

2124
M. E. (Bio-Technology)
First Semester
Elective - I
ME-BIO-105(b): Cell and Cell Technology

Time allowed: 3 Hours

Max. Marks: 50

NOTE: Attempt five questions in all, including Question No. I which is compulsory and selecting two questions from each Section.

x-x-x

1 Compulsory question:

- i. What is a conditioned medium.
- ii. What is the purpose of using roller bottles in animal cells in culture.
- iii. What are continuous cell lines.
- iv. How can you verify founder animal while generating Transgenic animals.
- v. What is xenotransplantation. (2x5)

Section-A

2 Write notes on any **two** of the following for their features and functions

- a) Cell adhesion molecules b) Intracellular junctions c) Cytoskeleton (5+5)

3a) What is a serum replacement medium, what is the purpose of this medium in culture practices.

b) Describe various methods of cell isolation for primary cell culture preparation. (3+7)

4a) Give a brief account of cell culture vs organ culture in terms of their advantages and disadvantages.

b) Enlist various equipment's used in animal cell culture laboratory, describe any two of these in detail. (4+6)

Section -B

5a) Discuss the scale up procedure for cells grown in suspension cultures.

b) Write a short on therapeutic cloning in animal cells. (6+4)

6 a) Give a detailed account of good laboratory practices.

b) How can we perform authentication of cell lines by DNA fingerprinting. (7+3)

7 a) Discuss the various procedures of generating Transgenic animals .

b) Add a note on advantages and disadvantages of various procedure of generating transgenic animals. (7+3)

x-x-x