

M.TECH. DEGREE EXAMINATIONS: DECEMBER 2009

First Semester

BIOTECHNOLOGY

BTY 503: Plant and Animal Biotechnology

Time: Three Hours

Maximum Marks: 100

Answer All the Questions:-

PART A (10 x 2 = 20 Marks)

1. What is meant by molecular pharming?
2. What are macerozymes?
3. What are Ti Plasmids?
4. What is meant by binary vector?
5. Comment on Organ culture
6. What is meant by monolayer culture?
7. What is meant by superovulation?
8. What is meant by embryo sexing?
9. What are cytokines?
10. Give two applications of Stem cells.

PART B (5 x 16 = 80 Marks)

11. (a) (i) Comment on meristem culture?
(ii) Briefly explain suspension culture?

(OR)

- (b) (i) Briefly explain Continuous culture?
(ii) Briefly explain the various strategies used for the immobilization of plant cells?

12. (a) Briefly explain the strategies used for gene transfer using Agrobacterium?

(OR)

- (b) Briefly explain gene transfer using electroporation and particle gun bombardment?

13. (a) Explain how cell culture can be carried out in continuous, perfusion and hollow fibre reactor?

(OR)

(b) Explain the principle behind the Hybridoma Technology and explain the steps involved in the production of Monoclonal Antibody?

14. (a) What are transgenic animals? Explain the strategies involved in the production of transgenic animals?

(OR)

(b) Briefly explain the steps involved in vitro fertilization? Comment on the ethics associated with in vitro fertilization?

15. (a) Briefly explain the strategies involved in the isolation and large scale production of Interferons?

(OR)

(b) Briefly explain about the steps involved in the isolation of terpenes from plants?
