

1128

M.Sc. (Biotechnology), Third Semester
MBIO-301: Animal Cell Science and Technology

Time allowed: 3 Hours

Max. Marks: 80

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

x-x-x

I. Attempt the following:-

- a) What is a primary lysosome?
- b) What is a cell line?
- c) What is viability?
- d) Define batch reservation of serum.
- e) Define *in vitro* fertilization.
- f) What is an embryonic stem cell?
- g) What is a humanized antibody?
- h) What is transgenesis?

(8x2)

UNIT – I

- II. a) Discuss the structure and function of endoplasmic reticulum.
- b) Discuss the advantages and disadvantages of serum in Cell culture medium. (8,8)
- III. a) Discuss the significance of carbon dioxide incubator in cell culture laboratory.
- b) Discuss the role of viability and survival assay in measuring cytotoxicity. (8,8)

UNIT – II

- IV. a) Discuss the significance of trypsinization for cell disaggregation.
- b) Explain the significance and technique of cell separation. (8,8)
- V. a) Discuss applications of stem cells in tissue engineering.
- b) Discuss the process for monoclonal antibody production in cell culture laboratory. (8,8)

P.T.O.

(2)

UNIT – III

- VI. a) Describe any two methods for transgenesis of animal cells.
b) Discuss the role of Biotechnology in pest control. (8,8)
- VII. a) Discuss the major characteristics of transformed animal cells.
b) Describe the role of Biotechnology in aquaculture. (8,8)

UNIT – IV

- VIII. a) Discuss the technique in IVF.
b) Describe the process of reproductive cloning. (8,8)
- IX. a) Describe the role of Biotechnology in conserving Biotechnology.
b) Explain the limitations of cloning. (10,6)

x-x-x