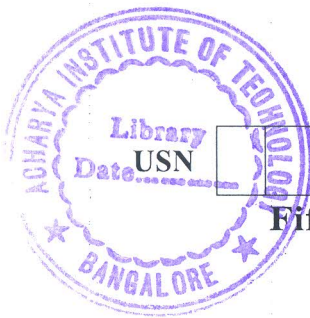


CBCS SCHEME



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15BT553

Fifth Semester B.E. Degree Examination, Dec.2019/Jan.2020
Animal Biotechnology

Time: 3 hrs.

Max. Marks: 80

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. What is CO₂ incubator? Describe the sterilization protocol to culture animal cells in a CO₂ incubator. (06 Marks)
- b. Explain the functions of four main types of tissue with examples. (05 Marks)
- c. Describe the role of Serum in Media. (05 Marks)

OR

- 2 a. What is Coulter Counter? Explain the process of counting cells using the electronic counter, with a neat labeled diagram. (06 Marks)
- b. How does a MTT assay work? (06 Marks)
- c. Briefly explain the phases of growth curve in microbial cells. (04 Marks)

Module-2

- 3 a. What is meant by Primary cell cultures? Explain the development of continuous cell lines from primary cell culture. (07 Marks)
- b. How do you preserve and thaw a cell line? (04 Marks)
- c. What is a transformed cell line? Describe one of the natural methods of transforming a cell line. (05 Marks)

OR

- 4 a. Define the term Lipofection. Explain Liposome mediated cell line transformation method. (05 Marks)
- b. Describe the Electrical methods of cell transformation. (06 Marks)
- c. Explain Micro carrier beads cell culture. (05 Marks)

Module-3

- 5 a. What is the structure and function of Sperm cells? Explain with a neat labeled diagram. (06 Marks)
- b. What is Artificial Insemination? Discuss any 2 types of artificial insemination method. (05 Marks)
- c. Discuss the process and benefits of Superovulation. (05 Marks)

OR

- 6 a. Describe SV40 Animal Cloning vector. (03 Marks)
- b. List and briefly explain any three inutero testing methods of foetus for genetic disorders. (06 Marks)
- c. Describe Geneknock out mechanism with geneknock mice as an example. (07 Marks)

Module-4

- 7 a. Differentiate between Exotic dairy breeds (Jersey and Holstein Friesian) of cattle. (06 Marks)
- b. Describe Microsatellites as a genetic marker. (06 Marks)
- c. Differentiate between Positive and Negative selectable markers. (04 Marks)

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
 2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.

OR

- 8 a. Describe Restriction fragment length polymorphism method to detect nucleotide polymorphism. (08 Marks)
- b. Discuss in detail the process of hybridization techniques to detect meat adulteration. (08 Marks)

Module-5

- 9 a. Discuss in detail the process and the need for engineering skin tissue. (05 Marks)
- b. Define the term aquaculture. Enumerate the importance of aquaculture. (06 Marks)
- c. Discuss the trends in Engineering Liver tissue. (05 Marks)

OR

- 10 a. Name the major Indian carps. Describe the breeding process of Indian major carps. (10 Marks)
- b. Enumerate the significance of probiotics in aquaculture with examples. (06 Marks)
