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**ZOH 451**



**Second Semester M.Sc. Examination, September/October 2022**  
**(CBCS)**  
**ZOOLOGY**  
**Animal Cell Biotechnology**

Time : 3 Hours

Max. Marks : 70

**Instructions :** 1) Answer *all* questions.  
2) Give illustrations *wherever* necessary.

- I. Write short notes on : **(5×2=10)**
- a) Vertical laminar flow hood
  - b) Subculture of monolayer
  - c) Feeder layer
  - d) Transfection
  - e) Bt-toxin.
- II. a) Give an account of essential and useful equipments required for the culture of animal cells. **12**
- OR
- b) Describe the different type and utilities of culture media for animal cell culture.
- III. a) Discuss on the evolution of cell lines with a note on their maintenance. **12**
- OR
- b) Give an account of types of primary culture techniques and their disaggregation of tissue isolated for primary culture.
- IV. a) Write an account on culture and maintenance of mouse embryonic stem cells. **12**
- OR
- b) Describe the production of monoclonal antibodies and their applications.
- V. a) Describe the salient features and types of cloning vectors. **12**
- OR
- b) Describe recombinant DNA technology and add a note on its application in medicine and industry.
- VI. a) Elaborate on the methods of introduction of desired genes into animal cells. **12**
- OR
- b) Discuss the transgenic technology in improvement of farm animals.