



B.Sc. (Semester – VI) Examination, April/May 2019

ZOOLOGY (Paper – XVI)

Animal Biotechnology Applications

Duration : 2 Hours

Total Marks : 80

Instructions : 1) **All questions are compulsory.**

2) Figures to the **right** indicate maximum marks to the question.

3) Illustrate your answer **wherever** necessary.

1. Answer **any four** of the following :

16

- a) Uses of Balanced Salt Solution.
- b) Suspension Culture.
- c) Classification of Vaccines.
- d) Embryo Transfer.
- e) Use of PCR in Fisheries.
- f) Characteristics of Stem Cells.

2. Answer **any four** of the following :

16

- i) Source and characteristics of HeLa Cell Lines.
- ii) Immobilized Cell Culture.
- iii) Uses of Tissue Plasminogen activator.
- iv) Monoclonal Antibodies.
- v) Advantages and disadvantages of Human Cloning.
- vi) Transgenic Fish.

3. A) Explain the process of Explant Disaggregation by Collagenase method.

6

OR

A) Give an account on the advantages and limitations of Organ Culture.

6

B) Briefly explain the different types of Natural Animal Ingredients as Media.

6

P.T.O.



4. A) Explain the design and working of the stirred Tank Fermenter used for Large Scale Cultures. 6

OR

- A) What are Interferons ? Briefly mention the uses of Interferons. 6
B) In brief, explain the different methods of production of Monoclonal Antibodies. 6
5. A) Explain the importance of Live Attenuated Vaccines. 6

OR

- A) Write a note on Measles Vaccine. 6
B) Outline the steps involved in in vitro fertilization in Dairy Animals and its advantages. 6
6. A) Describe the Embryonic Stem Cell Method of Transgenesis. 6

OR

- A) Discuss the important products obtained through Transgenic Sheep. 6
B) Briefly explain the types of Stem Cells. 6