



(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, 2014-15
ANIMAL BIOTECHNOLOGY

Time : 3 Hours]

[Total Marks : 100

Note : Attempt all questions. All questions carry equal marks.

- 1 Write short notes on any four parts of the following
(5×4=20)
 - (a) Preparation and sterilization of culture media
 - (b) Cryopreservation
 - (c) Protooncogenes
 - (d) Trypsinization
 - (e) Microencapsulation
 - (f) Serum

- 2 Attempt any two parts of the following (10 × 2 =20)
 - (a) What do mean by cell culture techniques? Describe various types of cell culture media used for cultivating animal cells *in-vitro*.
 - (b) What is stem cell? Explain therapeutic application of stem cells for human health.

- (c) Why cell suspension culture is a preferred choice of cell cultivation? Explain.
- 3 Attempt any two parts of the following : (10×2=20)
- (a) What do you mean by transgenic animals? Explain methods and strategies of transgene delivery in host cell.
 - (b) Enlighten the process of stem cell differentiation. Also explain the process of blood cell formation.
 - (c) What is shear stress and shear strain? Explain in terms of animal cell cultivation in bioreactor?
- 4 Attempt any two parts of the following : (10×2=20)
- (a) What is perfused monolayer Cultures? Discuss various reactor configurations for developing monolayer cell lines.
 - (b) What do you understand by cell cloning and selection? Illustrate the process of Transformation in explaining the process of cell cloning
 - (c) How can Animal cell lines be used in estimating the toxicity of environmental pollutant? Also show its relatedness with human. health.
- 5 Attempt any two parts of the following (10×2=20)
- (a) How can Transgene integration efficiency be improved? Discuss strategies for it.
 - (b) Discuss the media selection parameters for cell lines development
 - (c) What do you understand by Vaccines? Explain how Animal Biotechnology is of great use in producing Vaccines at large scale.