Society - Meaning and definition of law -Classification of law

Unit – II
Hotel and restaurants licenses - License permit, procedure of obtaining, renewing licenses - Suspension and termination of licenses -List of licenses required to open hotel & Operate restaurants

Unit – III
Law relating to hotel guest relation, hotel and lodging rates control -Definition of law - Fair rate - Hotel & Lodging house - Manager of hotel - Owner of lodging house - Paying guest - Premises

Unit – IV
Tenant & Tenement - Appointment of controller - Fixation of fair rates - Refusal of accommodation - Eviction of a guest from hotel rooms - Duties, rights, responsibilities of Innkeeper towards guest - Innkeeper lien

Unit – V
Shops & establishments act as applicable to hotel and catering establishments - Definition of – Apprentice – Child – Closed - Commercial establishments - Provision regarding opening and closing hours - Spread over weekly off & leaves, health, safety and hygiene provision

REFERENCES:
1. Basic Hotel Law – Werner, petter
2. Hotel Law operation – Patrick Jomoreo
3. Hotel Law manual – SudheerAnrews
4. Hospitality today-An introduction-Rocu M. Angelo & Andrew N. Vladmir

B.Sc. (CT & HM)
Third Year : VI-Semester
CT&HM- 605 HOTEL LAW
Model Question Paper

Time : 3 Hrs **Marks : 75**

Section-A

Answer any Five Questions Each question carries 5 marks **5 × 5 = 25 M**

1. Food standards in India
2. Write about the termination of licenses of restaurants
3. Write about the manager of a hotel.
4. Discuss about the establishment Act Applicable to Creating establishment.
5. Write about Welfare of Worker
6. Discuss about Show Cause Notice
7. PFA standards explain
8. What is consumer Protection

Section-B

Answer ALL Questions Each question carries 10 marks **5 × 10 = 50 M**

9. a) Explain in detail about food adulteration

(or)

b) Write about the responsibilities of Food inspector

10. a) Explain the rights and duties concerning to guest safety.

(or)

b) Discuss the law relating to Hotel Guest relationship

11. a) Write about the implied conditions and warrantee of Sale Goods Act.

(or)

b) Discuss about manufacturing process and Health, safety of workers

12. a) Write about the prevention and control of air a pollution Act. 1981

(or)

b) Explain about consumer protection counsels and Consumer Redresal Agencies.

13. a) Discuss the eriction of guest from hotel room

(or)

b) Write about food inspector duties.

THIRD YEAR
VI SEMESTER CT&HM-606
TRAVEL AND TOUR MANAGEMENT -IV

Theory: 4 hrs/week
Practicals : 3 hrs/week

THEORY:

Unit-I
Travel agency – documents required for International travel – Passports – Visa-travel insurance – Foreign currency – Baggage – Reasons for Travel - Known about tour Management and operation Impact system and its growth.

Unit – II
Tourism world wide organizations - WTO-IATA-PATA-ICAO-TAAI-UFTAA The Chicago convention – Bilateral Agreements – Warsaw conversion.

Unit – III
Computers Reservation System-types of CRS –Airline Ticketing –ABC codes –Flight schedule-types of fares –fare calculation – Manual Ticketing-automated Ticketing.

Unit – IV
Tour operations – Definition – Package tours – types of tour packages – Scope of tour package – Itinerary rules & regulations – Itinerary planning with examples.

Unit – V
Marketing a package tour – tour broach - Activities in tour operation – tour pricing – tour operator's Responsibilities and his role in hospitality Management

PRACTICALS:

1. Visit to tour Operation (Travel Agency)
2. Itinerary planning – Plan an Itinerary programme
3. Visit to Airline Office – Ticketing of Aspects
4. International Travel – From – Passport Procedures – Visit.

REFERENCES:

1. An Introduction to Travel and Tourism – Jag Mohan Nagi
2. Air Lines and ticketing for tourism – Jag Mohan Nagi
3. IATA ticketing manual – Ticketing course material

B.Sc. (CT & HM)
Third Year : VI-Semester
CT&HM- 606
TRAVEL AND TOUR MANAGEMENT- IV
Model Question Paper

Time : 3 Hrs **Marks : 75**

Section-A

Answer any Five Questions Each question carries 5 marks **5 × 5 = 25 M**

1. Describe the TAAI
2. What is the importance of VISA
3. Explain the Chicago Convention
4. Describe Airline Ticketing
5. What is meant by package Tour? Explain
6. How to market a package tour.
7. Discuss the activities of Tour Operation.
8. Explain UFTAA

Section-B

Answer ALL Questions
Each question carries 10 marks **5 × 10 = 50 M**

9. a) Write about Travel Agency

(or)

b) What are documents required for international travel? Explain

10. a) Explain WTO

(or)

b) Write notes on i) PATA; ii) IATA

11. a) Discuss the computer reservation system in Air Line Ticketing

(or)

b) Write Notes on: i) ABC codes ii) Manual Ticketing

12. a) What are the responsibilities of Tour Operator to organize different types of tours.

(or)

b) Analyze the scope of a package tour. Define the package tour

13. a) History of Tourism and Hospitality

(or)

b) Explain history of travel in India

B.A./B.Sc. THIRD YEAR MATHEMATICS SYLLABUS

SEMESTER – VI, PAPER – VII-(A)

ELECTIVE-VII(A); LAPLACE TRANSFORMS

60 Hrs

UNIT – 1 (12 hrs) Laplace Transform I : -

Definition of - Integral Transform – Laplace Transform Linearity, Property, Piecewise continuous Functions, Existence of Laplace Transform, Functions of Exponential order, and of Class A.

UNIT – 2 (12 hrs) Laplace Transform II : -

First Shifting Theorem, Second Shifting Theorem, Change of Scale Property, Laplace Transform of the derivative of f(t), Initial Value theorem and Final Value theorem.

UNIT – 3 (12 hrs) Laplace Transform III : -

Laplace Transform of Integrals – Multiplication by t, Multiplication by t^n – Division by t. Laplace transform of Bessel Function, Laplace Transform of Error Function, Laplace Transform of Sine and cosine integrals.

UNIT –4 (12 hrs) Inverse Laplace Transform I : -

Definition of Inverse Laplace Transform. Linearity, Property, First Shifting Theorem, Second Shifting Theorem, Change of Scale property, use of partial fractions, Examples.

UNIT –5 (12 hrs) Inverse Laplace Transform II : -

Inverse Laplace transforms of Derivatives–Inverse Laplace Transforms of Integrals – Multiplication by Powers of 'P'– Division by powers of 'P'– Convolution Definition – Convolution Theorem – proof and Applications – Heaviside's Expansion theorem and its Applications.

Reference Books :-

1. Laplace Transforms by A.R. Vasistha and Dr. R.K. Gupta Published by Krishna Prakashan Media Pvt. Ltd. Meerut.
2. Fourier Series and Integral Transforms by Dr. S. Sreenadh Published by S.Chand and Co., Pvt. Ltd., New Delhi.
3. Laplace and Fourier Transforms by Dr. J.K. Goyal and K.P. Gupta, Published by Pragathi Prakashan, Meerut.
4. Integral Transforms by M.D. Raising hania, - H.C. Saxsena and H.K. Dass Published by S. Chand and Co., Pvt.Ltd., New Delhi.

Suggested Activities:

Seminar/ Quiz/ Assignments

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S. V UNIVERSITY., MODEL PAPER

THIRD YEAR . B. A, B. Sc, DEGREE EXAMINATIONS

SEMISTER . IV: CHOICE BASED CREDIT SYSTEM

PARTIII, MATHEMATICS

ELECTIVE – VII(*A*): LAPLACE TRANSFORMS

(NEW SYLLABUS W. E. F. 2015 – 16)

PART – A

Answere any five of the following questions $5 \times 5 = 25.$

(1)Define the function of exponential order

(2)Define change of sclar property

(3) Laplace transform of integral.

(4)If$F(t) = t^2, 0 < t < 2$ *and* $F(t+2) = F(t)$ *thenfind* $L\{F(t)\}$.

(5)*Find*$L\{t^2 \cos at\}$.

(6)*Evaluate* $L^{-1}\left\{\frac{e^{-3s}}{(s-4)^2}\right\}$.

(7)*Provethat* $L^{-1}\left\{\tan^{-1}\frac{2}{s^2}\right\} = \frac{2}{t}\sin t \sin ht$.

(8)*Evaluate* $L^{-1}\left\{\frac{4s+5}{(s-1)^2(s+2)}\right\}$.

PART – B

Answere all questions $5 \times 10 = 50$

(9)(*a*)*SupposeF*(*t*)*is piecewise continuty in every finite interval and is of exponential order a as* $t \to \infty$. *Then f exists* $\forall\ s > a$.

(*or*).

(*b*) *State and prove linear property.*

(10)(*a*) *State and prove Second Shifting theorem.*

(*or*)

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(b) Prove that $L\{J_0(t)\} = \frac{1}{\sqrt{s^2+1}}$ and hence deduce that

(i) $L\{tJ_0(at)\}$, (ii) $L\{e^{-at}J_0(at)\}$.

(11)(a) State and prove Initial value theorem.

(or)

(b) prove that $L\{c(t)\} = \frac{\log(s^2+1)}{2s}$.

(12)(a) State and prove Convolution theorem.

(or)

(b) Find $L^{-1}\left\{\frac{1}{(s-1)^5(s+2)}\right\}$

(13)(a) Using Heavi – sides expansion formula, find $L^{-1}\left\{\frac{3s+1}{(s-1)(s^2+1)}\right\}$.

(or).

(b) Showthat $\int_0^\infty \sin x^2 \, dx = \frac{1}{2}\sqrt{\frac{\pi}{2}}$.

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B.A./B.Sc. THIRD YEAR MATHEMATICS SYLLABUS, SEMESTER – VI, CLUSTER – A, PAPER – VIII-A-1

Cluster Elective- VIII-A-1: INTEGRAL TRANSFORMS

60 Hrs

UNIT – 1 (12 hrs) Application of Laplace Transform to solutions of Differential Equations : -

Solutions of ordinary Differential Equations.
Solutions of Differential Equations with constants co-efficient
Solutions of Differential Equations with Variable co-efficient

UNIT – 2 (12 hrs) Application of Laplace Transform : -

Solution of simultaneous ordinary Differential Equations.
Solutions of partial Differential Equations.

UNIT – 3 (12 hrs) Application of Laplace Transforms to Integral Equations : -

Definitions : Integral Equations-Abel's, Integral Equation-Integral Equation of Convolution Type, Integro Differential Equations. Application of L.T. to Integral Equations.

UNIT –4 (12 hrs) Fourier Transforms-I : -

Definition of Fourier Transform – Fourier's in Transform – Fourier cosine Transform – Linear Property of Fourier Transform – Change of Scale Property for Fourier Transform – sine Transform and cosine transform shifting property – modulation theorem.

UNIT – 5 (12 hrs) Fourier Transform-II : -

Convolution Definition – Convolution Theorem for Fourier transform – parseval's Indentify – Relationship between Fourier and Laplace transforms – problems related to Integral Equations.

Finte Fourier Transforms : -

Finte Fourier Sine Transform – Finte Fourier Cosine Transform – Inversion formula for sine and cosine Transforms only statement and related problems.

Reference Books :-

1. Integral Transforms by A.R. Vasistha and Dr. R.K. Gupta Published by Krishna Prakashan Media Pvt. Ltd. Meerut.
2. A Course of Mathematical Analysis by Shanthi Narayana and P.K. Mittal, Published by S. Chand and Company pvt. Ltd., New Delhi.
3. Fourier Series and Integral Transforms by Dr. S. Sreenadh Published by S.Chand and Company Pvt. Ltd., New Delhi.
4. Lapalce and Fourier Transforms by Dr. J.K. Goyal and K.P. Gupta, Published by Pragathi Prakashan, Meerut.
5. Integral Transforms by M.D. Raising hania, - H.C. Saxsena and H.K. Dass Published by S.Chand and Company pvt. Ltd., New Delhi.

Suggested Activities:

Seminar/ Quiz/ Assignments

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THIRD YEAR . B. A, B. Sc, DEGREE EXAMINATIONS

SEMISTER . IV: CHOICE BASED CREDIT SYSTEM

PARTIII, MATHEMATICS

CLUSER ELECTIVE – VII – A – 1: INTEGRAL TRANSFORMS

(NEW SYLLABUS W. E. F. 2015 – 16)

PART – A

Answere any five of the following questions $5 \times 5 = 25.$

(1)*Using Laplace transform method, solve* $y''(t) + y(t) = t$, *given that* $y'(0) = 1$, $y(\pi) = 0$

(2)*Solve* $\frac{d^2y}{dx^2} + y = 0$ under the condition that $y = 1, \frac{dy}{dt} = 0$, *when* $t = 0$

(3)Apply Laplace transform to solve $\frac{dy}{dx} - \frac{dy}{dt} = 1 - e^{-t}, 0 < x < 1, t > 0,$ *given that* $y(x, 0) = x$

(4)*Solve the Integral equation* $F(t) = 1 + \int_0^t F(u) \sin(t - u)du.$

(5)*Convert the integral equation* $F(t) = t^2 - 3t + 4 - 3\int_0^t (t - u)^2 F(u)du$ *into differential equation and associated condition.*

(6)*Relationship between Fourier transform and Laplace transform*

(7)*Show that the Fourier transform of* $f(x) = e^{\frac{-x^2}{2}}$ *is* $\sqrt{2\pi}\ e^{\frac{-s^2}{2}}$.

(8)*State and prove parsevals identity for fourier transform.*

PART – B

Answere all questions $5 \times 10 = 50$

(9)(a)*Using Laplace transform method* $\frac{d^2y}{dt^2} + 4\frac{dy}{dt} + 5y = (\cos t - \sin t)e^{-2t}$, *subject to the boundary conditions* $y(0) = 1, y'(0) = -3$

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(or).

(b) Solve $(D^4 - 1)y = 1$, when $y = Dy = D^2y = D^3y = 0$.

(10)(a) Solve $(D-2)x - (D+1)y = 6e^{3t}$

$(2D-3)x + (D-3)y = 6e^{3t}$, $x(0) = 3$, $y(0) = 0$.

(or)

(b) Solve $\frac{dy}{dt} = 2\frac{d^2y}{dx^2}$ if $y(0,t) = 0 = y(5,t), y(x,0) = 10\sin 4\pi$

(11)(a) Solve $\int_0^t \frac{F(u)du}{\sqrt{t-u}} = 1 + t + t^2$.

(or)

(b) Solve $F'(t) = t + \int_0^t F(t-u)\cos u\, du$, $F(0) = 4$.

(12)(a) Findthe fourier transform of $f(x) = \begin{cases} 1-x^2 & , |x| < 1 \\ 0 & , |x| < 1 \end{cases}$ and hence

evaluate $\int_0^\infty \left(\frac{x\cos x - \sin x}{x^3}\right)\cos\frac{x}{2}\, dx$.

(or)

(b) Find the sine transform of $\frac{x}{1+x^2}$

(13)(a) Find the inverse Fourier transform of $\overline{f(s)} = e^{-|s|y}$

where y belongs to $(-\infty, \infty)$.

(or).

(b) Using Fourier integral formula, show that $e^{-x}\cos x = \frac{2}{\pi}\int_0^\infty \frac{(u^2+2)\cos ux}{u^4+4}\, du$.

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B.A./B.Sc. THIRD YEAR MATHEMATICS SYLLABUS
SEMESTER – VI: PAPER – VIII-A-2
ELECTIVE – VIII-A-2: ADVANCED NUMERICAL ANALYSIS

60 Hrs

Unit – I (10 Hours)

Curve Fitting: Least – Squares curve fitting procedures, fitting a straight line, nonlinear curve fitting, Curve fitting by a sum of exponentials.

UNIT- II : (12 hours)

Numerical Differentiation: Derivatives using Newton's forward difference formula, Newton's backward difference formula, Derivatives using central difference formula, stirling's interpolation formula, Newton's divided difference formula, Maximum and minimum values of a tabulated function.

UNIT- III : (12 hours)

Numerical Integration: General quadrature formula on errors, Trapozoidal rule, Simpson's 1/3 – rule, Simpson's 3/8 – rule, and Weddle's rules, Euler – Maclaurin Formula of summation and quadrature, The Euler transformation.

UNIT – IV: (14 hours)

Solutions of simultaneous Linear Systems of Equations: Solution of linear systems – Direct methods, Matrix inversion method, Gaussian elimination methods, Gauss-Jordan Method ,Method of factorization, Solution of Tridiagonal Systems, Iterative methods. Jacobi's method, Gauss-siedal method.

UNIT – V (12 Hours)

Numerical solution of ordinary differential equations: Introduction, Solution by Taylor's Series, Picard's method of successive approximations, Euler's method, Modified Euler's method, Runge – Kutta methods.

Reference Books :

1. Numerical Analysis by S.S.Sastry, published by Prentice Hall India (Latest Edition).
2. Numerical Analysis by G. Sankar Rao, published by New Age International Publishers, New – Hyderabad.
3. Finite Differences and Numerical Analysis by H.C Saxena published by S. Chand and Company, Pvt. Ltd., New Delhi.
4. Numerical methods for scientific and engineering computation by M.K.Jain, S.R.K.Iyengar, R.K. Jain.

Suggested Activities:

Seminar/ Quiz/ Assignments

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S. V UNIVERSITY., MODEL PAPER

THIRD YEAR . B. A, B. Sc, DEGREE EXAMINATIONS

SEMISTER . IV: CHOICE BASED CREDIT SYSTEM

PARTIII, MATHEMATICS

CLUSER ELECTIVE – VII – A – 2: ADVANCED NUMARICAL ANALYSIS

(NEW SYLLABUS W. E. F. 2015 – 16)

PART – A

Answere any five of the following questions $5 \times 5 = 25$.

(1)*Certain experimental values of x&y are given bellow*

x	0	2	5	7
y	-1	5	12	20

If " a_0+a_1x "*find the approximation values of* a_0 & a_1 +

(2)*From the following table of values of x and y , obtain* $\frac{dy}{dx}$&$\frac{d^2y}{dx^2}$ *for* $x = 1.5$.

x	1.5	2.0	2.5	3.0	3.5	4.0
y	3.375	7.0	13.625	24.0	38.875	59.0

(3)Computethe first derivative for the following table of data $x = -3 \& x = 0$

x	-3	-2	-1	0	1	2	3
y	-33	-12	-3	0	3	12	33

(4)*Evaluate* $\int_0^1 x^3\,dx$ *with five sub intervals by trapezoidal rule.*

(5)*Evaluate the integral* $\int_4^{5.2} \log x\,dx$.

(6)*Solve the equations* $2x_1 + x_2 + x_3 = 10$, $3x_1 + 2x_2 + 3x_3 = 18$ *and*

$x_1 + 4x_2 + 9x_3 = 16$ *using Gauss – elimination method.*

(7)*Solve the equations* $10x + y + z = 12$, $2x + 10y + z = 13$ *and* $x + y + 5z = 7$

by Gauss – Jordan method.

(8)*Find the values of y for* $x = 0.4$ *by picards method , given that* $\frac{dy}{dx} = x^2 + y^2$,

$y(0) = 0$.

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PART – B

Answere all questions $5 \times 10 = 50$

(9)(a) Find the curve of best fit of the type $y = ae^x$ to the following data by the method of of least squares

x	1	5	7	9	12
y	10	15	12	15	21

(or).

(b) Fit a function of the form $Y = A_1 e^{\lambda_1 x} + A_2 e^{\lambda_2 x}$ to the data by using a sum ofexponentials.

(10)(a) Compute $f'(4)$ from the following table using Newtens divided difference formula.

x	1	2	4	8	10
y	0	1	5	21	27

(or)

(b) Use stirlings formula to find $f'(1.22)$ from the following table

x	1.0	1.1	1.2	1.3	1.4
y	0.84147	1.89121	0.93204	0.96356	0.98545

(11)(a) Find the value of $\int_1^2 \frac{dx}{x}$ by simpsons rule. Hence obtain approximate value of $\log_e 2$

(or)

(b) Evaluate $I = \int_1^{\frac{\pi}{2}} \sin x \, dx$ using Eulers – Meclaurines formula.

(12)(a) Solve the following system by the method of factorization(Triangularization)

$2x - 3y + 10z = 3$, $-x + 4y + 2z = 20$ and $5x + 2y + z = -12$.

(or)

(b) Solve the following system of equationsby Jacobi &Gauss – scidel methods correct to 3 – decimal places $x + y + 54z = 110$, $27x + 6y - z = 35$ and $6x + 15y + 2z = 72$.

(13)(a) Given $\frac{dy}{dx} = \frac{y - x}{y + x}$, $y(0) = 1$, compute $y(0.1)$ in steps of 0.02 using

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Eulers modified method.

(*or*).

(*b*) *Use* $R-K$ *method to evaluate* $y(0.1)\&y(0.2)$ *given that* $y'=x+y, y(0)=1$

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S. V UNIVERSITY., MODEL PAPER

THIRD YEAR . B. A, B. Sc, DEGREE EXAMINATIONS

SEMISTER . IV: CHOICE BASED CREDIT SYSTEM

PARTIII, MATHEMATICS

CLUSER ELECTIVE – VII – A – 3:PROJECT WORK

(NEW SYLLABUS W. E. F. 2015 – 16)

PROJECT WORK: 100MARKS

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PROJECT WORK

Project work in mathematics or in mathematics-related subjects is now very common,especially in applied or statistical topics. Everyone knows projects aregenerally beneficial to the students.To delve deeply into a topic of interest by finding and studying an article or part of a book on that topic and then writing a report,which should include some mathematical analysis and numerical computations.The project report and presentation make 20 percent of our course grade and more importantly,is our opportunity to learn about a concept of interest that involves some aspect ofanalysis.

Report guidelines:We take a project to be a substantial piece of written work (mini-thesis), in which the student has some element of choice over topic. The report should be roughly 15-20 pages, double-spaced, using word or some other appropriate format. There are individual assignments under the supervision of a member or staff. The report should include theoretical or computational significance inmathematics, but may also include less technical explanations and relevant historical or scientific background (who developed the method,why the method was developed,how its usage is, etc.)

Source:-You should use at least two sources of information,which may include your text book, other booksand scholarly articles.You should not rely on any website as a main source of information, but searching the web may help initially as an idea-generator to create interest on topics and for basic information.

Assessment: We have argued that depth of understanding, especially of proofs,plays a more central role in projects.For this reason we think the viva should be a required part of the assessment.The viva is also

needed to reward the student who has substantiated the topic in a material form, for example, the web, but used it logically and with understanding, and penalize the student who has lifted mindlessly. The main assessment of the written report, often supplemented by contributions from an oral presentation, along with a book of work progress, poster presentation etc.

For each selected problem, a good presentation of data would include.

- A description of the problem and numerical method.
- One table showing the errors resulting from all the different methods.
- One graph showing the numerical solutions.
- One graph showing the errors.
- A writeup explaining your results and analysis of what is happening with the different methods and why.
- A copy of your codes in the appendix.

For example: project name:Numerical differentiation and integration

Abstract:

Keywords:

Introduction:

We will normally evaluate the derivative or integral of a simple function by using calculus.When the functions are complicated, we have to apply some numerical techniques to obtain the approximate values for their derivatives and integrals.

Conclusion:

References:

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B.Sc MICROBIOLOGY (CBCS) SYLLABUS

THIRD YEAR
SEMESTER –VI – W.E.F. 2017-18

(ELECTIVE)
PAPER-VII - MICROBIAL DIAGNOSIS IN HEALTH CLINICS

TOTAL HOURS: 36 **CREDITS: 3**

UNIT- I **No. of hours: 8**

Bacterial, Viral, Fungal and Protozoan Diseases of various human body systems, Disease associated clinical samples for diagnosis.

UNIT- II **No. of hours: 8**

Collection of clinical samples (oral cavity, throat, skin, blood, CSF, urine and faeces) and precautions required.
Method of transport of clinical samples to laboratory and storage.

UNIT- III **No. of hours: 8**

Examination of sample by staining - Gram stain, Ziehl-Neelson staining for tuberculosis, Giemsa-stained thin blood film for malaria
Preparation and use of culture media - Blood agar, Chocolate agar, Lowenstein-Jensen medium, MacConkey agar, Distinct colony properties of various bacterial pathogens.

UNIT- IV **No. of hours: 6**

Serological Methods - Agglutination, ELISA, immunofluorescence, Nucleic acid based methods - PCR, Nucleic acid probes.
Typhoid, Dengue and HIV, Swine flu.

UNIT- V **No. of hours: 6**

Importance, Determination of resistance/sensitivity of bacteria using disc diffusion method, Determination of minimal inhibitory concentration (MIC) of an antibiotic by serial double dilution method

PAPER VII (PRACTICAL) - MICROBIAL DIAGNOSIS IN HEALTH CLINICS

TOTAL HOURS: 36 **CREDITS: 2**

1. Collection transport and processing of clinical specimens (Blood, Urine, Stool and Sputum). Receipts, Labeling, recording and dispatching clinical specimens.
2. Isolation of bacteria in pure culture and Antibiotic sensitivity.
3. Identification of common bacteria by studying their morphology, cultural character, Biochemical reactions, slide agglutination and other tests.
4. Maintenance and preservation of stock culture.

SUGGESTED READING

Ananthanarayan R and Paniker CKJ (2009) **Textbook of Microbiology**, 8th edition, Universities Press Private Ltd.

Brooks G.F., Carroll K.C., Butel J.S., Morse S.A. and Mietzner, T.A. (2013) Jawetz, Melnick and Adelberg's **Medical Microbiology**. 26th edition. McGraw Hill Publication

Collee JG, Fraser, AG, Marmion, BP, Simmons A (2007) Mackie and Mccartney Practical **Medical Microbiology**, 14th edition, Elsevier.

Randhawa, VS, Mehta G and Sharma KB (2009) **Practicals and Viva in Medical Microbiology** 2nd edition, Elsevier India Pvt Ltd

Tille P (2013) Bailey's and Scott's **Diagnostic Microbiology**, 13th edition, Mosby

B.Sc MICROBIOLOGY (CBCS) SYLLABUS
THIRD YEAR
SEMESTER- VI – W.E.F. 2017-18

(CLUSTER ELECTIVE – I)

PAPER VIII (A) - MICROBIAL BIOTECHNOLOGY

TOTAL HOURS: 36 **CREDITS: 3**

UNIT- I
No. of Hours: 8

Microbial biotechnology: Scope and its applications in human therapeutics, agriculture (Biofertilizers, PGPR, Mycorrhizae), environmental, and food technology.
Genetically engineered microbes for industrial application: Bacteria and yeast

UNIT- II
No. of Hours: 7

Recombinant microbial production processes in pharmaceutical industries - Streptokinase, recombinant vaccines (Hepatitis B vaccine).
Microbial polysaccharides, polyesters and bioplastics.
Microbial production of bio-pesticides
Microbial biosensors

UNIT- III
No. of Hours: 10

Microbial based transformation of steroids and sterols.
Bio-catalytic processes and their industrial applications: Production of high fructose syrup and production of cocoa butter substitute.
Immobilization methods and their application: Whole cell immobilization

UNIT- IV
No. of Hours: 7

Bio-ethanol and bio-diesel production: commercial production from lignocellulosic waste and algal biomass.
Biogas production: Methane and hydrogen production using microbial culture. Microorganisms in bioremediation: Degradation of xenobiotics.
Mineral recovery, removal of heavy metals from aqueous effluents.

UNIT- V
No. of Hours: 4

Outlines of Intellectual Property Rights: Patents, Copyrights, Trademarks

PAPER VIII(A) (PRACTICAL) - MICROBIAL BIOTECHNOLOGY

TOTAL HOURS: 36 **CREDITS: 2**

1. Yeast cell immobilization in calcium alginate gels

2. Enzyme immobilization by sodium alginate method

3. Pigment production from fungi (*Trichoderma* / *Aspergillus* / *Penicillium*)

4. Isolation of xylanase or lipase producing bacteria

5. Study of algal Single Cell Proteins

SUGGESTED READING

Crueger W, Crueger A (1990) Biotechnology: **A text Book of Industrial Microbiology** 2nd edition Sinauer associates, Inc.

Demain, A. L and Davies, J. E. (1999). **Manual of Industrial Microbiology and Biotechnology**, 2nd Edition, ASM Press.

Glazer AN and Nikaido H (2007) **Microbial Biotechnology**, 2nd edition, Cambridge University Press

Glick BR, Pasternak JJ, and Patten CL (2010) **Molecular Biotechnology** 4th edition, ASM Press

Gupta PK (2009) **Elements of Biotechnology** 2nd edition, Rastogi Publications

Prescott, Harley and Klein's **Microbiology** by Willey JM, Sherwood LM, Woolverton CJ (2014), 9th edition, Mc Graw Hill Publishers.

Ratledge, C and Kristiansen, B. (2001). **Basic Biotechnology**, 2nd Edition, Cambridge University Press.

Stanbury PF, Whitaker A, Hall SJ (1995) **Principles of Fermentation Technology** 2nd edition., Elsevier Science

Swartz, J. R. (2001). **Advances in Escherichia coli production of therapeutic proteins. Current Opinion in Biotechnology**, 12, 195–201.

B.Sc MICROBIOLOGY (CBCS) SYLLABUS

THIRD YEAR

SEMESTER- VI – W.E.F. 2017-18

(CLUSTER ELECTIVE – 2)

PAPER VIII (B) - MICROBIAL QUALITY CONTROL IN FOOD AND PHARMACEUTICAL INDUSTRIES

TOTAL HOURS: 36 **CREDITS: 3**

UNIT – I

No. of Hours: 8

Good laboratory practices - Good microbiological practices.
Biosafety cabinets – Working of biosafety cabinets, using protective clothing, specification for BSL-1, BSL-2, BSL-3.
Discarding biohazardous waste – Methodology of Disinfection, Autoclaving & Incineration

UNIT – II

No. of Hours: 8

Culture and microscopic methods - Standard plate count, Most probable numbers, Direct microscopic counts, Biochemical and immunological methods: Limulus lysate test for endotoxin, gel diffusion, sterility testing for pharmaceutical products

UNIT – III

No. of Hours: 8

Molecular methods - Nucleic acid probes, PCR based detection, biosensors.

UNIT – IV

No. of Hours: 8

Enrichment culture technique, Detection of specific microorganisms - on XLD agar, *Salmonella Shigella* Agar, Manitol salt agar, EMB agar, McConkey Agar, Saboraud Agar
Ascertaining microbial quality of milk by MBRT, Rapid detection methods of microbiological quality of milk at milk collection centres (COB, 10 min Resazurin assay).

UNIT – V

No. of Hours: 4

Hazard analysis of critical control point (HACCP) - Principles, flow diagrams, limitationsMicrobial Standards for Different Foods and Water – BIS standards for common foods and drinking water.

PAPER VIII (B) (PRACTICAL) - MICROBIAL QUALITY CONTROL IN FOOD AND PHARMACEUTICAL INDUSTRIES

TOTAL HOURS: 36 **CREDITS: 2**

1. Microbiological laboratory safety- General rules & Regulations.

2. Sterility tests for Instruments – Autoclave & Hot Air Oven

3. Disinfection of selected instruments & Equipments

4. Sterility of Air and its relationship to Laboratory & Hospital sepsis.

5. Sterility testing of Microbiological media

6. Sterility testing of Pharmaceutical products –Antibiotics, Vaccines & fluids

7. Standard qualitative analysis of water.

8. Quantitative analysis of water – Membrane filter method

9. Analysis of food samples for Mycotoxins

SUGGESTED READING

Baird RM, Hodges NA and Denyer SP (2005) Handbook of Microbiological Quality control in Pharmaceutical and Medical Devices, Taylor and Francis Inc.

Garg N, Garg KL and Mukerji KG (2010) Laboratory Manual of Food Microbiology I K International Publishing House Pvt. Ltd.

Harrigan WF (1998) Laboratory Methods in Food Microbiology, 3rd ed. Academic Press

Jay JM, Loessner MJ, Golden DA (2005) Modern Food Microbiology, 7th edition. Springer

Laboratory Exercises in Microbiology, George.A.Wistreich & Max.D.Lechtman, 3 rd Ed, Glencoe press, London.

Manual of diagnostic microbiology, Dr.B.J.Wadher & Dr.G.L.Bhoosreddy, Firs.Ed., Himalaya publishing house, Nagpur.

Microbiology - A laboratory manual, Cappuccino & Sherman , 6 th Ed, Pearson Education

Pharmaceutical Microbiology – Purohit

Pharmaceutical Microbiology – W.B. Hugo

B.Sc MICROBIOLOGY (CBCS) SYLLABUS

THIRD YEAR

SEMISTER-VI – W.E.F. 2017-18

(CLUSTER ELECTIVE - 3)

PAPER VIII (C) - BIOFERTILIZERS AND BIOPESTICIDES

TOTAL HOURS: 36 **CREDITS: 3**

UNIT – I

No of Hours: 10

General account of the microbes used as biofertilizers for various crop plants and their advantages over chemical fertilizers.

Symbiotic N_2 fixers: *Rhizobium* - Isolation, characteristics, types, inoculum production and field application, legume/pulses plants

Frankia from non-legumes and characterization.

Cyanobacteria from *Azolla*, characterization, mass multiplication, Role in rice cultivation, Crop response, field application.

UNIT – II

No of Hours: 6

Free living *Azospirillum*, *Azotobacter* - isolation, characteristics, mass inoculum production and field application.

UNIT – III

No of Hours: 6

Phosphate solubilizing microbes - Isolation, characterization, mass inoculum production, field application

UNIT – IV

No of Hours: 7

Importance of mycorrizal inoculum, types of mycorrhizae and associated plants, Mass inoculum production of VAM, field applications of Ectomycorrhizae and VAM.

UNIT – V

No of Hours: 7

General account of microbes used as bioinsecticides and their advantages over synthetic pesticides.

Bacillus thuringiensis - production, Field applications.

Viruses – NPV cultivation and field applications.

PAPER VIII (C) (PRACTICAL) - BIOFERTILIZERS AND BIOPESTICIDES

TOTAL HOURS: 36 **CREDITS: 2**

1. Isolation of *Rhizobium* from root nodules.

3. Isolation of phosphate solubilizers from soil

4. Staining and observation of VAM

3. A visit to biofertilizer production unit.

SUGGESTED READINGS

Agarwal SK (2005) **Advanced Environmental Biotechnology**, APH publication.

Kannaiyan, S. (2003). **Bioetchnology of Biofertilizers,** CHIPS, Texas.

Mahendra K. Rai (2005). **Hand book of Microbial biofertilizers**, The Haworth Press, Inc. New York.

Reddy, S.M. et. al. (2002). **Bioinoculants for sustainable agriculture and forestry**, Scientific Publishers.

Saleem F and Shakoori AR (2012) **Development of Bioinsecticide,** Lap Lambert Academic Publishing GmbH KG

Subba Rao N.S (1995) **Soil microorganisms and plant growth** Oxford and IBH publishing co. Pvt. Ltd. NewDelhi.

BSc. Microbiology (CBCS) syllabus - III year

Semester - VI - Elective paper VII

Title : Microbial Diagnosis in Health clinics

Time : 3 Hrs

Max. marks : 75 marks

section : A

5 x 5 = 25 M

Answer any Five of the following:

1. Diseases of Nervous system.
2. Transportation of clinical samples
3. colony characteristics of various bacterial pathogens.
4. PCR
5. MIC
6. Ziehl-Neelson staining
7. Swine-flu
8. ELISA.

Section - B

5 x 10 = 50 M

Answer the following Questions:

9. a) Give an account on clinical samples associated with diseases? (or)

   b) Explain the causative agent and clinical symptoms of bacterial diseases of human body?

10. a) Give an account of collection of clinical samples? (or)

    b) Write about precautions required to storage the clinical samples?

11. a) Explain the Giemsa- staining technique for given smear?

(or)

b) Describe any culture media preparation for diagnosis?

12. a) Write about nucleic acid based method for diagnosis?

(or)

b) Write various serological methods in detail?

13. a) Explain about determination of drug sensitivity and resistance? (or)

b) Describe the MIC method for antibiotic activity?

BSc. Microbiology (CBCS) syllabus - III year

Semester - VI Cluster elective VIII A

Title: Microbial Biotechnology

Time: 3 Hrs Max. marks: 75M

Section-A

Answer any Five of the following: 5x5 = 25M

1. Bio Fertilizers
2. Strepto kinase
3. Steroids
4. Bio diesel
5. patenting.
6. Microbial biosensors
7. Bioremediation
8. Recombination.

Section-B 5x10 = 50M

Answer the following Questions:

9. a) Write about scope and its applications in Agriculture?

(or)

b) Describe genetically engineered microbes for Industrial application.

10. a) Recombinant Microbial production process in pharmaceutical industries?

(or)

b) Discuss indetail about microbial poly esters and bio-plastics?

11. a) Write about Microbial transformation of steroids and sterols? (or)

b) Explain Immobilization methods and their applications?

12. a) Give an account on bio-gas production by using microbial culture? (or)

b) production of bio-diesel from Algal biomass?

13. a) Write indetail about copyrights ? (or)

b) Write indetail about Trade marks.

BSc. Microbiology (CBCS) syllabus.

III year - semester- VI - cluster- VIII B

Title : Microbial Quality control in food and pharceutical Industries.

Time : 3Hrs. Max.marks: 75M

section - A

5 x 5 = 25M

Answer any five of the following:

1. Incineration
2. Bio safety cabinets
3. Endotoxins
4. Gel-diffusion method.
5. DNA probes
6. EMB Agar
7. MBRT
8. BIS standards for drinking water.

section - B

5 x 10 = 50M

Answer the following Questions:

9. a) Describe good Laboratory practices? (or)
   b) write various methods in discarding bio hazardous wastes?
10. a) Write about various cultural methods of microbes? (or)
    b) Describe various Immunological methods to detect the microbes?
11. a) Describe the PCR method with applications? (or)
    b) Explain indetail about biosensors?

12. a) Describe the enrichment culture technique for specific micro organisms? (or)

b) Write indetail about the microbial quality of milk with suitable methods?

13. a) Explain in detail about HACCP?

b) Give an account of BIS standards for different foods?

BSc. Microbiology (CBCS) Syllabus.

III year - semester - VI - cluster - VIII C

Title: Biofertilizers and Biopesticides

Max. marks: 75M

Time: 3Hrs

Section-A

Answer any five of the following Questions: 5×5=25M

1. Frankia
2. Azospirillum
3. phosphate solubilizing microbes
4. VAM
5. Bio-insecticides
6. NPV
7. Bacillus thuringiensis
8. Mycorrhizae.

Section-B

5×10=50 M

9. a) Explain the biofertilizers for various crop plants and their advantages over chemical fertilizers? (or)

   b) Describe the Mass cultivation and field application of cyanobacteria?

10. a) Describe the Mass cultivation and field application of Azotobacter. (or)

    b) Describe the Mass production and field application of Azo-spirillum

11. a) Describe the Isolation and characteristics of phosphate solubilizing micro organisms? (or)

b) Describe mass production and field application of phosphate solubilizing microorganisms?

12. a) Explain the types of Mycorrhiza associated with plants?

(or)

b) Describe the field application Mass production and field application of Mycorrhizae?

13. a) Differentiate the advantages of Biopesticides over the Synthetic pesticides? (or)

b) Explain the production and field application of Bacillus thuringiensis and NPV?

Andhra Pradesh State Council of Higher Education
B.Sc. PHYSICS SYLLUBUS UNDER CBCS
w.e.f. 2015-16 (Revised in April 2016)

First Semester
Paper I : Mechanics & Properties of Matter
Practical I (Lab-1)

Second Semester
Paper II: Waves & Oscillations
Practical 2 (Lab2)

Third Semester
Paper III: Wave Optics
Practical 3. (Lab 3)

Fourth Semester
Paper IV: Thermodynamics & Radiation Physics
Practical 4.(Lab 4)

Fifth Semester
Paper V: Electricity, Magnetism & Electronics
Paper VI: Modern Physics
Practical 5.(Lab 5)
Practical 6.(Lab 6)

Sixth Semester
PaperVII: Elective (One)
Paper VIII: Cluster Electives (Three)
Practical 7 (Lab 7)
Practical 8 (Lab 8)

Proposed Electives in Semester - VI

Paper – VII (one elective is to be chosen from the following)

Paper VII-(A): Analog and Digital Electronics
Paper VII-(B): Materials Science
Paper VII-(C): Renewable Energy

Paper – VIII (one cluster of electives (A-1,2,3 or B-1,2,3 or C-1,2,3) to be chosen *preferably* relating to the elective chosen under paper – VII (A or B or C)

Cluster 1
Paper VIII-A-1. Introduction to Microprocessors and Microcontrollers
Paper VIII-A-2.Computational Physics and Programming
Paper VIII-A-3. Electronic Instrumentation

Cluster 2

Paper VIII-B-1.Fundamentals of Nanoscience
Paper VIII-B-2.Synthesis and Characterization of Nanomaterials
Paper VIII-B-3.Applications of Nanomaterials and Devices

Cluster 3

Paper VIII-C-1.Solar Thermal and Photovoltaic Aspects
Paper VIII-C-2.Wind, Hydro and Ocean Energies
Paper VIII-C-3.Energy Storage Devices

NOTE: Problems should be solved at the end of every chapter of all Units.

1. Each theory paper is of 100 marks and practical paper is also of 50 marks.
   Each theory paper is 75 marks University Exam (external) + 25 marks mid Semester Exam (internal). Each practical paper is 50 marks external
2. The teaching work load per week for semesters I to VI is 4 hours per paper for theory And 2 hours for all laboratory (practical) work.
3. The duration of the examination for each theory paper is 3.00 hrs.
4. The duration of each practical examination is 3 hrs with 50 marks, which are to be distributed as30 marks for experiment
   10 marks for viva
   10 marks for record

Practicals	**50 marks**
Formula & Explanation	6
Tabular form +graph +circuit diagram	6
Observations	12
Calculation, graph, precautions & Result	6
Viva-Voce	10
Record	10

***NOTE: Practical syllabus is same for both Mathematics and Non Mathematics combinations**



B.Sc. (Physics) (Maths Combinations)

Scheme of instruction and examination to be followed w.e.f. 2015-2016

S. No	Semester	Title of the paper	Instruc-tion hrs/week	Duration of exam(hrs)	Max Marks (external)
		Thoery			
1	First	Paper I: Mechanics& Properties of Matter	4	3	75
2	Second	Paper II: Waves & Oscillations	4	3	75
3	Third	Paper III: Wave Optics	4	3	75
4	Fourth	Paper IV: Thermodynamics & Radiation Physics	4	3	75
5	Fifth	Paper V:Electricity, Magnetism& Electronics Paper VI: Modern Physics	4 4	3 3	75 75
6	Sixth	PaperVII :Elective (One) Paper VIII: Cluster Electives (Three)	4 4	3 3	75 75
		Practicals			
1	First	Practical 1	2	3	50
2	Second	Practical II	2	3	50
3	Third	Practical III	2	3	50
4	Fourth	Practical IV	2	3	50
5	Fifth	Practical V	2	3	50
6		Practical VI	2	3	50
7	Sixth	Practical VII	2	3	50
8		Practical VIII	2	3	50

Model question Paper for all theory papers

Time : 3 hrs **Max marks: 75**

Section-A (Essay type)

Answer All questions with internal choice from all units Marks: 10x5 = 50

(Two questions are to be set from each unit with either or type)

Section-B (Short answer type)

Answer any three out of 5 questions from all units (I to V) Marks: 5 x3 = 15

At least one question should be set from each unit.

Section-C

Answer any two out of 5 questions set from all units Marks: 5x2 = 10



Paper VII-(B) Elective (Materials Science)

Semester –VI
Elective Paper –VII-(B): Materials Science

No. of Hours per week: 04 **Total Lectures:60**

UNIT-I (12 hrs)
1.Materials and Crystal Bonding: Materials, Classification, Crystalline, Amorphous, Glasses; Metals, Alloys, Semiconductors, Polymers, Ceramics, Plastics, Bio-materials, Composites, Bulk and nanomaterials. Different types of chemical bonds – Ionic covalent bond or homopolar bond – Metallic bond – Dispersion bond – Dipole bond – Hydrogen bond – Binding energy of a crystal.

UNIT-II (12 hrs)
2. Defects and Diffusion in Materials: Introduction – Types of defects - Point defects- Line defects- Surface defects- Volume defects- Production and removal of defects- Deformation- irradiation- quenching- annealing- recovery. Diffusion in solids- Fick's laws of diffusion.

UNIT-III(12 hrs)
3. Mechanical Behavior of Materials: Different mechanical properties of engineering materials – Creep – Fracture – Technological properties – Factors affecting mechanical properties of a material – Heat treatment - Cold and hot working – Types of mechanical tests – Deformation of metals.

UNIT-IV (12 hrs)
4. Magnetic Materials: Dia-, Para-, Ferri- and Ferromagnetic materials, Classical Langevin theory of dia magnetism. Curie's law, Weiss's theory of ferromagnetism, Ferromagnetic domains. Discussion of B-H Curve. Hysteresis and energy Loss.

UNIT-V (12 hrs)
5. Dielectric Materials: Dielectric constant, dielectric strength and dielectric loss, polarizability, mechanism of polarization, factors affecting polarization, polarization curve and hysteresis loop, types of dielectric materials, applications; ferroelectric, piezoelectric and pyroelectric materials, Clausius -Mosotti equation.

Reference books
1. Materials Science by M. Arumugam, Anuradha Publishers. 1990, Kumbakonam.
2. Materials Science and Engineering V. Raghavan, Printice Hall India Ed. V 2004. New Delhi.
3. Elementary Solid State Physics, 1/e M. Ali Omar, 1999, Pearson India
4. Solid State Physics, M.A. Wahab, 2011, Narosa Publications



Elective Paper-VII-B Practical: Materials Science **2hrs/Week**

Minimum of 6 experiments to be done and recorded

1. Measurement of susceptibility of paramagnetic solution (Quinck`s Tube Method)
2. Measurement of magnetic susceptibility of solids.
3. Determination of coupling coefficient of a piezoelectric crystal.
4. Measurement of the dielectric constant of a dielectric Materials
5. Study the complex dielectric constant and plasma frequency of metal using surface Plasmon resonance (SPR)
7. Study the hysteresis loop of a Ferroelectric Crystal.
8. Study the B-H curve of 'Fe' using solenoid and determine energy loss from hysteresis.
9. Energy gap of a metaloxide semiconductor (thermistor).
10. Determination of activation energy using creep method.
11. Determination of crystallite size of given polycrystalline materials using x-ray diffractogram.

Semester –VI: Cluster Electives – VIII-B
Cluster Elective Paper VIII-B-1: Fundamentals of Nanoscience

No. of Hours per week: 04 **Total Lectures: 60**

UNIT-I (12hrs)

1. Background and history: Emergence of Nanoscience with special reference to Feynman and Drexler; Role of particle size; Spatial and temporal scale; Concept of confinement, strong and weak confinement with suitable example; Development of quantum structures, Basic concept of quantum well, quantum wire and quantum dot.

Size dependence of properties, crystal structures, Lattice vibrations, Energy bands:- Insulators Semiconductors and conductors.

UNIT-II (12hrs)

2. Classification of Nanomaterials: Inorganic nanomaterials: carbon nanotubes and cones, Organic nanomaterials: dendrimers, micelles, liposomes, block copolymers; Bionanomaterials: Biomimtric, bioceramic and nanotherapeutics; Nanomaterials for molecular electronics and optoelectronics.

UNITS-III (12hrs)

3. Macromolecules: Classification of polymers, chemistry of polymerization, chain polymerization, step polymerization, coordination polymerization. Molecular weight of polymers-number average and weight average molecular weight, degree of polymerization, determination of molecular weight of polymers by viscometry. Preparation and application of polyethylene, PVC, Teflon.



UNIT-IV (12hrs)

4. Molecular & Nanoelectronics: Semiconductors, Transition from crystal technology to nanotechnology. Tiny motors, Gyroscopes and accelerometers. Nano particle embedded wrinkle resistant cloth, Transparent Zinc Oxide sun screens. Bio-systems, Nanoscale processes in environment. Nanoscale structures and quantum computing. Single electron transistors.

UNIT-V (12hrs)

5. Biomaterials: Implant materials: Stainless steels and its alloys, Ti and Ti based alloys, Ceramic implant materials; Hydroxyapatite glass ceramics, Carbon Implant materials, Polymeric Implant materials, Soft tissue replacement implants, Sutures, Surgical tapes and adhesives, heart valve implants, Artificial organs, Hard Tissue replacement Implants, Internal Fracture Fixation Devices, Wires, Pins, and Screws, Fracture Plates.

Reference Books

1. T. Pradeep: Textbook of Nanoscience and Nanotechnology Chapter (McGraw-Hill Professional, 2012), Access Engineering.
2. C. N. R. Rao, A. Mu¨ller, A. K. Cheetham, "The Chemistry of Nanomaterials :Synthesis, Properties and Applications", Wiley-VCH, 2006.
3. C. Breachignac P. Houdy M. Lahmani, "Nanomaterials and Nanochemistry", Springer, 2006.
4. Guozhong Cao, "Nanostructures and Nanomaterials: Synthesis, Properties, and Applications", World Scientific Publishing Private, Ltd., 2011.
5. Zhong Lin Wang, "Characterization of Nanophase Materials", Wiley-VCH, 2004.
6. Carl C. Koch, "Nanostructured Materials: Processing, Properties and Potential Applications", William Andrew Publishing Norwich, 2006.

Elective Paper- VIII-B-1: Practical: Fundamentals of Nanoscience 2hrs/Week

A project based on any of the concepts of Fundamentals of Nanoscience covered in the theory paper (VIII-B-1)



Semester –VI

Cluster Elective Paper –VIII-B-2: Synthesis and Characterization of Nanomaterials

No. of Hours per week: 04 **Total Lectures: 60**

Unit-I (12 hrs)

1. Nanomaterials synthesis: Synthesis and nanofabrication, Bottom-Up and Top-Down approach with examples. Chemical precipitation methods, sol-gel method, chemical reduction, hydrothermal, process. Physical Mehtods- ball milling, Physical Vapour deposition (PVD), Sputtering, Chemical Vapor deposition (CVD), spray pyrolysis, Biological methods- Synthesis using micro organisms and bacteria, Synthesis using plant extract.

Unit-II (12 hrs)

2. Classification of materials: Types of materials, Metals, Ceramics (Sand glasses) polymers, composites, semiconductors. Metals and alloys- Phase diagrams of single component, binary and ternary systems, diffusion, nucleation and growth. Mechanical properties. Metallic glasses. Preparation, structure and properties like electrical, magnetic, thermal and mechanical, applications.

UNITS-III (12 hrs)

3. Glasses: The glass transition - theories for the glass transition, Factors that determine the glass-transition temperature. Glass forming systems and ease of glass formation, preparation of glass materials. Applications of Glasses: Introduction: Electronic applications, Electrochemical applications, optical applications, Magnetic applications.

UNITS-IV (12 hrs)

4. Liquid Crystals: Mesomorphism of anisotropic systems, Different liquid crystalline phase and phase transitions, Thermal and electrical properties of liquid crystals, Types Liquid Crystals displays, few applications of liquid crystals.

UNITS-V (12 hrs)

5. Characterization Methods: XRD, SEM, TEM, AFM, XPS and PL characterization techniques for nano materials. Electrical and mechanical properties, Optical properties by IR and Raman Spectroscopy.

References books

1. Encyclopedia of Nanotechnology by M.Balakrishna Rao and K.Krishna Reddy, Vol.I to X, Campus books.
2. Nano: The Essentials-Understanding Nanoscinece & Nanotechnology by T.Pradeep; Tata Mc. Graw Hill
3. Nanotechnology in Microelectronics & Optoelectronics, J.M Martine Duart, R.J Martin Palma, F. Agullo Rueda, Elsevier
4. Nanoelectronic Circuit Design, N.K Jha, D Chen, Springer
5. Handbook of Nanophysics- Nanoelectronics & Nanophotonics, K.D Sattler, CRC Press
6. Organic Electronics-Sensors & Biotechnology- R. Shinar & J. Shinar, McGraw-Hill.



Cluster Elective Paper- VIII-B-2: Practical: Synthesis and Characterization of Nanomaterials **2hrs/Week**

Minimum of 6 experiments to be done and recorded

1. Synthesis of nanocrystalline films of II-VI compounds doped with rare earths by chemical process.
2. Synthesis of Alkaline earth aluminates in nanocrystalline form by combustion synthesis.
3. Preparation of surface conducting glass plate by spray pyrolysis method
4. Preparation of surface conducting glass plate by chemical route
5. Fabrication of micro fluidic nanofilter by polymerisation reaction
6. Absorption studies on the nanocrystalline films and determination of absorption coefficient.
7. Determination of band gap from the absorption spectra using Tauc's plots.
8. Study of Hall effect in semiconductors and its application in nanotechnology.
9. Measurement of electrical conductivity of semiconductor film by Four Probe method and study of temperature variation of electrical conductivity.
10. Determination of the Band Gap of Semiconductor Nanoparticles.

Semester –VI

Cluster Elective Paper –VIII-B-3: Applications of Nanomaterials and Devices

No. of Hours per week: 04 **Total Lectures: 60**

UNIT-I (12 hrs)

1. Optical properties: Coulomb interaction in nanostructures. Concept of dielectric constant for nanostructures and charging of nanostructure. Quasi-particles and excitons. Excitons in direct and indirect band gap semiconductor nanocrystals. Quantitative treatment of quasi-particles and excitons, charging effects. Radiative processes: General formalization-absorption, emission and luminescence. Optical properties of heterostrctures and nanostructures.

UNIT-II (12 hrs)

2. Electrical transport:

Carrier transport in nanostrcutures. Hall effect, determination of carrier mobility and carrier concentration; Coulomb blockade effect, thermionic emission, tunneling and hoping conductivity. Defects and impurities: Deep level and surface defects.

UNIT-III (12 hrs)

3. Applications: Applications of nanoparticles, quantum dots, nanowires and thin films for photonic devices (LED, solar cells). Single electron transfer devices (no derivation). CNT based transistors. Nanomaterial Devices: Quantum dots heterostructures lasers, optical switching and optical data storage. Magnetic quantum well; magnetic dots - magnetic data storage. Micro Electromechanical Systems (MEMS), Nano Electromechanical Systems (NEMS).



UNIT-IV(12 hrs)

4. Nanoelectronics: Introduction, Electronic structure of Nanocrystals, Tuning the Band gap of Nanoscale semiconductors, Excitons, Quantum dot, Single electron devices, Nanostructured ferromagnetism, Effect of bulk nanostructuring of magnetic properties, Dynamics of nanomagnets, Nanocarbon ferromagnets, Giant and colossal magneto-resistance, Introduction of spintronics, Spintronics devices and applications.

UNIT-V (12 hrs)

5. Nanobiotechnology and Medical application: Introduction, Biological building blocks- size of building blocks and nanostructures, Peptide nanowires and protein nanoparticles, DNA double nanowires, Nanomaterials in drug delivery and therapy, Nanomedicine, Targeted gold nanoparticles for imaging and therapy.

Reference books:

1.C.P. Poole, Jr. Frank J. Owens, Introduction to Nanotechnology (Wiley India Pvt. Ltd.).
2.S.K. Kulkarni, Nanotechnology: Principles & Practices (Capital Publishing Company).
3. K.K. Chattopadhyay and A.N. Banerjee, Introduction to Nanoscience & Technology (PHI Learning Private Limited).
4. Richard Booker, Earl Boysen, Nanotechnology (John Wiley and Sons).

Cluster Elective Paper-VIII-B-3: Practical: Applications of Nanomaterials and Devices 2hrs/Week

Minimum of 6 experiments to be done and recorded

1. Synthesis of metal nanoparticles by chemical route.
2. Synthesis of semiconductor nanoparticles.
3. Surface Plasmon study of metal nanoparticles by UV-Visible spectrophotometer.
4. XRD pattern of nanomaterials and estimation of particle size.
5. To study the effect of size on color of nanomaterials.
6. Prepare a disc of ceramic of a compound using ball milling, pressing and sintering, and study its XRD.
7. Fabricate a thin film of nanoparticles by spin coating (or chemical route) and study transmittance spectra in UV-Visible region.
8. Fabricate a pn-diode by diffusing Al over the surface of n-type Si and study its I-V characteristics.

B.Sc. (Physics) (Non-Mathematics Combinations)
Scheme of instruction and examination to be followed w.e.f. 2016-2017

S.No	Semester	Title of the paper	Instruction Hrs/week	Duration o f exam (hrs)	Max Marks (external)
		Theory			
1	First	Paper I: Mechanics & Properties of Matter	4	3	75
2	Second	Paper II: Waves & Oscillations	4	3	75
3	Third	Paper III: Optics	4	3	75
4	Fourth	Paper IV: Thermodynamics & Radiation Physics	4	3	75
5	Fifth	Paper V: Electricity, Magnetism & electronics Paper VI: Modern Physics & Medical Physics	4 4	3 3	75 75
6	Sixth	PaperVII : Elective Paper VIII: Cluster Electives	4 4	3 3	75 75
		Practical			
1	First	Practical 1	2	3	50
2	Second	Practical II	2	3	50
3	Third	Practical III	2	3	50
4	Fourth	Practical IV	2	3	50
5	Fifth	Practical V	2	3	50
6		Practical VI	2	3	50
7	Sixth	Practical VII	2	3	50
8		Practical VIII	2	3	50



B.Sc. Physics under CBCS for Non-Mathematics Combinations

w.e.f. 2015-16 (Revised in April, 2016)

Paper VII-(B) Elective (Materials Science)

Semester –VI

Elective Paper –VII-(B): Materials Science

No. of Hours per week: 04 **Total Lectures:60**

UNIT-I (12 hrs)

1.Materials and Crystal Bonding: Materials, Classification, Crystalline, Amorphous, Glasses; Metals, Alloys, Semiconductors, Polymers, Ceramics, Plastics, Bio-materials, Composites, Bulk and nanomaterials. Different types of chemical bonds – Ionic covalent bond or homopolar bond – Metallic bond – Dispersion bond – Dipole bond – Hydrogen bond – Binding energy of a crystal.

UNIT-II (12 hrs)

2. Defects and Diffusion in Materials: Introduction – Types of defects - Point defects- Line defects- Surface defects- Volume defects- Production and removal of defects- Deformation- irradiation- quenching- annealing- recovery. Diffusion in solids- Fick's laws of diffusion.

UNIT-III(12 hrs)

3. Mechanical Behavior of Materials: Different mechanical properties of engineering materials – Creep – Fracture – Technological properties – Factors affecting mechanical properties of a material – Heat treatment - Cold and hot working – Types of mechanical tests – Deformation of metals.

UNIT-IV (12 hrs)

4. Magnetic Materials: Dia-, Para-, Ferri- and Ferromagnetic materials, Classical Langevin theory of dia magnetism. Curie's law, Weiss's theory of ferromagnetism, Ferromagnetic domains. Discussion of B-H Curve. Hysteresis and energy Loss.

UNIT-V (12 hrs)

5. Dielectric Materials: Dielectric constant, dielectric strength and dielectric loss, polarizability, mechanism of polarization, factors affecting polarization, polarization curve and hysteresis loop, types of dielectric materials, applications; ferroelectric, piezoelectric and pyroelectric materials, Clausius -Mosotti equation.

Reference books

1. Materials Science by M. Arumugam, Anuradha Publishers. 1990, Kumbakonam.
2. Materials Science and Engineering V. Raghavan, Printice Hall India Ed. V 2004. New Delhi.
3. Elementary Solid State Physics, 1/e M. Ali Omar, 1999, Pearson India
4. Solid State Physics, M.A. Wahab, 2011, Narosa Publications



Elective Paper-VII-B Practical: Materials Science **2hrs/Week**

Minimum of 6 experiments to be done and recorded

1. Measurement of susceptibility of paramagnetic solution (Quinck`s Tube Method)
2. Measurement of magnetic susceptibility of solids.
3. Determination of coupling coefficient of a piezoelectric crystal.
4. Measurement of the dielectric constant of a dielectric Materials
5. Study the complex dielectric constant and plasma frequency of metal using surface Plasmon resonance (SPR)
7. Study the hysteresis loop of a Ferroelectric Crystal.
8. Study the B-H curve of 'Fe' using solenoid and determine energy loss from hysteresis.
9. Energy gap of a metaloxide semiconductor (thermistor).
10. Determination of activation energy using creep method.
11. Determination of crystallite size of given polycrystalline materials using x-ray diffractogram.

Semester –VI: Cluster Electives – VIII-B
Cluster Elective Paper VIII-B-1: Fundamentals of Nanoscience

No. of Hours per week: 04 **Total Lectures: 60**

UNIT-I (12hrs)

1. Background and history: Emergence of Nanoscience with special reference to Feynman and Drexler; Role of particle size; Spatial and temporal scale; Concept of confinement, strong and weak confinement with suitable example; Development of quantum structures, Basic concept of quantum well, quantum wire and quantum dot.

Size dependence of properties, crystal structures, Lattice vibrations, Energy bands:- Insulators Semiconductors and conductors.

UNIT-II (12hrs)

2. Classification of Nanomaterials: Inorganic nanomaterials: carbon nanotubes and cones, Organic nanomaterials: dendrimers, micelles, liposomes, block copolymers; Bionanomaterials: Biomimtric, bioceramic and nanotherapeutics; Nanomaterials for molecular electronics and optoelectronics.

UNITS-III (12hrs)

3. Macromolecules: Classification of polymers, chemistry of polymerization, chain polymerization, step polymerization, coordination polymerization. Molecular weight of polymers-number average and weight average molecular weight, degree of polymerization, determination of molecular weight of polymers by viscometry. Preparation and application of polyethylene, PVC, Teflon.



UNIT-IV (12hrs)

4. Molecular & Nanoelectronics: Semiconductors, Transition from crystal technology to nanotechnology. Tiny motors, Gyroscopes and accelerometers. Nano particle embedded wrinkle resistant cloth, Transparent Zinc Oxide sun screens. Bio-systems, Nanoscale processes in environment. Nanoscale structures and quantum computing. Single electron transistors.

UNIT-V (12hrs)

5. Biomaterials: Implant materials: Stainless steels and its alloys, Ti and Ti based alloys, Ceramic implant materials; Hydroxyapatite glass ceramics, Carbon Implant materials, Polymeric Implant materials, Soft tissue replacement implants, Sutures, Surgical tapes and adhesives, heart valve implants, Artificial organs, Hard Tissue replacement Implants, Internal Fracture Fixation Devices, Wires, Pins, and Screws, Fracture Plates.

Reference Books

1. T. Pradeep: Textbook of Nanoscience and Nanotechnology Chapter (McGraw-Hill Professional, 2012), Access Engineering.
2. C. N. R. Rao, A. Mu¨ller, A. K. Cheetham, "The Chemistry of Nanomaterials :Synthesis, Properties and Applications", Wiley-VCH, 2006.
3. C. Breachignac P. Houdy M. Lahmani, "Nanomaterials and Nanochemistry", Springer, 2006.
4. Guozhong Cao, "Nanostructures and Nanomaterials: Synthesis, Properties, and Applications", World Scientific Publishing Private, Ltd., 2011.
5. Zhong Lin Wang, "Characterization of Nanophase Materials", Wiley-VCH, 2004.
6. Carl C. Koch, "Nanostructured Materials: Processing, Properties and Potential Applications", William Andrew Publishing Norwich, 2006.

Elective Paper- VIII-B-1: Practical: Fundamentals of Nanoscience 2hrs/Week

A project based on any of the concepts of Fundamentals of Nanoscience covered in the theory paper (VIII-B-1)



Semester –VI

Cluster Elective Paper –VIII-B-2: Synthesis and Characterization of Nanomaterials

No. of Hours per week: 04 **Total Lectures: 60**

Unit-I (12 hrs)

1. Nanomaterials synthesis: Synthesis and nanofabrication, Bottom-Up and Top-Down approach with examples. Chemical precipitation methods, sol-gel method, chemical reduction, hydrothermal, process. Physical Mehtods- ball milling, Physical Vapour deposition (PVD), Sputtering, Chemical Vapor deposition (CVD), spray pyrolysis, Biological methods- Synthesis using micro organisms and bacteria, Synthesis using plant extract.

Unit-II (12 hrs)

2. Classification of materials: Types of materials, Metals, Ceramics (Sand glasses) polymers, composites, semiconductors. Metals and alloys- Phase diagrams of single component, binary and ternary systems, diffusion, nucleation and growth. Mechanical properties. Metallic glasses. Preparation, structure and properties like electrical, magnetic, thermal and mechanical, applications.

UNITS-III (12 hrs)

3. Glasses: The glass transition - theories for the glass transition, Factors that determine the glass-transition temperature. Glass forming systems and ease of glass formation, preparation of glass materials. Applications of Glasses: Introduction: Electronic applications, Electrochemical applications, optical applications, Magnetic applications.

UNITS-IV (12 hrs)

4. Liquid Crystals: Mesomorphism of anisotropic systems, Different liquid crystalline phase and phase transitions, Thermal and electrical properties of liquid crystals, Types Liquid Crystals displays, few applications of liquid crystals.

UNITS-V (12 hrs)

5. Characterization Methods: XRD, SEM, TEM, AFM, XPS and PL characterization techniques for nano materials. Electrical and mechanical properties, Optical properties by IR and Raman Spectroscopy.

References books

1. Encyclopedia of Nanotechnology by M.Balakrishna Rao and K.Krishna Reddy, Vol.I to X, Campus books.
2. Nano: The Essentials-Understanding Nanoscinece & Nanotechnology by T.Pradeep; Tata Mc. Graw Hill
3. Nanotechnology in Microelectronics & Optoelectronics, J.M Martine Duart, R.J Martin Palma, F. Agullo Rueda, Elsevier
4. Nanoelectronic Circuit Design, N.K Jha, D Chen, Springer
5. Handbook of Nanophysics- Nanoelectronics & Nanophotonics, K.D Sattler, CRC Press
6. Organic Electronics-Sensors & Biotechnology- R. Shinar & J. Shinar, McGraw-Hill.



Cluster Elective Paper- VIII-B-2: Practical: Synthesis and Characterization of Nanomaterials **2hrs/Week**

Minimum of 6 experiments to be done and recorded

1. Synthesis of nanocrystalline films of II-VI compounds doped with rare earths by chemical process.
2. Synthesis of Alkaline earth aluminates in nanocrystalline form by combustion synthesis.
3. Preparation of surface conducting glass plate by spray pyrolysis method
4. Preparation of surface conducting glass plate by chemical route
5. Fabrication of micro fluidic nanofilter by polymerisation reaction
6. Absorption studies on the nanocrystalline films and determination of absorption coefficient.
7. Determination of band gap from the absorption spectra using Tauc's plots.
8. Study of Hall effect in semiconductors and its application in nanotechnology.
9. Measurement of electrical conductivity of semiconductor film by Four Probe method and study of temperature variation of electrical conductivity.
10. Determination of the Band Gap of Semiconductor Nanoparticles.

Semester –VI

Cluster Elective Paper –VIII-B-3: Applications of Nanomaterials and Devices

No. of Hours per week: 04 **Total Lectures: 60**

UNIT-I (12 hrs)

1. Optical properties: Coulomb interaction in nanostructures. Concept of dielectric constant for nanostructures and charging of nanostructure. Quasi-particles and excitons. Excitons in direct and indirect band gap semiconductor nanocrystals. Quantitative treatment of quasi-particles and excitons, charging effects. Radiative processes: General formalization-absorption, emission and luminescence. Optical properties of heterostrctures and nanostructures.

UNIT-II (12 hrs)

2. Electrical transport:

Carrier transport in nanostrcutures. Hall effect, determination of carrier mobility and carrier concentration; Coulomb blockade effect, thermionic emission, tunneling and hoping conductivity. Defects and impurities: Deep level and surface defects.

UNIT-III (12 hrs)

3. Applications: Applications of nanoparticles, quantum dots, nanowires and thin films for photonic devices (LED, solar cells). Single electron transfer devices (no derivation). CNT based transistors. Nanomaterial Devices: Quantum dots heterostructures lasers, optical switching and optical data storage. Magnetic quantum well; magnetic dots - magnetic data storage. Micro Electromechanical Systems (MEMS), Nano Electromechanical Systems (NEMS).



UNIT-IV(12 hrs)

4. Nanoelectronics: Introduction, Electronic structure of Nanocrystals, Tuning the Band gap of Nanoscale semiconductors, Excitons, Quantum dot, Single electron devices, Nanostructured ferromagnetism, Effect of bulk nanostructuring of magnetic properties, Dynamics of nanomagnets, Nanocarbon ferromagnets, Giant and colossal magneto-resistance, Introduction of spintronics, Spintronics devices and applications.

UNIT-V (12 hrs)

5. Nanobiotechnology and Medical application: Introduction, Biological building blocks- size of building blocks and nanostructures, Peptide nanowires and protein nanoparticles, DNA double nanowires, Nanomaterials in drug delivery and therapy, Nanomedicine, Targeted gold nanoparticles for imaging and therapy.

Reference books:

1.C.P. Poole, Jr. Frank J. Owens, Introduction to Nanotechnology (Wiley India Pvt. Ltd.).
2.S.K. Kulkarni, Nanotechnology: Principles & Practices (Capital Publishing Company).
3. K.K. Chattopadhyay and A.N. Banerjee, Introduction to Nanoscience & Technology (PHI Learning Private Limited).
4. Richard Booker, Earl Boysen, Nanotechnology (John Wiley and Sons).

Cluster Elective Paper-VIII-B-3: Practical: Applications of Nanomaterials and Devices 2hrs/Week

Minimum of 6 experiments to be done and recorded

1. Synthesis of metal nanoparticles by chemical route.
2. Synthesis of semiconductor nanoparticles.
3. Surface Plasmon study of metal nanoparticles by UV-Visible spectrophotometer.
4. XRD pattern of nanomaterials and estimation of particle size.
5. To study the effect of size on color of nanomaterials.
6. Prepare a disc of ceramic of a compound using ball milling, pressing and sintering, and study its XRD.
7. Fabricate a thin film of nanoparticles by spin coating (or chemical route) and study transmittance spectra in UV-Visible region.
8. Fabricate a pn-diode by diffusing Al over the surface of n-type Si and study its I-V characteristics.



THREE YEAR B.Sc. DEGREE EXAMINATIONS
CHOICE BASED CREDIT SYSTEM
SIXTH SEMESTER
PART – II : PHYSICS
PAPER : VII (B) : MATERIALS SCIENCE
(w.e.f. 2018)
MODEL PAPER

TIME : 3 Hours **Max. Marks : 75**

Section – A
విభాగము – ఎ

(Essay Questions)
(వ్యాసరూప ప్రశ్నలు)

5 x 10 = 50 M

Answer All Questions.
(అన్ని ప్రశ్నలకు సమాధానములు వ్రాయుము)

1. (a) Discuss metallic and hydrogen bonding in crystals with examples.
స్ఫటికాలలో లోహ బంధము మరియు హైడ్రోజన్ బంధములను ఉదాహరణలతో వివరించుము.

OR

(b) Discuss about polymers and Bio-materials.
పాలిమర్స్ మరియు బయో పదార్థములను గూర్చి వివరించుము.

2. (a) What are different types of defects in solids? Explain the types of point defects with examples.
ఘన పదార్థములలో దోషముల రకములను తెల్పుము. బిందు దోషములలోని రకములను ఉదాహరణలతో వివరించుము.

OR

(b) State and explain Fick's laws of diffusion. How does diffusion coefficient depend on temperature?
వ్యాపనమునకు సంబంధించిన ఫిక్స్ నియమములను తెల్పి, వివరించుము. వ్యాపన గుణకము, ఉష్ణోగ్రతపై ఏ విధముగ ఆధారపడుతుందో తెల్పుము.

3. (a) Define creep. Explain the mechanism of creep in materials. Give some applications of creep.
ప్రాకుట అనగానేమి? పదార్థములలో ప్రాకుట అను ప్రక్రియను వివరించుము. ప్రాకుట యొక్క అనువర్తనములను తెల్పుము.

OR

(b) Explain about cold working and hot working states of materials.
పదార్థముల చల్లని పనిచేయు స్థితి మరియు వేడి పనిచేయు స్థితులను వివరించుము.

4. (a) Discuss Langevin's theory of diamagnetism. Derive an expression for the change of magnetic moment.
డయా అయస్కాంతత్వము నకు సంబంధించిన లాంజివాన్ సిద్ధాంతమును చర్చించుము. అయస్కాంత భ్రామకము లోని మార్పునకు సమీకరణమును ఉత్పాదించుము.

OR

(b) Draw and explain B – H curve for a ferromagnetic material. Identify retentivity and coercive fields on the curve.
ఫెర్రో అయస్కాంత పదార్థములకు సంబంధించిన B – H వక్రమును గీచి, వివరించుము. వక్రములో రిటెంటివిటి మరియు కొయార్సివ్ ప్రాంతములను గుర్తించుము.

19/7/18

5. (a) Explain the mechanism of polarization. Explain the factors affecting polarization.
ధ్రువణ ప్రక్రియను వివరించుము. ధ్రువణమును ప్రభావితముచేయు అంశములను వివరించుము.

OR

(b)Explain about ferroelectric and piezo electric materials.
ఫెర్రో విద్యుత్ మరియు పీడన విద్యుత్ పదార్థములను గూర్చి వివరించుము.

Section – B
విభాగము – బి

(Short answer questions)
(స్వల్ప సమాధాన ప్రశ్నలు)

5 x 5 = 25M

Answer any five questions
ఏవేని ఐదు ప్రశ్నలకు సమాధానములు వ్రాయుము.

6. Discuss about composites.
కాంపోజిట్ లను గూర్చి చర్చించుము.

7. Distinguish between ionic and covalent bonds.
అయానిక మరియు సమయోజనీయ బంధాల మధ్య తేడాలను తెల్పుము.

8. Explain annealing with examples.
యనీలింగ్ ప్రక్రియను ఉదాహరణలతో వివరించుము.

9. Discuss briefly about line defects.
రేఖీయ దోషములను సంక్షిప్తముగ వివరించుము.

10. Mention factors affecting mechanical properties of materials.
పదార్థముల యంత్రిక ధర్మాములను ప్రభావితము చేయు అంశములను తెల్పుము.

11. Define fracture. What are brittle and ductile fractures.
పగులు అనగానేమి? పెళుసైన పగులు మరియు మెత్తని పగులు అనగానేమి?

12. State and explain weiss's theory of ferromagnetism.
ఫెర్రో అయస్కాంతత్వమునకు సంబంధించిన వీస్ సిద్ధాంతమును తెల్పి, వివరించుము.

13. Discuss about ferromagnetic domains.
ఫెర్రో అయస్కాంత డొమైన్ లను గూర్చి చర్చించుము.

14. Define dielectric constant, dielectric strength and dielectric loss.
రోధక స్థిరాంకము, రోధక సత్వము మరియు రోధక క్షీణతలను నిర్వచించుము.

15. Discuss briefly about pyroelectricity.
ఫెర్రో విద్యుత్ ను గూర్చి సంక్షిప్తముగ చర్చించుము.

19/2/18

THREE YEAR B.Sc. DEGREE EXAMINATIONS (CBCS), 2017-18

VI Semester, Part-II: Physics

Paper VIII B-1, Cluster Elective: Fundamentals **of Nanoscience**

Model paper

Time: 3 hrs Max. Marks: 75

Section - A

Answer any FIVE questions from the following (5X10 = 50 M)

ఏవేని ఐదు ప్రశ్నలకు సమాధానాలిమ్ము

1. Write a note on emergence of nano science with special reference to Feynman and Drexler.

   నానో శాస్త్రము అభివృద్ధిని ఫిన్‌మెన్ మరియు డ్రెక్స్‌లేర్ పరంగా తెలపండి

2. Write a note on development of quantum structures. Explain the concept of quantum confinement.

   క్వాంటమ్ నిర్మాణాల అభివృద్ధిపై టీకా వ్రాయండి. క్వాంటమ్ కన్‌ఫైన్‌మెంట్ భావనను వివరించండి.

3. Explain the classification of nano materials giving suitable examples for each class.

   నానో పదార్థాల వర్గీకరణను తగిన ఉదాహరణలతో వివరించండి.

4. Describe the applications of carbon nanotubes.

   కార్బన్ నానో గోట్టాల అనువర్తనాలను వివరించండి,

5. Describe the various ways by which polymers can be classified.

   పాలిమర్ల వర్గీకరణలో వివిధ పద్ధతులను వివరించండి.

6. Explain with examples the process of step-growth polymerization.

   స్టెప్ - గ్రోత్ పోలీమరీ కరణమును ఉదాహరణలతో వివరించండి.

7. Discuss the transition from crystal technology to nanotechnology.

   నానో సాంకేతిక పరిజ్ఞానానికి స్ఫటిక సాంకేతిక పరిజ్ఞానం నుండి జరిగిన పరివర్తనను చర్చించండి.

8. Explain the reason for transparent Sum-screens using ZnO nanoparticles.

   ZnO నానో కణాలను సూర్యరశ్మినుండి చర్మాన్ని కాపాడేందుకు ఉపయోగించడం లో కారణాలను తెలపండి.

9. Write note on Ti and its alloys as implant material

   Ti మరియు దాని మిశ్రమలోహాల ను గూర్చి టీకా రాయండి

10. What are the various soft tissue implants? Mention the list of materials used for fabrication of these implants.

    మృదు కణజాల implants ను తెలిపి వానిని తయారుచేయడంలో ఉపయోగించే పదార్థలను పేర్కొనండి?

15/2/18

B-1

Section-B

Answer any Five questions from the following (5 x 5=25 M)

ఏవేని ఐదు ప్రశ్నలకు సమాధానాలిమ్ము

11. Write a note on energy bands in insulators, semiconductors and conductors.

వాహకాలు, అర్ధ వాహకాలు మరియు బందకాల వర్గీకరణను శక్తి పట్టి ల ఆధారంగా వివరించండి.

12. Explain quantum wire.

క్వాంటమ్ తీగ ను వివరించండి.

13. What are the properties of carbon nanotubes?

కార్బన్ నానో గోట్టాల ధర్మాలను తెలపండి.

14. Write short note on Block copolymers.

Block copolymers ల గూర్చి లఘుటీకా రాయండి.

15. What are the applications of Polyethylene?

Polyethylene అనువర్తనాలను తెలపండి.

16. What are number average and weight average molecular weights of polymers?

polymer ల సగటు మరియు భార సగటు అణుభారాలు అనగా నేమి?

17. Write short note on nanoscale processes in environment.

ప్రకృతిలో నానో పరిధి పద్దతుల పై లఘు టీకా వ్రాయండి.

18. Write short note on single electron transistor.

single electron transistor అనగా నేమి?

19. What are the ceramic implant materials?

సిరామిక్ implant పదార్థలు అనగా నేమి?

20. Discuss various internal fracture fixation nano devices.

వివిధ అంతర పగుళ్ళను (లోపాలను) సరిచేసుకొను నానో పరికరాలను గూర్చి వివరించండి.

19/12/18

MODEL PAPER

THREE YEAR B.Sc. DEGREE EXAMINATION/CHOICE BASED CREDIT SYSTEM
SIXTH SEMESTER
PART-II : PHYSICS CLUSTER ELECTIVE
PAPER VIII BH-2: **SYNTHESIS AND CHARACTERIZATION OF NANO MATERIALS**

TIME: 3 HOURS MAX MARKS:75

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SECTION-A

Answer any FIVE Questions. Marks: 5x10=50

1. Define Top - Down process. Explain Ball Milling Method for synthesis of nano particals.
   పై నుండి క్రిందకు పద్దతిని నిర్వచించుము. బాల్ మిల్లింగ్ పద్ధతి ద్వారా నానోకణాల సంశ్లేషణమును వివరింపుము.
2. Define Bottom-Up process. Explain Sol-Gel method for synthesis of nano materials?
   క్రింది నుండి పైకు పద్దతిని నిర్వచింపుము. Sol-Gel పద్ధతి ద్వారా నానోకణాల సంశ్లేషణమును వివరింపుము.
3. Explain Composite Materials and Polymers. Write its applications.
   మిశ్రమ పదార్థములు మరియు పాలిమర్‌లను వివరింపుము. వీటి అనువర్తనాలను వ్రాయుము.
4. What are Metallic Glasses? Mention a few metallic Glasses. How are Metallic glasses prepared?
   లోహపు గాజు అనగా ఏమి? కొన్ని లోహపు గాజులను తెలుపుము. లోహపు గాజును ఏ విధంగా తయారు చేస్తారు?
5. What is meant by glass transition temperature? How glass materials are prepared?
   గాజు సంక్రమణ ఉష్ణోగ్రత అనగా ఏమి? గాజు పదార్థాలను ఏ విధముగా తయారు చేస్తారు.
6. Discuss Electronic application, optical application and Magnetic application of glasses?
   గాజు యొక్క ఎలక్ట్రానిక్ అనువర్తనాలు, దృశ్యా అనువర్తనాలు మరియు అయస్కాంత అనువర్తనాలను చర్చించుము?
7. What are Liquid crystals? Explain different Liquid Crystal phases?
   ద్రవ స్ఫటికాలు అనగా ఏమి? ద్రవ స్ఫటికాల వివిధ దశలను వివరింపుము.

8. Explain Thermal and Electrical properties of Liquid crystals?

   ద్రవస్ఫటికాల ఉష్ణ ధర్మాలు మరియు విద్యుత్తు ధర్మాలను వివరింపుము.

9. Explain the Transmission Electron Microscope (TEM)? Give the advantages of TEM.

   ట్రాన్స్‌మిషన్ ఎలక్ట్రాన్ మైక్రోస్కోపు (TEM) ను వివరింపుము. TEM ఉపయోగాలను తెలుపుము.

10. Explain Atomic force Microscope (AFM). Give the uses of AFM.

    పరమాణబలము మైక్రోస్కాపు (AFM) ను వివరింపుము. AFM ఉపయోగాలను తెలుపుము.

SECTION-B

Answer any FIVE Questions. **Marks: 5x5=25**

11. Explain Chemical vapor deposition method for Synthesis of nanomaterials.

    రసాయనిక ఆవిరుల నిక్షేపము పద్ధతి ద్వాని నానోకణాల సంశ్లేశణమును వివరింపుము.

12. How are nanomaterials produced using bacteria?

    బాక్టీరియాను ఉపయోగించి, నానోపదార్థాలను ఏ విధముగా ఉత్పత్తి చేస్తారు.

13. Explain the Electrical and Magnetic properties of Metallic Glasses.

    లోహపు గాజు యొక్క విద్యుత్తు ధర్మాలు మరియు అయస్కాంత ధర్మాలను వివరింపుము.

14. Write a short note on diffusion.

    విసరణము మీద లఘు వ్యాఖ్యను వ్రాయుము.

15. State Theories for the glass transition.

    గాజు సంక్రమణ సిద్ధాంతమును తెలుపుము.

16. Write Electro Chemical application of Glasses.

    గాజు యొక్క విద్యుత్తు రసాయన అనువర్తనాలను వ్రాయుము.

17. Discuss the applications of Liquid Crystals

    ద్రవస్ఫటికాల అనువర్తనాలను చర్చించుము.

18. What are the types of Liquid Crystals displays?

    ద్రవ స్ఫటికా డిస్‌ప్లేల రకాలు ఏవి?

19. Explain XRD characterization Technique for nano materias.

    నానో పదార్థాల కొరకు XRD అభిలక్షణ పద్ధతి ని వివరింపుము.

20. Write Electrical properties of nano materials.

    నానో పదార్థాల విద్యుత్తు ధర్మాలను వ్రాయుము.

MODEL PAPER

THREE YEAR B.Sc DEGREE EXAMINATION CHOICE BASED CREDIT SYSTEM

SIXTH SEMESTER: PART II: PHYSICS CLUSTER ELECTIVE

Paper VIII-B-3: Applications of Nanomaterials and Devices

Time: 3 Hours | Max. Marks: 75

Section-A (Essay type)

Answer any Five questions **Marks: 5x10 = 50**

ఏవేని ఐదు ప్రశ్నలకు సమాధానాలిమ్ము

1. Eplain the Coulomb interaction in nanostructures and write the concept of dielectric constant for nanostructures.
   నానో రూపాల మధ్య కూలూంబ్ అన్యోన్య చర్యలను వివరించండి మరియు నానో నిర్మాణాల రోదక స్థిరాంకముల భావనను తెలపండి.
2. Explain optical properties of heterostructures and nanostructures.
   విషమ (hetero) నిర్మాణాలు మరియు నానో రూపాల దృశ ధర్మాలను వివరించండి.
3. Define Hall effect in nanostructures and explain how the carrier mobility and carrier concentration are determined in nanostructures.
   నానో రూపాల లో హాల్ ప్రభావం ను తెలిపి వాహకాల చలనం మరియు వాహకాల కణాల సాంద్రత ను ఏవిధంగా కనుగోందురో వివరించండి.
4. Explain the tunneling and hoping conductivity in nanostructures.
   నానో రూపాలలో టనలింగ్ మరియు హెూపింగ్ వాహకత్వాలను వివరించండి.
5. Explain quantum dots and nano wires and their applications.
   క్వాంటమ్ బిందువులు మరియు క్వాంటమ్ తీగల అనువర్తానాల తెలపండి.
6. Explain Optical switching and optical data storage nanomaterial devices.
   Optical switching మరియు optical datastorage నానో పదార్థ పరికరాల ను గూర్చి వివరించండి.
7. Explain the electronic structure of nanocrystals and tuning of band gap of nanoscale semiconductors.
   నానో స్ఫటికాల ఎలక్ట్రానిక్ నిర్మాణం మరియు నానో పరిధి అర్ధ వాహకాల పట్టీ అంతరాన్ని మార్చడాన్ని వివరించండి.
8. What are Spintronics, spintronics devices and write their applications.
   Spintronics, spintronics పరికారలు అనగా నేమి? వాని అనువర్తాలను తెలపండి.
9. What are Peptide nanowires and protein nanoparticles and write their applications.
   Peptide nanowires and protein nanoparticles అనగా నేమి? వాని అనువర్తాలను తెలపండి.
10. Explain the role of nanomaterials in drug delivery and therapy.
    రోగ చికిత్స లో మందుల సరఫరా చేయడంలో నానో పదార్థల పాత్రను విశదీకరించండి.

19/12/18

Section-B (Short answer type)

Answer any Five questions **Marks: 5 x5 = 25**
ఏవేని ఐదు ప్రశ్నలకు సమాధానాలిమ్ము

11. What are quasi-particles and excitons? Explain.
quasi-particles మరియు excitons అనగా నేమి ? వానిని గూర్చి వివరించండి .

12. Explain the process of luminescence in nanomaterials.
నానో పదార్థాలలో ప్రతి దీప్తి ప్రక్రియను వివరించండి .

13. Explain the Coulomb blackade effect.
Coulomb blackade ప్రభావం అనగా నేమి ?

14. Write short note on thermionic emission in nanostructures.
నానో రూపాలలో జరిగే ఉష్ణ ఉత్సర్గం గూర్చి లఘు టీకా వ్రాయండి ?

15. What are CNT based transistors? Explain.
CNT ఆధార transistors అనగా నేమి ? వివరించండి .

16. What are MEMS? Write their applications.
MEMS అనగా నేమి ? వాటి అనువర్తనాలను తెలపండి.

17. Explain nanostructured ferromagnetism.
నానో రూప ఫేర్రో అయస్కాంతత్వమును వివరించండి.

18. Explain the dynamics of nanomagnets.
నానో అయస్కాంతాల గతిశీలతను వివరించండి.

19. What are DNA double nanowires? Write their applications
DNA double నానో తీగలు అనగా నేమి ? వాని అనువర్తనాలను తెలపండి .

20. Explain medical application of targeted gold nanoparticles.
targeted బంగారు నానో కణాల వైద్యశాస్త్ర అనువర్తనాలను తెలపండి .

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19/2/18

SRI VENKATESWARA UNIVERSITY

CBCS B.A./B.Sc. Statistics Course Structure

W.E.F.2017-18

3rd YEAR - VI SEMESTER

STATISTICS

Year	Sem	Paper	Subject	Hrs	Cridets	IA	EA	Total
3	VI	VII	Elective(A)					
			Applied Statistics - I	3	3	25	75	100
			LAB	2	2	-	50	50
			Cluster Elective (A)					
		VIII	A-I : Operations Research	3	3	25	75	100
			A-II :Advanced Operations Research	3	3	25	75	100
			A-III : Numerical Analysis	3	3	25	75	100
			A-I : LAB	2	2	-	50	50
			A-II : LAB	2	2	-	50	50
			A-III : LAB	2	2	-	50	50

SRI VENKATESWARA UNIVERSITY

STATISTICS SYLLABUS

Semester – VI (CBCS With Maths Combination Common to BA/BSc)

Elective Paper – VII(A) : APPLIED STATISTICS - I

UNIT – I

Time series : Introduction, Components of Time Series, Analysis of time series, Uses of time series, Measurement of trend : Graphical method, Semi averages, moving averages and trend lines by straight line and parabola.

UNIT – II

Seasonal Indices : Simple average method, Ratio to moving average method, Ratio to trend method and Link relatives method.

UNIT – III

Index Numbers: Introduction, Applications and Limitations of index numbers, Problems involved in the construction of index numbers, Simple and weighted index numbers, Criteria of good index number, Chain base and fixed base index numbers. Base shifting and Splicing of index numbers. Construction of Cost of living index numbers

UNIT – IV

Vital Statistics : Introduction, Uses of vital statistics, Methods of obtaining vital statistics, Measurement of mortality: CDR,S.D.R and St.D.R , Fertility rates: CBR,GFR, SFR and TFR , Population growth rates: Pearl's vital index, GRR an NRR. Construction of Life Table.

UNIT – V

Official statistics : Present official statistical system in India, Functions and organization of Central Statistical Organization (CSO) and National Sample Survey Organization (NSSO). National Income, Basic concepts of National Income, Uses of National Income, Methods of Estimating National Income.

List of reference books:

1. Gun, A.M., Gupta, M.K. and Dasgupta, B. (2008): Fundamentals of Statistics, Vol. II, 9th Edition World Press, Kolkata.
2. Gupta, S. C. and Kapoor, V.K. (2008): Fundamentals of Applied Statistics, 4th Edition(Reprint), Sultan Chand & Sons
3. B.A/B.Sc III Year Paper-III Statistics- Applied Statistics- Telugu Academic by Prof.K.Srinivasa Rao, Dr.D. Giri, Dr.A.Anand, Dr.V.Papaiah Sastry
4. B.A/B.Sc Statistics, Applied Statistics Paper-III, Kalyani Publishers
5. K.V.S. Sarma: Statistics Made Simple: do it yourself on PC. PHI.

STATISTICS PRACTICALS

Semester – VI (CBCS With Maths Combination Common to BA/BSc)

Elective Paper – VII(A) : APPLIED STATISTICS - I

1. Calculation of trend values by Moving Average Method(Odd & Even Period)
2. Calculation of trend values by Linear Trend method
3. Calculation of seasonal indices by Simple Average Method
4. Calculation of seasonal indices by Ratio to Moving Average Method
5. Calculation of seasonal indices by Ratio – to- Trend Method
6. Calculation of seasonal indices by Link Relatives Method
7. Calculation of simple and weighted price relative index numbers
8. Calculation of different Weighted index numbers
9. Construction of Fisher Good Index number
10. Construction of Cost of living index number

SRI VENKATESWARA UNIVERSITY

STATISTICS MODEL QUESTION PAPER

Semester – VI (CBCS With Maths Combination Common to BA/BSc)

Elective Paper – VII(A) : APPLIED STATISTICS -I

(w.e.f. 2017-18)

(Scientific calculators are allowed)

Time:3 Hours Max.Marks:75

PART - A

Answer any **FIVE** of the following questions. Each question carries 5 Marks 5 X 5 = 25M

1. Define Time Series. Also write its Uses ?
2. Explain for finding trend values by fitting of straight line ?
3. Explain the method of simple averages to determine seasonal variations ?
4. Explain various simple index numbers
5. Explain the Procedure to construct the cost of living index number ?
6. Explain fixed base and chain base index numbers ?
7. Define Vital Statistics and write its Uses ?
8. Write uses of National Income ?

PART-B

Answer **ALL** questions. Each question carries 10 Marks 5X10=50M

UNIT - I

9. Explain the method of fitting parabolic trend in time series analysis ?

OR

10. Explain components of time series ?

UNIT – II

11. Describe the measurement of seasonal variations by ratio-to-moving average method ?

OR

12. Describe the measurement of seasonal variations by ratio-to-trend method ?

UNIT - III

13. Explain the Problems involved in the construction of Index numbers ?

OR

14. Explain test of reversibility ?

UNIT - IV

15. Explain various rates of fertility ?

OR

16. Explain the construction and Uses of life table ?

UNIT – V

17. What are the main functions of CSO and NSSO ?

OR

18. Explain Methods of Estimating National Income ?

SRI VENKATESWARA UNIVERSITY

STATISTICS SYLLABUS

Semester – VI (CBCS With Maths Combination Common to BA/BSc)

Cluster Elective Paper – VIII(A-1) : OPERATIONS RESEARCH

UNIT –I

Introduction: Origin and development of OR, Nature and features of OR, Modeling in OR, Phases of OR. Applications and Limitations of OR.

UNIT – II

Linear Programming Problem: Introduction, Mathematical formulation of the LPP, Canonical and standard form of LPP. Graphical solution of a Linear Programming Problem , Problems.

UNIT – III

Solution of LPP: Definitions of BFS, IBFS, Degenerate solution, Slack and Surplus variables, Optimum solution, Computational procedure of Simplex method , Big- M method and Two-phase simplex method and Problems.

UNIT – IV

Transportation Problem: Introduction, Transportation Table, General Transportation problem Initial basic feasible solution(IBFS) by North West Corner Rule, Least cost method and Vogel's Approximation Method (VAM), Un-Balanced Transportation Problem, Maximization Transportation Problem

UNIT –V

Assignment problem: Introduction, Mathematical formulation of the problem, Optimal solution by Hungarian method. Un balanced and Maximization case in assignment problem, The travelling salesman problem.

List of reference books:

1. Taha, H. A. (2007): Operations Research: An Introduction, 8th Edition, Prentice Hall of India.
2. KantiSwarup, Gupta, P.K. and Manmohan (2007): Operations Research, 13th Edition, Sultan Chand and Sons.
3. B.A/B.Sc III Year Paper-IV Statistics- applied Statistics- Telugu Academic by Prof.K.Srinivasa Rao, Dr.D. Giri, Dr.A.Anand, Dr.V.Papaiah Sastry
4. B.A/B.Sc Statistics, Applied Statistics Paper-III, Kalyani Publishers
5. S.Kalavathi, Operations Research, 2nd Edition, Vikas

STATISTICS PRACTICALS

Semester – VI (CBCS With Maths Combination Common to BA/BSc)

Cluster Elective Paper – VIII(A-1) : OPERATIONS RESEARCH

1. Formulation of LPP
2. Solution of LPP by Graphical Method
3. Solution of LPP by Simplex Method
4. Solution of LPP by Big M Method
5. Solution of LPP by Two Phase Simple method
6. Solution of TP by North West Corner Rule to find IBFS
7. Solution of TP by Least Cost Method to find IBFS
8. Solution of TP by VAM to find IBFS
9. Solution of Unbalanced TP
10. Solution of Maximization TP
11. Solution of Assignment problem by Hungarian Method
12. Solution of unbalanced Assignment problem.
13. Solution of traveling salesman problem.

SRI VENKATESWARA UNIVERSITY

STATISTICS MODEL QUESTION PAPER

Semester – VI (CBCS With Maths Combination Common to BA/BSc)

Cluster Elective Paper – VIII(A-1) : OPERATIONS RESEARCH

(w.e.f. 2017-18)

(Scientific calculators are allowed)

Time:3 Hours Max.Marks:75

PART -A

Answer any FIVE of the following questions. Each question carries 5 Marks 5X5=25M

1. What is meant by OR ?
2. Write Canonical and standard form of LPP ?
3. Write the procedure of Solving LPP by graphical method ?
4. Write Mathematical formulation of the LPP ?
5. Explain the following terms ?

   (1) Slack Variable (2) Surplus Variable with example
6. Explain Big M-Method ?
7. Find IBFS by North West corner rule ?

	D1	D2	D3	D4	Supply
S1	3	7	6	4	5
S2	2	4	3	2	2
S3	4	3	8	5	3
Demand	3	3	2	2	

8. What is an assignment Problem? Explain mathematical representation of Assignment problem ?

PART-B

Answer **ALL** questions. Each question carries 10 Marks. 5X10=50M

UNIT - I

9. Write applications of Operation Research ?

OR

10. Explain phases of Operation Research ?

UNIT - II

11. A firm can produce 3 types of cloth, A, B and C. Three kinds of wool are required Red, Green and Blue.1 unit of length of type A cloth needs 2 meters of red wool and 3 meters of blue wool. 1 unit of length of type B cloth needs 3 meters of red wool, 2 meters of green wool and 2 meters of blue wool.1 unit type of C cloth needs 5 meters of green wool and 4 meters of blue wool. The firm has a stock of 8 meters of red, 10 meters of green and 15 meters of blue. It is assumed that the income obtained from 1 unit of type A is Rs.3, from B is Rs.5 and from C is Rs.4. Formulate this as an LPP.

(OR)

12. Solve the following LPP by using graphical method.

Maximize $Z=2X_1+X_2$

Subject to $X_1+2X_2 \leq 10$; $X_1+X_2 \leq 6$; $X_1-X_2 \leq 2$; $X_1-2X_2 \leq 1$

and $X_1, X_2 \geq 0$

UNIT - III

13. Describe the Computational Procedure of the Simplex method for the solution of LPP?

(OR)

14. Solve the following LPP by two Phase Simplex method

Maximize $Z=3X_1+2X_2$

Subject to $2X_1+X_2 \leq 2$

$3X_1+4X_2 \geq 12$

$X_1, X_2 \geq 0$

UNIT - IV

15. Find IBFS for the following T.P by VAM ?

Origins	Destinations				Supply/ Available
	D	E	F	G	
A	11	13	17	14	250
B	16	18	14	10	300
C	21	24	13	10	400
Demand/ requirement	200	225	275	250	

(OR)

16. Explain North-west corner rule and Lowest cost entry method of finding IBFS ?

UNIT - V

17. Solve the following Assignment Problem ?

Jobs	Persons				
	P_1	P_2	P_3	P_4	P_5
J_1	3	8	2	10	3
J_2	8	7	2	9	7
J_3	6	4	2	7	5
J_4	8	4	2	3	5
J_5	9	10	6	9	10

OR

18. Explain Hungarian method of solving assignment problem

SRI VENKATESWARA UNIVERSITY

STATISTICS SYLLABUS

Semester – VI (CBCS With Maths Combination Common to BA/BSc)

Cluster Elective Paper – VIII(A-II) : ADVANCED OPERATIONS RESEARCH

UNIT – I

Sequencing Problem: Introduction, Principal assumptions, Basic terms used in sequencing, Optimum Sequence Algorithm (Johnston Algorithm) processing n Jobs through two machines, Processing n Jobs through three machines and K machines

UNIT-II

Game theory: Introduction, Definition, Payoff matrix , Types of games, Saddle point, Games with out saddle point, Graphical method for 2xn or mx2 games, Maximin-Minimax principle, Solution to rectangular game using graphical method, Dominance property to reduce the game matrix and solutions.

UNIT-III

Queuing System: Introduction, Queuing system, Arrival pattern, Service mechanism, Queue discipline, Customer's behavior, Transient and steady states, Traffic intensity, Kendall's notation for representing Queuing models, Classification of Queuing models, Problems on Model -1 (M/M/1 : with finite and infinite system capacity) only.

UNIT – IV

Network: Introduction, Basic terms, Rules of network construction, Numbering the events (Fulkerson,s Rule), Construction of Network, Algorithm and problems on Critical Path method(CPM) and Program evaluation and review technique (PERT).

UNIT – V

Simulation: Definition, Types of simulation, Random variable, Random number, Pseudo-random numbers, Monte-Carlo Technique, Generation of random numbers and problems.

List of reference books:

1. Taha, H. A. (2007): Operations Research: An Introduction, 8th Edition, Prentice Hall of India.
2. KantiSwarup, Gupta, P.K. and Manmohan (2007): Operations Research, 13th Edition, Sultan Chand and Sons.
3. B.A/B.Sc III Year Paper-IV Statistics- applied Statistics- Telugu Academic by Prof.K.Srinivasa Rao, Dr.D. Giri, Dr.A.Anand, Dr.V.Papaiah Sastry
4. S.Kalavathi, Operations Research, 2nd Edition, Vikas

STATISTICS PRACTICALS

Semester – VI (CBCS With Maths Combination Common to BA/BSc)

Cluster Elective Paper – VIII(A-II) : ADVANCED OPERATIONS RESEARCH

1. N jobs through two machines
2. N jobs through three machines
3. N jobs through K machines
4. Graphical method for 2xn or mx2 games
5. Principle of Dominance find the value of game matrix.
6. Measures of Model I
7. Critical Path Method(CPM)
8. Programme Evaluation and Review Technique(PERT)
9. Monte -carlo technique of simulation

SRI VENKATESWARA UNIVERSITY

STATISTICS MODEL QUESTION PAPER

Semester – VI (CBCS With Maths Combination Common to BA/BSc)

Cluster Elective Paper – VIII(A-II) : ADVANCED OPERATIONS RESEARCH

(w.e.f. 2017-18)

(Scientific calculators are allowed)

Time:3 Hours Max.Marks:75

PART -A

Answer any FIVE of the following questions. Each question carries 5 Marks 5X5=25M

1. Define the Problem of Sequencing and Explain its assumptions.
2. We have five jobs each of which must go through the two machines A and B in the order AB. Processing times in hours are given in the table below.

Job	:	1	2	3	4	5
Machine A	:	5	1	9	3	10
Machine B	:	2	6	7	8	4

Determine the optional sequence that will minimize the elapsed Time.

3. Describe Payoff Matrix ?
4. Explain Maximin-Minimax principle?
5. Explain customer's behavior ?
6. Define the terms Network, Activity, Event ?
7. Explain rules of network construction ?
8. Define simulation

PART-B

Answer **ALL** questions. Each question carries 10 Marks. 5X10=50M

UNIT - I

9. Describe the method of Processing n 'jobs through three machines.

(OR)

10. Determine the optional sequence of jobs that minimize the total elapsed time based on the following information Processing time on machines is given in hours and passing is not allowed.

Job	:	A	B	C	D	E	F	G
M_1	:	3	8	7	4	9	8	7
M_2	:	4	3	2	5	1	4	3
M_3	:	6	7	5	11	5	6	12

UNIT - II

11. Explain graphical method of 2xn or mx2 games ?

(OR)

12. Solve the following payoff matrix, determine the optimal strategies and the value of game

B

$$A\begin{bmatrix} 5 & 1 \\ 3 & 4 \end{bmatrix}$$

UNIT – III

13. Explain queueing system ?

(OR)

14. The mean arrival rate to a service centre is 3 per hour. The mean service time is found to be 10 minutes per service. Assuming Poisson arrival and exponential service time, find(i) The utilization factor for this service facility(ii)The probability of two units in the system (iii) The expected number of units in the system (iv) The expected time in minutes that a customer has to spend in the system.

UNIT – IV

15. A small maintenance project consist of the following jobs whose precedence relationships is given below.

Job	1-2	1-3	2-3	2-5	3-4	3-6	4-5	4-6	5-6	6-7
Duration(days)	15	15	3	5	8	12	1	14	3	14

Draw an arrow diagram representing the project (ii)Find the total float for each activity?

UNIT - V

16. Explain Monte-Carlo Technique of simulation ?

OR

17. A manufacturing company keeps stock of a special product. Previous experience indicates the daily demand as given below.

Daily Demand	5	10	15	20	25	30
Probability	0.01	0.20	0.15	0.50	0.12	0.02

Simulate the demand for the next 10 days. Also find the daily average demand for the product on the basis of simulated data ?

SRI VENKATESWARA UNIVERSITY

STATISTICS SYLLABUS

Semester – VI (CBCS With Maths Combination Common to BA/BSc)

Cluster Elective Paper – VIII (A-III) :NUMERICAL ANALYSIS

UNIT – I

Finite Differences: Definitions of operators Δ, ∇ and E, - Properties - Relationship among operators-Difference Table- Uses- Estimation of single and Two Missing values- Newton's Binomial expansion rule- Problems

UNIT – II

Interpolation and Extrapolation: Assumptions- uses- Newtons's forward formula- Newtons back ward formula- Interpolation at unequal intervals- Divided differences-properties- Newtons divided differences formula- Lagranges formula- Problems

UNIT – III

Central Difference: Uses – Gauss Forward and Backward formulae- Sterling's formula- Bessel's formula- Laplace everett's formula - Problems

UNIT – IV

Numerical Differentiation: First and Second order derivatives-Newton,s forward and Back ward Differentiation formulae-, Gauss Forward and Backward differentiation formulae- Sterling's and Bessel's differentiation formulae- Problems

UNIT – V

Numerical Integration: Importance- General Quadrature rule- Trapezoidal Rule- Simpson's -1/3 Rule- Simpson's -3/8 Rule –Weddle's Rule - Problems

List of reference books:

1. Statistical Methods by S.C.Gupta,
2. Gupta, S. C. and Kapoor, V.K. (2008): Fundamentals of Mathematical Statistics, New Edition(Reprint), Sultan Chand & Sons
3 Statistics and Numerical methods by Dr. A. Singaravelu, ARS Publications.

STATISTICS PRACTICALS

Semester – VI (CBCS With - Maths Combination Common to BA/BSc)

Cluster Elective Paper – VIII (A-III) :NUMERICAL ANALYSIS

1. Missing values by Binomial Expansion method
2. Newton's forward formula
3. Newton's back ward formula
4. Lagrange's formula
5. Gauss forward central formula
6. Gauss backward central formula
7. Sterling's central difference formula
8. Bessel's central difference formula
9. Laplace-Everett's central difference formula
10. Gauss forward differentiation formula
11. Gauss backward differentiation formula
12. Sterling's differentiation formula
13. Bessel's differentiation formula
14. Laplace-Everett's differentiation formula
15. Trapezoidal Rule
16. Simpson's 1/3 and 3/8 rule

SRI VENKATESWARA UNIVERSITY

STATISTICS MODEL QUESTION PAPER

Semester – VI (CBCS With Maths Combination Common to BA/BSc)

Cluster Elective Paper – VIII(A-III) : NUMERICAL ANALYSIS

(w.e.f. 2017-18)

(Scientific calculators are allowed)

Time:3 Hours Max.Marks:75

PART- A

Answer any **FIVE** questions. Each question carries **FIVE** marks 5 X 5 = 25 Marks

1. Define (a) Forward difference operator (b) Backward difference operator (c) Shift operator and also obtain the relations between them
2. (i) Prove that $e^x = \left(\frac{\Delta^2}{E}\right) e^x . \frac{Ee^x}{\Delta^2 e^x}$

   (ii) Evaluate $\Delta^2(e^{ax+b})$ the interval of differencing being unity.
3. Explain interpolation? Also discuss the assumptions of interpolation.
4. The value of x and y are given below

X	:	5	6	9	11
Y	:	12	13	14	16

   Find the value of x when y = 15
5. Obtain the relation between divided differences and ordinary differences.
6. Find the first derivative of the function f(θ)= tanθ tabulated below at the point $\theta = 3^0$

θ	:	0^0	5^0	10^0	15^0
tanθ	:	0.0000	0.0875	0.1763	0.2679
7. Derive the formula for Simpson's $\frac{3}{8}^{th}$ rule.
8. Evaluate $\int_0^6 \frac{dx}{1+x^2}$ by using Weddle's rule and also compare with the exact value.

PART -B

Answer **ALL** questions. Each question carries **TEN** marks 5 X 10 = 50M

UNIT – I

9. Show that if f(x) be a polynomial of nth degree in x then the nth difference of f(x) is constant and $(n+1)^{th}$ and the higher order difference of f(x) are zero.

(OR)

10. Estimate the missing values in the following table

x	:	1	2	3	4	5	6	7
f(x)	:	2	--	8	---	32	64	128

UNIT - II

11. Derive the Newton-Gregory backward difference interpolation formula.

(OR)

12. Use Gauss's forward formula to find the value of y when x = 3.75 from the following table

X	:	2.5	3.0	3.5	4.0	4.5
Y	:	24.145	22.043	20.225	18.644	17.262

UNIT - III

13. Derive the Newton's divided difference formula.

(OR)

14. The following table Estimate the weight of the baby at the age of 7 months by using Lagrange's interpolation formula.

Age in months	:	0	2	5	8	10	12
Weights in lbs	:	7.5	10.25	15	16	18	21

Estimate the weight of the baby at the age of 7 months by using Lagrange's formula

UNIT - IV

15. Find the first and second derivatives of the function tabulated below when x = 1.1

x	:	1.0	1.2	1.4	1.6	1.8
f(x)	:	0	0.128	0.544	1.296	2.432

(OR)

16. Find f ´(5) and f ´´(5) from the following table

x	:	0	2	4	6	8
f(x)	:	4	26	58	112	466

UNIT - V

17. Derive general Quadrature formula for equidistant ordinates.

(OR)

18. Calculate by Simpson's $\frac{1}{3}$rd rule an appropriate value of $\int_{-3}^{3} x^4 dx$ by taking seven distant ordinates. Compare it with the exact value and the value obtained by using the trapezoidal rule.

ZOOLOGY SYLLABUS FOR VI SEMESTER

W.E.F. 2017-18

ZOOLOGY –ELECTIVE PAPER:VII-(A)

IMMUNOLOGY

Periods:60 **Max. Marks:100**

Unit - I

1.1 Overview of Immune system

1.1.1 Introduction to basic concepts in Immunology

1.1.2 Innate and adaptive immunity

1.2 Cells and organs of Immune system

1.2.1 Cells of immune system

1.2.2 Organs of immune system

Unit - II

2.1 Antigens

2.1.1 Basic properties of antigens

2.1.2 B and T cell epitopes, haptens and adjuvants

2.1.3 Factors influencing immunogenicity

Unit - III

3.1 Antibodies

3.1.1 Structure of antibody

3.1.2 Classes and functions of antibodies

3.1.3Monoclonal antibodies

Unit - IV

4.1 Working of Immune system

4.1.1 Structure and functions of major histocompatibility complexes

4.1.2 Exogenes and Endogenes pathways of antigen presentation and processing

Unit - V

5.1 Immune system in health and disease

5.1.1 Classification and brief description of various types of hyper sensitivities

5.2 Vaccines

5.2.1 General introduction to vaccines

5.2.2 Types of vaccines

ZOOLOGY PRACTICAL SYLLABUS FOR VI SEMESTER

ZOOLOGY - ELECTIVE PAPER – VII-(A)

IMMUNOLOGY

Periods: 24 **Max. Marks: 50**

1. Demonstration of lymphoid organs (as per UGC guidelines)
2. Histological study of spleen, thymus and lymph nodes (through prepared slides)
3. Blood group determination
4. Demonstration of
    a. ELISA
    b. Immunoelectrophoresis

ZOOLOGY SYLLABUS FOR CLUSTER ELECTIVE –VIII-B:
VI SEMESTER

AQUACULTURE

Cluster Elective Paper: VIII-B-1

PRINCIPLES OF AQUACULTURE

Periods:60 **Max.Marks:75**

Unit – I

1.1 Introduction / Basics of Aquaculture

1.1.1 Definition, Significance and History of Aquaculture
1.1.2 Present status of Aquaculture – Global and National scenario
1.1.3 Major cultivable species for aquaculture: freshwater, brackish water and marine.

Unit – II

2.1 Types of Aquaculture

2.1.1 Freshwater, Brackishwater and Marine
2.1.2 Concept of Monoculture, Polyculture, Composite culture.

2.2 Culture systems

2.2.1 Ponds, Raceways, Cages, Pens, Rafts and water recirculating systems

2.3 Culture practices

2.3.1 Traditional, extensive, modified extensive, semi-intensive and intensive cultures of fish and shrimp.

Unit – III

3.1 Design and construction of aquafarms

3.1.1 Criteria for the selection of site for freshwater and brackish water pond farms
3.1.2 Design and construction of fish and shrimp farms

3.2 Seed resources

3.2.1 Natural seed resources and Procurement of seed for stocking: Carp and shrimp

3.3 Nutrition and feeds

3.3.1 Nutritional requirements of a cultivable fish and shellfish

Unit – IV

4.1 Management of carp culture ponds

4.1.1 Culture of Indian major carps: Pre-stocking management – Dewatering, drying, ploughing/desilting; Predators, weeds and algal blooms and their control, Liming and fertilization; Stocking management – Stocking density and stocking; Post-stocking management – Feeding, water quality, growth and health care; and Harvesting ofponds

4.2 Culture of giant freshwater prawn, *Macrobrachium rosenbergii*

Unit – V

5.1 Culture of shrimp (*Penaeus monodon* or *Litopenaeus vannamei*)
5.2 Culture of seaweeds-species cultured, culture techniques, important by-products, prospects
5.3 Culture of ornamental fishes – Setting up and maintenance of aquarium; and breeding.

REFERENCES BOOKS

1. Bardach, JE *et al*. 1972. *Aquaculture – The farming and husbandry of freshwater and marine organisms*, John Wiley & Sons, New York.
2. Bose AN et al.1991. *Coastal aquaculture Engineering*. Oxford & IBH Publ.Co.Pvt.Ltd.
3. Chakraborty C & Sadhu AK. 2000. *Biology Hatchery and Culture Technology of Tiger Prawn and Giant Freshwater Prawn.* Daya Publ. House.
4. FAO. 2007. *Manual on Freshwater Prawn Farming*.
5. Huet J. 1986. *A text Book of Fish Culture*. Fishing News Books Ltd.
6. ICAR. 2006. *Hand Book of Fisheries and Aquaculture*. ICAR.
7. Ivar LO. 2007. *Aquaculture Engineering*. Daya Publ. House.
8. Jhingran V.G. 2007. *Fish and Fisheries of India*. Hindustan Publ. Corporation, India.
9. Landau M. 1992. *Introduction to Aquaculture*. John Wiley & Sons.
10. Lovell RT.1998. *Nutrition and Feeding of fishes*. Chapman & Hall.
11. Mcvey JP. 1983. *Handbook of Mariculture*. CRC Press.
12. MPEDA: *Handbooks on culture of carp, shrimp, etc*.
13. New MB. 2000. *Freshwater Prawn Farming*. CRC Publ.
14. Pillay TVR.1990. *Aquaculture- Principles and Practices*, Fishing News Books Ltd., London.
15. Pillay TVR & Kutty MN. 2005. *Aquaculture- Principles and Practices*. 2nd Ed. Blackwell
16. Rath RK. 2000. *Freshwater Aquaculture*. Scientific Publ.
14. Stickney RR. 1979. *Principles of Warmwater Fish Culture*, John Wiley & Sons
15. Wheaton FW. 1977. *Aquacultural Engineering*. John Wiley & Sons.

CLUSTER ELECTIVE PAPER: VIII-B-2

AQUACULTURE MANAGEMENT

Periods : 60 **Max.Marks : 75**

Unit – I

1.1Breeding and Hatchery Management

1.1.1 Bundh Breeding and Induced breeding of carp by Hypophysation; and use of synthetic hormones

1.1.2 Types of fish hatcheries; Hatchery management of Indian major carps

1.1.3 Breeding and Hatchery management of *Penaeus monodon/ Litopenaeus vannamei*

1.1.4 Breeding and Hatchery management of giant freshwater prawn.

Unit – II

2.1 Water quality Management

2.1.1Water quality and soil characteristics suitable for fish and shrimp culture

2.1.2 Identification of oxygen depletion problems and control mechanisms in culture ponds

2.1.3 Aeration: Principles of aeration and Emergency aeration

Unit – III

3.1 Feed Management

3.1.1 Live Foods and their role in shrimp larval nutrition.

3.1.2 Supplementary feeds: Principal foods in artificial diets; Types of feeds; Feed additives and Preservatives; role of probiotics.

3.1.3 Feed formulation and manufacturing; Feed storage

Unit – IV

4.1 Disease Management

4.1.1 Principles of disease diagnosis and health management;

4.1.2 Prophylaxis, Hygiene and Therapy of fish diseases

4.1.3 Etiology, Symptoms, prophylaxis and therapy of common fish diseases in fish ponds

Unit – V

5.1 Economics and Marketing

5.1.1 Principles of aquaculture economics – Capital costs, variable costs, cost-benefit analysis

5.1.2Fish marketing methods in India; Basic concepts in demand and price analysis

5.2 Fisheries Extension

5.1.3 Fisheries Training and Education in India; Role of extension in community development.

REFERENCE BOOKS

1. Boyd CE. 1979. *Water Quality in Warm Water Fish Ponds*. Auburn University
2. Boyd, CE. 1982. *Water Quality Management for Pond Fish Culture.* Elsevier Sci. Publ. Co.
3. Chakraborty C & Sadhu AK. 2000. *Biology Hatchery and Culture Technology of Tiger Prawn and Giant Freshwater Prawn*. Daya Publ. House
4. Conroy CA and Herman RL. 1968. *Text book of Fish Diseases*. TFH (Great Britain) Ltd, England.
5Halver J & Hardy RW. 2002. *Fish Nutrition*. Academic Press.
6. Ian C. 1984. *Marketing in Fisheries and Aquaculture*. Fishing News Books.
7. ICAR. 2006. *Handbook of Fisheries and Aquaculture*. ICAR.
8. Jhingran VG. 2007. *Fish and Fisheries of India.* Hindustan Publishing Corporation, India.
9. Jhingran VG & Pullin RSV. 1985. *Hatchery Manual for the Common, Chinese and Indian Major Carps*. ICLARM, Philippines.
10. Kumar D. 1996. *Aquaculture Extension Services Review: India.* FAO Fisheries CircularNo. 906, Rome.
11. Lavens P & Sorgeloos P. 1996. *Manual on the Production and Use of Live Food for Aquaculture.* FAO Fisheries Tech. Paper 361, FAO.
12. MPEDA. 1993. *Handbook on Aqua Farming - Live Feed. Micro Algal Culture.* MPEDA Publication
13. New MB. 1987. *Feed and Feeding of Fish and Shrimp. A Manual on the Preparation and Preservation of Compound Feeds for Shrimp and Fish in Aquaculture.* FAO – ADCP/REP/87/26
14. Pandian TJ, Strüssmann CA & Marian MP. 2005. *Fish Genetics and Aquaculture Biotechnology*. Science Publ.
15.Pilley, TVR & Dill, WMA. 1979. *Advances in Aquaculture*. Fishing News Books, Ltd. England.
16. Pillay TVR & Kutty MN. 2005. *Aquaculture- Principles and Practices*. Blackwell.
17. Ray GL. 2006. *Extension, Communication and Management*. 6th Ed. Kalyani Publ. Delhi.
18. ReddyPVGK, AyyappanS, ThampyDM & Gopalakrishna 2005.*Text Book of Fish Genetics and Biotechnol.* ICAR
19. Reichenbach KH. 1965. *Fish Pathology.* TFH (Gt. Britain) Ltd, England.
20.Shang YC. 1990. *Aquaculture Economic Analysis - An Introduction.* World Aquaculture Society, USA.
21. Singh B. 2006. *Marine Biotechnology and Aquculture* Development. Daya Publ. House
22.Stickney RR. 1979. *Principles of Warm waterAquaculture*. John-Willey & sons Inc.
23. Swain P, Sahoo PK & Ayyappan S. 2005. *Fish and Shellfish Immunology: An Introduction*. Narendra Publ.
24. Thomas PC, Rath SC & Mohapatra KD.2003.Breeding and Seed Production of Finfish and Shellfish. Daya Publ.

CLUSTER ELECTIVE PAPER: VIII-B-3

POSTHARVEST TECHNOLOGY

Periods : 60 **Max.Marks : 75**

Unit – I

1.1 Handling and Principles of fish Preservation

1.1.1 Handling of fresh fish, storage and transport of fresh fish, post mortem changes (rigor mortis and spoilage), spoilage in marine fish and freshwater fish.

1.1.2 Principles of preservation– cleaning, lowering of temperature, rising of temperature, denudation, use of salt, use of fish preservatives, exposure to lowradiation of gamma rays.

Unit – II

2.1 Methods of fish Preservation

2.1.1 Traditional methods - sun drying, salt curing, pickling and smoking.

2.1.2 Advanced methods – chilling or icing, refrigerated sea water, freezing, canning, Irradiation and Accelerated Freeze drying (AFD).

Unit – III

3.1 Processing and preservation of fish and fish by-products

3.1.1 Fish products – fish minced meat, fish meal, fish oil, fish liquid (ensilage), fish protein concentrate, fish chowder, fish cake, fish sauce, fish salads, fish powder, pet food from trash fish, fish manure.

3.1.2 Fish by-products – fish glue, ising glass, chitosan, pearl essence, shark fins, fish leather and fish maws.

3.2 Seaweed Products

3.2.1 Preparation of agar, algin and carrageen. Use of seaweeds as food for humanconsumption, in diseasetreatment and preparation of therapeutic drugs.

Unit – IV

4.1Sanitation and Quality control

4.2.1 Sanitation in processing plants - Environmental hygiene and Personal hygiene in processing plants.

Unit – V

5.1 Quality Assurance, Management and Certification

5.1.1 Seafood Quality Assurance and Systems: Good Manufacturing Practices (GMPs); Good Laboratory Practices (GLPs); Standard Operating Procedures (SOPs); Concept of Hazard Analysis and Critical Control Points (HACCP) in seafood safety.

REFERENCE BOOKS

1. Balachandran KK. 2001. *Post-harvest Technology of Fish and Fish Products*. Daya Publ.
2. Bond, et al. 1971. *Fish Inspection and Quality Control.* Fishing News Books, England.
3 Clucas IJ. 1981. *Fish Handling, Preservation and Processing in the Tropics*. Parts I, II. FAO.
4. Gopakumar K. (Ed.). 2002. *Text Book of Fish Processing Technology*. ICAR.
5. Govindan, TK.1985. *Fish Processing Technology,* Oxford-IBH.
6. Hall GM. (Ed). 1992. *Fish Processing Technology*. Blackie.
7. Huss HH, Jakobsen M & Liston J. 1991. *Quality Assurance in the Fish Industry.* Elsevier.
8. John DEV. 1985. *Food Safety and Toxicity*. CRC Press.
9. Krenzer R. 1971. *Fish Inspection and Quality Control.* Fishing News.
10. Larousse J & Brown BE. 1997. *Food Canning Technology*. Wiley VCH.
11. Nambudiri DD. 2006. *Technology of Fishery Products*. Fishing Chimes.
12. Regenssein JM & Regenssein CE.1991. *Introduction to Fish Technology*.VanNostrand Reinhold.
13. Rudolf K. 1969. *Freezing and Irradiation of Fish.* Fishing News (Books).
14. Sen DP. 2005. *Advances in Fish Processing Technology*. Allied Publ.

ZOOLOGY PRACTICLSYLLABUSCLUSTER ELECTIVE PAPER: VIII-B

VI SEMESTER

PRINCIPLES OF AQUACULTURE

PRACTICAL: I

Periods : 24 **Max.Marks : 50**

Cultivable fishes

1. Identification and study of important cultivable and edible fishes - Any ten
2. Identification and study of important cultivable and edible crustaceans - Any five

Diseases

1. Identification and study of fish and shrimp diseases - Using specimens / pictures
2.External examination of the diseased fish – diagnostic features and procedure.
3. Autopsy of fish – Examination of the internal organs.

Pond Management

1. Water Quality -Determination of temperature, pH, salinity in the pond water sample; Estimation of dissolved oxygen, free carbondioxide, total alkalinity, total hardness, phosphates and nitrites.

2. Identification and study of common zooplankton, aquatic insects and aquatic weeds – Each 5

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ZOOLOGY PRACTICLSYLLABUSCLUSTER ELECTIVE PAPER: VIII-B

VI SEMESTER

AQUACULTURE MANAGEMENT

PRACTICAL - II

Periods :24 **Max.Marks : 50**

Nutrition

1. Identification and study of Live food organisms – Any five
2. Formulation and preparation of a balanced fish feed

Post harvest Technology

1. Evaluation of fish/ fishery products for organoleptic, chemical and microbial quality.
2. Developing flow charts and exercises in identification of hazards – preparation of hazard analysis worksheet, plan form and corrective action procedures in processing of fish.

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ZOOLOGY PRACTICLSYLLABUSCLUSTER ELECTIVE PAPER: VIII-B

VI SEMESTER

PRACTICAL – III

PROJECT WORK

Visit to a fish breeding centre / fish farms and submit a project report

or

Visit to a feed manufacturing unit and submit a project report

or

Visit to a shrimp hatchery / shrimp farms and submit a project report

or

Visit to a shrimp processing unit and submit a project report

ZOOLOGY – VI SEMESTER.

Elective paper : VII (A)

IMMUNOLOGY.

Time : 3hrs. Max. Marks: 75

I. Answer any five of the following: 5×5 = 25

1. Innate Immunity :- సహజ అసంక్రామ్యతలో
2. Haptenes – హాప్టీన్ లు
3. Features of IgG - IgG స్వభావం పద్ధతులు.
4. Cytokines - సైటోకైనేలు.
5. Anaphylaxis – అనాఫిలాక్సిస్.
7. phagocytosis. – భక్షక్రియ
8. Vaccines – వాక్సిన్లు.

II. Answer any five of the following. 5×10 = 50.
Draw labelled diagrams wherever necessary.

9. (a) what is Immunity? Explain different types of Immunity.
అసంక్రామ్యత అనగా నేమి? అసంక్రామ్యతలలో వివిధ రకములను వివరింపుము.

(or)

(b) write an essay on T and B lymphocytes and explain how they are useful in Immune response.
T మరియు B లింఫోసైట్లను గురించి వివరించి అసంక్రామ్యత లో వాటి ప్రాముఖ్యతలను వ్రాయుము.

10. (a) Describe organs of Immune system with functions.
అసంక్రామ్యత లోని కల అవయవాలను వాటి విధులను వివరింపుము.

(or)

(b) Describe the factors influencing Immunogenicity.
రోగనిరోధకశక్తిపై ప్రభావితంచేసే కారకములను వివరింపుము.

(11) (a) Describe structure and classification of Antibodies.
ప్రతిరక్షకముల నిర్మాణం మరియు వర్గీకరణను వివరింపుము.

(or)

(b) Describe the properties and functions of Monoclonal Antibodies.
మోనోక్లోనల్ ప్రతిరక్షకముల లక్షణములను మరియు విధులను వివరింపుము.

(12) (a) write an essay on HLA-typing and its importance.
'HLA టైపింగ్' అనగా నేమి? దాని ప్రాముఖ్యతను సవిస్తరంగా వ్రాయుము.

or

(b) Describe Exogenous and Endogenous pathways of Antigen presentation and processing.
ప్రతిజనకాల ఔన్నత్యత మరియు అంతర్గతమైన ప్రక్రియలను వాటి ఉపయోగించే విధానాన్ని వివరింపుము.

(13) Define Hypersensitivity. write an essay on different types of hypersensitivities.
హైపర్ సెన్సిటివిటీ అనగా నేమి. హైపర్ సెన్సిటివిటీ చర్యలను సవిస్తరంగా ఒక వ్యాసమును వ్రాయుము.

(or)

(b) Enumerate the Concepts of Autoimmunity and Immunodeficiency
స్వవిరోధ అసంక్రమణ మరియు అసంక్రమణ లోపం సవిస్తరంగా వర్ణింపుము.

[Best-chance person] Rajkumar 8/1/18

Zoology - VI SEMESTER.

AQUACULTURE - Paper - VIII

Cluster Elective Paper: VIII B-1 - Principles of AQUACULTURE

Time; 3hrs. Max Marks: 75

I. Answer any five of the following; 5×5=25
Draw labelled diagrams wherever necessary.

1. Significance of Aqua Culture.
ఆక్వాకల్చర్ యొక్క ప్రాముఖ్యతను తెలుపుము.
2. Pen System - పెన్ పెంపకం పద్ధతి.
3. Site selection for fish pond farm.
చేపల చెరువుల నిర్మాణానికి స్థలం ఎంపిక.
4. Importance of Natural and Artificial food in fish Culture.
చేపల పెంపకంలో సహజ మరియు కృత్రిమ ఆహారం యొక్క ప్రాముఖ్యత.
5. Indian major Carps; భారతదేశపు ముఖ్యమైన కార్ప్ చేపలు.
6. Ornamental fishes - అలంకరణకు ఉపయోగించు చేపలు.
7. Weed Control - కలుపు మొక్కల నివారణ.
8. Intensive Culture - ఇంటెన్సివ్ కల్చర్.

II. Answer ALL of the following. 5×10 = 50.
Draw labelled diagrams wherever necessary.

(9) (a) write an essay on present status of Aqua Culture.
ఆక్వాకల్చర్ యొక్క ప్రస్తుత స్థాయి/స్థితి పై ఒక వ్యాసం వ్రాయుము

[OR]

(b) write an account on major Cultivable species for fresh water Culture.
మంచి నీటి వ్యవసాయంలో పండించు ముఖ్యమైన వర్ణన వ్రాయుము

10. (a) write an essay on Composit fish Culture.
కాంపోజిట్ చేపల పెంపకం పై ఒక వ్యాసం వ్రాయుము

[OR]

(b) Explain in detail the traditional and extensive Culture practices of Shrimp.
రొయ్యల కల్చర్ లో అవలంభించు సాంప్రదాయిక మరియు విస్తృత పద్ధతులను గురించి విపులంగా వివరింపుము.

11. (a) write an essay on Seed resources of Carps.
కార్ప్ చేప యొక్క విత్తన వనరులపై ఒక వ్యాసం వ్రాయుము.

[OR]

(b) Explain in detail the nutritional requirements of Cultivable Shell fish.
కవచ్ఛర చేపల పెంపకానికి అవసరం అయిన పోషక విధానం ను వివరింపుము.

12. (a) write an essay on Stocking Management of ponds.
పెంపక చెరువుల నిల్వ విధివిధానాలపై ఒక వ్యాసం వ్రాయుము

[OR]

(b) Explain Culture of Macrobrachium rosenbergii
మంక్కో రొయ్యలు రొయ్యను పెంపక పద్ధతిని వివరింపుము

13. (a) write an essay on pearl oyster Culture.
ముత్యపుచిప్ప ఆల్చిప్పల పెంపకంను వివరింపుము.

(or)

(b) write a note on Seaweed Culture-techniques.
సముద్రపు (కలుపు) పాచి వర్ధన పద్ధతులను వివరింపుము.

ZOOLOGY - VI SEMESTER.

Cluster Elective Paper; VIII - B - 2.

Aquaculture Management.

Time: 3hrs. Max. marks: 75

I. Answer any Five of the following: 5×5 = 25
Draw labelled diagrams wherever necessary.

1. Bundh breeding.
2. Synthetic Hormones.
3. Aeration.
4. Artificial Diet.
5. Feed Additives
6. Fish immunization
7. Cost benefit Analysis.
8. Cryopreservation.

II. Answer any Five of the following. 5×10: (50)
Draw labelled diagrams wherever necessary.

9. (a) Explain the steps involved in the Induced breeding.
ప్రేరిత పద్ధతిలో చేపలను పిల్లలుగా చేయడంలో వివిధ దశలను వివరించండి.

or.

(b) Describe the types of fish hatcheries.
వివిధరకాలైన చేపల పొదిగే కేంద్రాలను వివరించండి

10. (a) ~~Describe~~ Discuss the physical factors suitable for Culturing of Aquatic animals.
~~వివరించండి~~ [OR] జలచర జీవాల పెంపకానికి అనుకూలమైన భౌతిక కారకాలను చర్చించండి

(b) write about the fertilizers commonly used in fish ponds.
చేపల కొలను యందు సాధారణంగా ఉపయోగించే ఎరువులను గురించి వివరించండి.

(11) (a) Describe the supplementary feeds used in shrimp culture
రొయ్యలను కల్చర్ చేయుటలో కావలసిన అదనపు ఆహారం
గురించి వివరించుము. [OR]

(b) ~~write about the fertilizers~~

(b) write an essay on feeding mechanisms.
ఆహారవిధానం గురించి ఒక వ్యాసమును వ్రాయుము.

(12) (a) Explain the diseases occur in culturing fishes.
చేపలకల్చర్ యందలి వ్యాధులను గురించి వర్ణింపుము.
[OR]

(b) ~~Explain the diseases occur in culturing fishes.~~

(b) Describe the common diseases in shrimp during culture
రొయ్యల పెంపకము యందలి వ్యాధులను వివరింపుము.

(13) (a) Explain fish marketing methods in India.
[OR]
చేపల మార్కెటింగ్ విధానాలను వర్ణింపుము.
భారత దేశంలో
[OR]

(b) Describe the role of fisheries training and Education in India.
భారత దేశము యందు చేపలను గురించి అధ్యయనము
మరియు శిక్షణను వివరింపుము.

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Bas- chairperson

ZOOLOGY - VI SEMESTER.

CLUSTER Elective paper : VIII B-3.

POST HARVEST TECHNOLOGY

Time: 3hrs. Max. marks: 75

I. Answer any five of the following. 5×5 = 25

1. Transport of fish - చేపలరవాణా
2. Denudation - భూక్షయము
3. Accelerated freeze drying - విక్షేపశీతలీకరణ పద్ధతి
4. Ensilage - ఎన్‌సిలేజ్ విధానము.
5. Sea weeds - సముద్రపు కలుపు మొక్కలు
6. Preprocessing Measures - పూర్వశీతల ఉత్పత్తుల కొలమానము.
7. Therapeutic Drugs - చికిత్సా విధానంలోని మందులు.
8. Fish by products - Importance - చేపల ఇతర ఉత్పన్నాలు - ప్రాముఖ్యత

II. Answer any five of the following.

9(a) Discuss how the fish was handled during preservation.
చేపల నిల్వ-చేయుటలో వలలు వేయు మొదలు వరకు పాటించవలసిన జాగ్రత్తలు వాటిని గురించి చర్చించుము.

[OR]

(b) Describe the principles involved in fish preservation.
చేపల నిల్వ-చేయుటలో పాటించవలసిన సూత్రములను వివరింపుము

10(a) Write about various traditional methods of fish preservation
చేపలను నిల్వ-చేయుటలో సాంప్రదాయపు పద్ధతులను వివరింపుము

[OR]

(b) Explain the advanced methods of fish preservation.
చేపలను నిల్వ-చేయుటలో ఆధునిక పద్ధతులను వివరింపుము

(11) (a) write an essay on fish byproducts.
చేపల నుండి లభ్యమయ్యే ఇతర ఉత్పన్నకాలను గురించి వ్యాసము వ్రాయుము.

[OR]

(b) Describe the products produced from Seaweeds.
సముద్రపు కలుపు మొక్కల నుండి ఉత్పత్తి అగు ఉత్పాదకాలను వివరింపుము

(12) (a) write about Sanitary measures in Processing plants
మొక్కలు యందు పరిశుభ్రత లోని మెలకువలను వివరింపుము.

[OR]

(b) Explain the regulatory affairs in Industries.
పరిశ్రమల యందలి క్రమబద్ధీకరణ విధానాన్ని వర్ణింపుము

(13) (a) Describe various Quality Assurance and Systems in Seafood Safety.
సముద్రపు ఆహారంలోని వివిధరకాలైన సాంకేతిక పద్ధతులను పాటు రక్షణను గురించి వివరింపుము.

[OR]

(b) what are National & International standards in Quality Assurance.

సాంకేతిక ప్రమాణాలను నిర్ధారించుట భారతీయ మరియు అంతర్జాతీయ విధానములను తెల్పుము.

8.1.18

[Bos - Chairperson]