

B.Sc. DEGREE END SEMESTER EXAMINATION- APRIL 2021**SEMESTER –6: BOTANY (CORE COURSE)****COURSE: 15U6CRBOT11: BIOTECHNOLOGY AND BIOINFORMATICS**

(Common for Regular 2018 admission & Improvement 2017/Supplementary 2017/2016 /2015 admissions)

Time: Three Hours

Max. Marks: 60

PART A**Answer All Questions; Each Question Carries 1 Mark.**

1. What is an explant?
2. Give one method of sterilization of plant tissue.
3. What is golden rice?
4. Name a method used for DNA sequencing.
5. Define micropropagation.
6. What is organogenesis?
7. Who invented PCR technique?
8. What is molecular docking? (1 x 8 = 8)

PART B**Answer Any Six Questions; Each Question Carries 2 Marks.**

9. Write a brief note on Ti plasmid.
10. Name the plant growth regulators used in plant tissue culture.
11. What is the principle of autoclave?
12. What is Bt cotton?
13. Differentiate between electroporation and micro injection
14. What is meant by embryo rescue?
15. What are the advantages of meristem culture?
16. What is meant by pair wise alignment?
17. Write a note on Rasmol.
18. What is Gen Bank? (2 x 6 = 12)

PART C**Answer Any Four Questions; Each Question Carries 4 Marks.**

19. What is PCR? What are its applications?
20. Write a note on biodiversity database.
21. Explain the working principle of laminar air flow and mention its uses in the tissue culture laboratory.
22. Write a note on somatic cell hybridization.
23. Explain the technique of Southern Blotting.
24. Write note on restriction endonucleases. (4 x 4 = 16)

PART D

Answer Any Two Questions; Each Question Carries 12 Marks.

25. Explain Edman's degradation method for protein sequencing.

OR

26. What is biological database? Describe the different biological databases and mention their important features.

27. Write a comprehensive account of methods of sterilization in tissue culture lab.

OR

28. Give an account on the achievements and current trends in Biotechnology. (12 x 2 = 24)
