



K17P 1245

Reg. No. :

Name :

**Third Semester M.Sc. Degree (Reg./Suppl./Imp.)
Examination, November 2017
(2014 Admn. Onwards)**

BOTANY

BOT 3E01 : BIOTECHNOLOGY AND BIOINFORMATICS

Time : 3 Hours

Max. Marks : 60

SECTION – A

1. a) Write an account on Cell Suspension Culture for production secondary metabolites.

OR

b) Explain the techniques of in vitro matagenesis for crop improvement.

2. a) Explain the methods of in vitro production of haploids.

OR

b) Give an account of in vitro fertilization and its significance. (2×8=16)

SECTION – B

Answer any two.

3. a) What is data base ?

b) Explain the concepts of data base.

c) Give an account of application of data-base in biology. (1+2+3)

4. a) What are restriction enzymes ?

b) Explain the method of construction of recombinant DNA.

c) Write on account of application of recombinant DNA in plant biology. (1+2+3)

P.T.O.

K17P 1245



5. a) What is micropropagation ?
- b) Explain the stages of micropropagation.
- c) Write an account of cryopreservation.

(1+2+3)
(2×6=12)

SECTION – C

Answer any six.

6. Write an account of in vitro organogenesis.
7. Explain the method of production of synthetic seeds.
8. Write an account of somatic embryogenesis.
9. Explain the techniques of shoot tip culture.
10. Write an account of protoplast fusion methods.
11. Explain the techniques of endosperm culture.
12. Write an account of somaclonal variation.
13. Explain the concept of totipotency.

(6×3=18)

SECTION – D

Answer any seven.

14. PBR 322.
15. Callus.
16. Gene bank.
17. Cy brid.
18. Hairy roots.
19. Elicitors.
20. Antisense RNA.
21. NCBI.
22. Multiple sequence alignment.
23. Swiss PORT.

(7×2=14)