Exam.Code:0437
Sub. Code: 3479

2012

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 the role of cisternae?

b) What is serum free adaptation?

c) What are totipotent stem cells?

d) What is embryo transfer in IVF?

e) What are microcarrier cultures?

f) Define scorable markers.

g) Define humanized antibodies.

h) What is therapeutic cloning? (8x2)

UNIT - I

II. a) Discuss the structure and function of golgi complex.

b) Discuss the functions and constituents of balanced salt solution. (2x8)

III. a) Discuss the role of carbon dioxide incubator and inverted microscope in cell culture lab.

b) Discuss the role of serum in cell culture medium. (2x8)

UNIT - II

IV. a) Describe the enzymatic disaggregation methods for animal cell culture.

b) Discuss the methods for scale up of monolayer culture. (2x8)

V. a) Discuss the role of embryonic stem cells in tissue regeneration.

b) Discuss the hybridoma technology for synthesis of monoclonal antibodies. (2x8)

UNIT - III

VI. a) Describe the role of Biotechnology in pest control.

b) Discuss two methods for raising transgenic animals. (2x8)

P.T.O.

VII. a) Discuss how Biotechnological tools help in improving silkworm quality.

b) Discuss the characteristics of transformed cells. (2x8)

UNIT - IV

VIII. Discuss the different steps in IVF. Discuss the role of hormonal intervention in the same. (16)

IX. a) Discuss the technique of reproductive cloning and its applications.

b) Discuss the role of Biotechnology in conservation of Biodiversity. (2x8)

x-x-x