

Code: R7 422301

**R7**

B.Tech IV Year II Semester (R07) Advanced Supplementary Examinations, June 2012

**ANIMAL CELL SCIENCE AND TECHNOLOGY**

(Biotechnology)

Time: 3 hours

Max Marks: 80

Answer any FIVE questions

All questions carry equal marks

Draw neat labelled diagrams wherever necessary.

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- 1 Explain the details of three dimensional culture. Add a note on tissue engineering.
- 2 (a) Describe briefly about ultrastructure of animal cell.  
(b) Explain role of CO<sub>2</sub> in culture medium preparation.  
(c) Write an account on patterns of growth measurement.
- 3 (a) Write briefly about maintenance of cell culture.  
(b) Explain measurement of cell death.  
(c) Describe cell cultured based vaccines.
- 4 Describe the different steps involved in cell cloning. Add a note on micromanipulation.
- 5 (a) Explain briefly simple growth medium.  
(b) Describe the serum and protein free defined media.  
(c) Explain briefly about organ culture.
- 6 (a) Write briefly on disaggregation of tissue and primary culture.  
(b) Explain cell synchronization.  
(c) Write the characters of cultured cells.
- 7 Explain in detail the embryonic stem cell culture. Add a note on their applications.
- 8 (a) Explain somatic cell genetics.  
(b) Describe primary cell line culture.  
(c) Write briefly the chemical functions of different constituents of culture medium.

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