

D 13059

Name.....

Reg. No.....

THIRD SEMESTER M.Sc. DEGREE EXAMINATION, FEBRUARY 2006

General Biotechnology

GBT 213: PLANT TISSUE CULTURE

Time : Three Hours

Maximum : 80 marks

Section A

*Answer any **two** questions.*

1. Give an account on isolation and purification of **protoplasts** and **factors** affecting **protoplast** yield and viability.
2. Explain the stages in and factors affecting somatic embryo genesis and **synseed** production. Add a note on commercial applications of **synseed** production.
3. Give an account on the role of plant growth regulators *in vitro* studies.

(2 x 10 = 20 marks)

Section B

*Answer any **ten** questions.*

4. How do you induce haploid production *in vitro* ?
5. Explain **explant** sterilization procedures.
6. What are the factors controlling **organogenesis** ?
7. Describe *in vitro* pollination.
8. Give an account on **protoplast** fusion methods.
9. Describe hormone habituation.
10. Give an account on **somaclonal** variation.
11. Discuss the importance of **cryopreservation**.
12. What is the role of **biotransformation** in secondary metabolite production *in vitro* ?
13. Explain commercial perspective of **micropropagation**.
- 14.0 Explain the importance of hardening process in tissue culture
15. How do you set a tissue culture laboratory on a commercial scale ?

(10 x 5 = 50 **marks**)

Section C

*Answer **all** questions.*

16. PCV.
17. **Chimeras**.
18. Nurse culture.
19. Vitrification.
20. Role of suspensor.

(5 x 2 = 10 **marks**)