

Exam.Code:1032

Sub. Code: 7566

2123

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. Answer the following questions**

- i. Define basal media.
- ii. What are the characteristics of cultured cells?
- iii. Name basic equipment required in animal cell culture.
- iv. Write the major differences between adherent and suspension culture.
- v. What is Primary cell culture?
- vi. What is xenotransplantation?.
- vii. Define cell cloning.
- viii. What is sub culturing of cell lines?
- ix. What is application of isoenzyme analysis?
- x. Write role of multiarray disks in animal cell culture?

[10×1 = 10]

**Section – A**

2. a) Describe the process of selection and maintenance of cell lines.  
b) Write the major differences between Primary cell culture and Secondary cell culture.  
[2×5 = 10]
- 3 a) Write a brief note on biology and characteristics of cultured cells.  
b) What are the advantages and disadvantages of animal cell culture? [2×5=10]
- 4 a) Discuss various methods of primary cell isolation.  
b) Write a note on Fluorescence Activated Cell Sorting [6,4]

P.T.O.

(2)

**Section – B**

5. a) Write short notes on:

- i) Therapeutic cloning
- ii) Xenotransplantation

b) What is transfection? Explain the various techniques of transfection. [2×5=10]

6. a) Write about screening and production of medical or pharmaceutical products using mammalian culture.

b) What is growth? Discuss different methods of growing cells in a monolayer [2×5=10]

7. a) Explain

- i) Multiplex PCR
- ii) Regulatory aspects of GLP

b) What is DNA fingerprinting? Describe the steps involved in the process. [2×5=10]