

B. Sc. DEGREE END SEMESTER EXAMINATION - MARCH 2018**SEMESTER – 6: BOTANY (CORE COURSE)****COURSE: 15U6CRBOT11: BIOTECHNOLOGY & BIOINFORMATICS***(For Regular 2015 Admission)*

Time: Three Hours

Max. Marks: 60

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

1. Name the common amino acids present in MS medium.
2. Name the organisms known as nature's own genetic engineer.
3. Who is the father of Plant Tissue Culture?
4. Name the highly heat stable enzyme used in PCR?
5. Name a tissue culture technique used for producing haploid plants.
6. Define bioinformatics.
7. What is EMBL?
8. Expand PDB.

(1 x 8 = 8)

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

9. What is Flavr Savr tomato?
10. Define cybrids.
11. Elaborate pairwise alignment.
12. What are restriction endonucleases? How it differs from ligases?
13. Write notes on synthetic seeds.
14. What is somaclonal variation?
15. Give the applications of RasMol.
16. What is Species 2000?
17. Describe southern blotting.
18. Write a short note on DNA fingerprinting.

(2 x 6 = 12)

PART - C

III. Answer **ANY FOUR** questions; each question carries **4** marks.

19. Explain the necessary facilities required in a tissue culture laboratory.
20. Describe PCR technique and enumerate its application in Biotechnology.
21. Explain the Agrobacterium mediated gene transfer.
22. Give an account of Edman's degradation method for protein sequencing.
23. What are the major outcomes of human genome project?
24. With the help of an example explain the concept of 'transgenic plants'.

(4 x 4 = 16)

PART - D

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

25. Write a comprehensive account of application of tissue culture.

OR

26. Give an account on different Nucleotide sequence database.
27. Write an essay on Sanger's method of DNA sequencing.

OR

28. Using MS medium as an example explain the various components of a typical plant tissue culture medium.

(12 x 2 = 24)
