

B. Sc. DEGREE END SEMESTER EXAMINATION - MARCH 2020**SEMESTER – 6: BOTANY (CORE COURSE)****COURSE: 15U6CRBOT11 : BIOTECHNOLOGY & BIOINFORMATICS***(Common for Regular 2017 Admission & Supplementary 2016 /2015 Admissions)*

Time: Three Hours

Max. Marks: 60

PART - AI. Answer **ALL** questions; each question carries **1** mark.

1. Define cybrids
2. What is inoculation?
3. Which plant parts are used for *In vitro* production of virus free plants?
4. Give an example for chemical sterilant used in tissue culture?
5. is a Molecular visualization tool
6. Give an example for Restriction endonucleases
7. What is the pH of MS medium?
8. Expand the abbreviation – PCR

(1 x 8 = 8)

PART - BII. Answer **ANY SIX** questions; each question carries **2** marks.

9. What is electroporation
10. What is the importance of hardening in tissue culture?
11. Differentiate between de differentiation and re-differentiation
12. What do you mean by Molecular docking?
13. Write a note on Autoclave
14. Differentiate between genome and proteome
15. Write a note on Protein sequencing
16. List two applications of DNA finger printing
17. What are the uses of FASTA?
18. Write a brief account on Biowar

(2 x 6 = 12)

PART - CIII. Answer **ANY FOUR** questions; each question carries **4** marks.

19. Briefly describe the different methods of sterilization used in tissue culture
20. How will you make Synthetic seed? What is its application?
21. How will you develop haploid plants using tissue culture techniques?

22. Comment on patenting and IPR issues in biotechnology fields.
23. Give a brief account on the scope and relevance of bioinformatics
24. Write a note on Southern blotting. (4 x 4 = 16)

PART - D

IV. Answer ANY **TWO** questions; each question carries **12** marks.

25. What is vector in Recombinant DNA Technology? Write an essay on different types of vectors used in Recombinant DNA Technology.

OR

26. Describe somatic embryogenesis. Mention the different methods of synthetic seed preparation. Differentiate somatic embryogenesis from organogenesis.
27. What are databases? Give an account of different databases you have studied.

OR

28. Briefly describe the applications of Biotechnology in the field of Agriculture & Medicine.

(12 x 2 = 24)
