

D 40118

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Name.....

Reg. No.....

SIXTH SEMESTER B.Sc. DEGREE EXAMINATION, MARCH/APRIL 2018

(CUCBCSS—UG)

Biotechnology

BTY 6B 13—PLANT BIOTECHNOLOGY

Time : Three Hours

Maximum : 80 Marks

Section A

Answer any two out of four questions in about 1,500 words.

Each question carries 10 marks.

1. Describe somatic embryogenesis and its applications.
2. Explain the different methods of plant genetic transformation.
3. Explain the methods for the production of virus free plants.
4. How is plant tissue culture used for germplasm conservation ?

(2 × 10 = 20 marks)

Section B

Answer any seven of fourteen questions in about 750 words.

Each question carries 5 marks.

5. Role of growth hormones in plant tissue culture.
6. Acclimatization.
7. Micropropagation pathway.
8. Protoplast fusion.
9. Haploid production.
10. Methods of asepsis used in plant tissue culture.
11. Causes of somaclonal variation ?
12. Media constituents of plant tissue culture.
13. Cybrids and their uses.
14. Suspension cultures.
15. Cryopreservation.
16. Ri plasmid.

Turn over

17. Reporter genes.
18. Vitrification.

(7 × 5 = 35 marks)

Section C

*Answer all questions in about 300 words.
Each question carries 3 marks.*

19. IAA.
20. Undefined media.
21. Biolistics.
22. Low salt medium.
23. Browning.

(5 × 3 = 15 marks)

Section D

*Answer all questions in about 200 words.
Each question carries 2 marks.*

24. Totipotency.
25. De-differentiation.
26. Cytokinins.
27. Artificial seeds.
28. Role of Agar-agar.

(5 × 2 = 10 marks)