

(Following Paper ID and Roll No. to be filled in your Answer Book)

PAPER ID :154651

Roll No.

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B.Tech.**(SEM. VI) THEORY EXAMINATION 2013-14****ANIMAL BIOTECHNOLOGY***Time : 3 Hours**Total Marks : 100***Note :- Attempt all questions. All questions carry equal marks.**

1. Write notes on any four of the following : (5×4=20)
 - (a) Cell culture growth supplements
 - (b) Conditioned media
 - (c) Ultrafiltration with diagram
 - (d) Cell Harvesting Methods
 - (e) Application of cell culture in drug development.
 - (f) Erythropoietin
2. Attempt any two parts of the following : (10×2=20)
 - (a) What is serum free media ? Describe its merits, demerits, significance and application.
 - (b) Describe the ingredients of cell culture media and discuss the physiochemical properties which affect growth and yield of culture.
 - (c) Describe the step wise procedure for establishing a primary cell line from liver tissue of a mouse.

3. Write notes on any four of the following : (5×4=20)
- (a) Pumping Heart Culture
 - (b) Organotypic and Histiotypic Culture
 - (c) Kidney Culture
 - (d) Stem Cell Banking
 - (e) Enemies of Cell Culture
 - (f) Cellular Confluence
4. Attempt any two parts of the following : (10×2=20)
- (a) Describe step wise about the production of Monoclonal Antibodies from a mouse against an specific antigen (A), further describe its expansion in-vitro and in-vivo.
 - (b) When we have sufficient animal models, then why do we need cell culture system for initial screening of therapeutic agents, explain the philosophy of that, taking suitable example.
 - (c) What are the two best suited upscaling methods of monoclonal antibody production, describe in detail.
5. Attempt any two parts of the following : (10×2=20)
- (a) Write notes on Cell Factory, Wave Bioreactor and Roller Bottle Culture.
 - (b) What is Transgenesis ? Describe the application of technique in value addition of various food stuffs.
 - (c) What are the non viral methods of gene transfer in developing transgenic products ?