

Reg. No. :

R 3103

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2007.

Seventh Semester

Animal Biotechnology

BT 1005 — ANIMAL BIOTECHNOLOGY

(Regulation 2004)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. What are suspension cultures?
2. What is meant by differentiation of cells?
3. How are cell cultures stored?
4. What is a chemically defined media?
5. Define a monoclonal antibody.
6. What is meant by in situ hybridization?
7. What is micro manipulation?
8. What are cytokines?
9. What is meant by process control?
10. What is the principle behind loop bioreactor?

PART B — (5 × 16 = 80 marks)

11. (a) Explain with a neat diagram the equipments and other requirements to set up a tissue culture facility.

Or

- (b) Describe the advantages and disadvantages of using serum free media for cell culture studies.

12. (a) Discuss the applications of monoclonal antibodies in the diagnosis of animal infectious.

Or

- (b) Discuss the applications of various types of PCR in the diagnosis of animal diseases.

13. (a) Discuss the technology behind the production of DNA vaccines to prevent animal infection by citing a suitable example.

Or

- (b) How will you produce a protein based vaccine using modern tools of biotechnology and test its efficacy to prevent animal infectious. Discuss by citing a suitable example.

14. (a) Discuss the principle and applications of the following in scaling up of animal cell culture.

(i) Hollow fibre reactor. (8)

(ii) Fixed bed bioreactor. (8)

Or

- (b) Explain the production and applications of Transgenic animals.

15. (a) Write notes on :

(i) Products derived through mammalian cell lines. (8)

(ii) Techniques to enrich 'Y' bearing sperms. (8)

Or

(b) (i) RFLP in animal biotechnology. (8)

(ii) Use of recombinant interferons in animal diseases. (8)