Exam.Code:1032
Sub. Code: 7566

2063

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. Write a very short note on followings (1*10=10)
   a) Role of xenotransplantation
   b) Transformation
   c) Importance of CO_2 incubator
   d) Normal cell characteristics
   e) Feeder cell type
   f) Composition of holding media
   g) Nunc factory
   h) Name two Anti-bacterial agents
   i) Example of reproductive cloning
   j) Isoenzymes

Section-A

2. a) Describe the importance and procedure of cloning cells in animal cell culture. (5)
   b) Give an account of methods used for improving survival percentage of cloned cells. (5)
3. a) List out and justify nutrient requirements of animal cell culture in laboratory. (6)
   b) Compare various methods employed to isolate primary cell culture. (4)
4. a) Enlist equipment and facility requirement for a large-scale laboratory have. Draw layout diagram of small- and large-scale laboratory. (5)
   b) What is conditioned medium? How this is prepared. What is its application? (5)

Section-B

5. a) State the best method employed for scaling up the epithelial cell culture and why. (6)
   b) Giving examples, describe the process of developing mouse disease models. (4)
6. a) Compare therapeutic cloning with reproductive cloning. Write a note on related ethical issues. (6)
   b) Write a note on cell culture contamination. (4)

P.T.O.

7. a) Discuss the synthesis of Recombinant Factor VIII employing cell culture methodology. (5)

b) Write a note on (Any one) (5)

i. Multiplex PCR

ii. DNA fiingerprinting

x-x-x