

## Part II - Zoology

## Paper - 2 (3-5-131) : ANIMAL BIOTECHNOLOGY

Time: 3 Hrs

(w.e.f. 2017-18)

Max: 75 Marks

**PART - A ( $5 \times 5 = 25$  Marks)****Answer any FIVE of the following questions.**

1. PBR 322
2. Role of Linkers and adaptors in r-DNA Technology.
3. What are the Advantages & Disadvantages of Using Serum in the Medium.
4. Write a short note on Electroporation Method.
5. Write briefly about the cryopreservation?
6. Comparison between solid state and semi solid state fermentations?
7. Write a short note on Ligases in the process of DNA synthesis.
8. Give a brief description about the Artificial insemination.

**PART - B ( $5 \times 10 = 50$  Marks)****Answer FIVE questions from the following**

- 9.a) Define restriction Endonucleases. Write briefly about the three types of Enzymes. (Or)
- b) Define vectors. Write briefly about the different types of vectors in biotechnology.
- 10.a) Describe briefly about different Techniques of gene transfer. (Or)
- b) Explain the technique of PCR and its application in modern molecular biology.
- 11.a) Define & describe various types of natural culture media used for cell culture. (Or)
- b) Explain the Artificial on synthetic culture media & their advantages & disadvantages.
- 12.a) What are Transgenic animals? Write about any two Transgenic animals. (Or)
- b) How Embryo transfer is done in animals. Add a note on its application.
- 13.a) Define fermentation. What are the steps involved in the process of fermentation. (Or)

- b) Explain the steps involved in down stream processing of fermentation.

# **SRI VENKATESWARA UNIVERSITY**

**B.Sc. DEGREE EXAMINATIONS – OCT/NOV 2018**

**FIFTH SEMESTER**

**Part II – Zoology**

**Paper - 2 (3-5-131) : ANIMAL BIOTECHNOLOGY**

**Time: 3 Hrs**

**(w.e.f. 2017-18)**

**Max: 75 Marks**

**PART - A ( $5 \times 5 = 25$  Marks)**

***Answer any FIVE of the following questions.***

1. Bacteriophage vectors.
2. Describe briefly about different techniques of gene transfer.
3. Natural and Synthetic media.



4. Write short note on Biolistic method.
5. Artificial Insemination.
6. Monoculture.
7. Kinases and Phosphatases.
8. Superovulation process.

**PART -B** ( $5 \times 10 = 50$  Marks)

***Answer FIVE questions from the following***

- 9.a) Elaborate on the application of Type – II restriction enzymes in genetic engineering, particularly gene cloning. (Or)
- b) Describe DNA transferases, kinase and phosphate.
- 10.a) Explain the role Linkers and Adaptors in gene technology. (Or)
- b) Write a note on Sanger's method of DNA sequencing.
- 11.a) Explain the production of Mab's and its applications. (Or)
- b) Describe the application of cell technology.
- 12.a) Describe the Invitro Fertilizatio (IVF) technology. (Or)
- b) What is transgenesis? Describe any two transgenic animals.
- 13.a) Describe the Batch culture, Fed-batch culture and Continuous culture methods of fermentation. (Or)
- b) Describe DNA finger printing.

# **SRI VENKATESWARA UNIVERSITY**

**B.Sc. DEGREE EXAMINATIONS – OCT/NOV 2019**

**FIFTH SEMESTER**

**Part II – Zoology**

**Paper - 2 (3-5-131) : ANIMAL BIOTECHNOLOGY**

**Time: 3 Hrs**

**(w.e.f. 2017-18)**

**Max: 75 Marks**

## **PART - A ( $5 \times 5 = 25$ Marks)**

***Answer any FIVE of the following questions.***

1. Nomenclature of restriction enzymes.
2. DNA Ligases.
3. Micro injection method.
4. Adaptors.
5. Artificial culture media.
6. Cryopreservation.
7. In Vitro fertilization.
8. Super ovulation process.

## **PART -B ( $5 \times 10 = 50$ Marks)**

***Answer FIVE questions from the following***

- 9.a) Give a detail account of type-II restriction enzymes and its application. (Or)
- b) Describe different cloning vectors you have studied.
- 10.a) Write an essay on Southern Blotting technique. (Or)
- b) Explain the various steps involved in the construction of cDNA library and mention its applications.



11.a) Give a detailed account of stem cells and their application.

(Or)

b) Explain the production of mAb and its application.

12.a) Describe the process of embryo transfer in cattle and its applications.

(Or)

b) How transgenic fish is produced? Add a note on its importance.

13.a) Write an essay on downstream processing.

(Or)

b) Define finger printing. Describe DNA finger printing protocol and add a note on its uses.

# SRI VENKATESWARA UNIVERSITY

B.Sc.(CBCS) DEGREE EXAMINATIONS -APRIL 2021

THIRD YEAR - FIFTH SEMESTER

Part I - Zoology

Paper - 2 (3-5-131) : ANIMAL BIOTECHNOLOGY

Time: 3 Hrs

(w.e.f. 2017-18)

Max: 75 Marks

**PART - A** ( $5 \times 5 = 25$  Marks)

*Answer any FIVE of the following questions.*

1. DNA ligases.
2. PBR 322
3. Genomic library.
4. Southern blotting.
5. Primary cell culture.
6. Super ovulation - 35
7. Batch method
8. Stirred Tank bioreactor.

**PART -B** ( $5 \times 10 = 50$  Marks)

*Answer All questions from the following question Draw labelled diagram wherever necessary.*

- 9.a) Define Restriction endonucleases. Describe about restriction endonucleases. (Or)
- b) What is Plasmid? Explain about any 2 plasmid vectors.
- 10.a) Define PCR. Explain various steps involved in PCR technique.  $\rightarrow$  (21) (Or)
- b) Write about hybridization techniques such as northern & western blotting.
- 11.a) Describe about established cell lines in detail. (Or)
- b) What are stem cells? Explain stem cell types & its applications.
- 12.a) Define cloning. Explain about embryo cloning.. (Or)
- b) Describe about IVF technology in detail.  $\rightarrow$  (21)
- 13.a) Define fermentation? Describe various types of fermentation. (26) (Or)
- b) Explain various methods in down stream processing. 35