

[Time: 2:30 Hours]

[Marks:60]

Please check whether you have got the right question paper.

- N.B:
1. All questions are compulsory
 2. Figures to the right indicates full marks
 3. Draw neat and labelled diagrams wherever necessary

- Q.1 Write an essay on culture media used for animal tissue culture. **12**
- OR**
- Q.1 a) Write a note on production of viral vaccines using animal cell culture. **6**
- AND**
- b) Write a note on trypsinization. **6**
- Q.2 Give design and working of a "Bioreactor". **12**
- OR**
- a) Explain HAT medium selection of Hybridoma cells. **6**
- AND**
- b) Write short note on: Continuous culture system for mass culture of plant cells. **6**
- Q.3 What are monoclonal antibodies? Discuss certain diagnostic and therapeutic applications. **12**
- OR**
- a) How to select cell lines for high yield of secondary metabolites? **6**
- AND**
- b) Describe propagation of ornamental species? **6**
- Q.4 Write a note on specialized cell lines. **12**
- OR**
- a) Give an account of all the stages involved in regeneration of a plant by micropropagation. **6**
- AND**
- b) Explain production of better yielding plants. **6**
- Q.5 Write a short note on the following (**any three**):- **12**
- a) CO₂ incubators
 - b) Applications of animal cell culture
 - c) Ri plasmid
 - d) Steps involved in production of Hybridoma cells
 - e) Microencapsulation Technology for production of monoclonal antibodies
 - f) Hybrid cell lines
