

B. Sc. DEGREE END SEMESTER EXAMINATION - MARCH 2019**SEMESTER – 6 : BOTANY (CORE COURSE)****COURSE: 15U6CRBOT11 : BIOTECHNOLOGY & BIOINFORMATICS**

(Common for Regular - 2016 Admission / Supplementary-Improvement 2015 admission)

Time: Three Hours

Max. Marks: 60

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

1. Define callus
2. What is explant?
3. Which plant parts are used for *In vitro* production of haploids plants?
4. What are plasmids?
5. Give an example for Nucleotide sequence database
6. Describe proteome
7. is a Molecular visualization tool
8. Expand the abbreviation – IPR

(1 x 8 = 8)

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

9. List two applications of DNA finger printing
10. What is the role of Restriction endonucleases in genetic engineering?
11. Why *Agrobacterium* is called a natural genetic engineer?
12. What are cybrids?
13. What do you mean by Somaclonal variation?
14. Write a note on Laminar air flow
15. What is SWISS PROT?
16. Write a note on DNA sequencing
17. What is BLAST?
18. Write a brief account on Molecular phylogeny

(6 x 2 = 12)

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

19. Briefly describe the different methods of sterilization used in tissue culture
20. What are the advantages and disadvantages of micropropagation?
21. How will you develop virus free plants using tissue culture techniques?

- 22. With the help of suitable example write a note on transgenic plants
- 23. What do you mean by a data bases? Write a short note on Species 2000
- 24. Write a short essay on Molecular docking. (4 x 4 = 16)

PART D

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

- 25. Write an essay on Different methods of gene transfer.

OR

- 26. What are the composition and preparation of Murashige and Skoog medium?

- 27. Write an essay on Protein sequencing with special reference to Edman degradation method

OR

- 28. Describe the various steps involved in micro-propagation. Add a note on its advantages and disadvantages.

(12 x 2 = 24)
