

Exam. Code: 0909
Sub. Code: 6709

2021
B.E. (Biotechnology) Fifth Semester
BIO-513: Animal Cell Culture and Biotechnology

Time allowed: 3 Hours

Max. Marks: 50

NOTE: Attempt five questions in all, including Question No. 1 which is compulsory and selecting two questions from each Unit.

x-x-x

I. Answer the following:-

- a) Name the stable derivative of glutamine used in ACC media
- b) Two distinct features of animal cell culture
- c) Relationship between split ratio and generation number
- d) Role of CO₂ incubator in cell culturing
- e) Significant properties of methocel
- f) Use of tylosin in ACC
- g) Major protein of communicating junctions
- h) Role of freezing while preparing conditioned media
- i) Significance of iPSC
- j) Name a reporter gene used in transient transfection (10x1)

UNIT – I

- II. Explain the process, difficulties and correction measures taken while developing cell line through cell cloning. (10)
- III. Compare methodologies, pros & cons of enzymatic and mechanical methods used for developing primary cell culture. (10)
- IV. a) Giving some examples, describe the structure and function of intermediate filaments.
b) Write a note on isoenzyme analysis. (7,3)

UNIT – II

- V. a) Using diagram, describe any two methods employed for developing animal transgenics.
b) Write a note on supercooling and eutectic points. (7,3)

P.T.O.

(2)

- VI. Explaining one real life example, describe in detail the steps and application of IVF and embryo transfer technology in animal sciences. (10)
- VII. Describe principle, working and advantage of any two physical methods of cell transfection. (10)

x-x-x