

Code: R7422301

**R7**

B.Tech IV Year II Semester (R07) Supplementary Examinations, March/April 2013

**ANIMAL CELL SCIENCE & TECHNOLOGY**

(Biotechnology)

Time: 3 hours

Max Marks: 80

Answer any FIVE questions  
All questions carry equal marks

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- 1 (a) Explain briefly the basic techniques of in vitro mammalian cell culture.  
(b) Write briefly different approaches to measure the growth of cultured cells.
- 2 (a) Describe scaling-up of animal cell culture.  
(b) Write briefly on somatic cell genetics.  
(c) Explain histolytic cultures.
- 3 Describe in detail about embryonic stem cells. Add a note on their applications.
- 4 (a) Write briefly on apoptosis.  
(b) Explain about micromanipulation.  
(c) Describe simple growth medium.
- 5 (a) Write about applications of animal cell culture.  
(b) Describe tissue engineering.  
(c) Explain briefly the disaggregation of tissue and primary culture.
- 6 (a) Explain protein free defined medium and its applications.  
(b) Write briefly on the equipment used for animal cell culture.
- 7 Explain briefly on the chemical, physical and metabolic functions of different constituents of culture medium.
- 8 (a) Explain different methods to measure the cytotoxicity of cells.  
(b) Write briefly about cell synchronization.  
(c) Describe briefly the structure and organization of animal cell.

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