TB246971S

18·4

Reg. No :.....

Name :.....

BACHELOR'S DEGREE (C.B.C.S) EXAMINATION, MARCH 2024

2021 ADMISSIONS REGULAR

SEMESTER VI - CORE COURSE (BOTANY)

BO6B12B18 - Biotechnology and Bioinformatics

Time : 3 Hours **Maximum Marks : 60**

Part A

I. Answer any Ten questions. Each question carries 1 mark **(10x1=10)**

1. Why is it necessary to have an aseptic environment in plant tissue culture lab?
2. What is a bioreactor? Give its importance.
3. What is the difference between de-differentiation and re-differentiation?
4. Define the terms- Caulogenesis and Rhizogenesis.
5. List down the steps in PCR.
6. List any two goals of rDNA technology.
7. Write the full form of BAC.
8. What is meant by accession number in bioinformatics?
9. What is called a biological database?
10. Give full form of BLAST
11. What is meant by proteome?
12. Define Global alignment.

Part B

II. Answer any Six questions. Each question carries 5 marks **(6x5=30)**

13. Enlist the advantages of micropropagation.
14. Differentiate between pollen and anther culture. Discuss the advantages and disadvantages of both.
15. How are artificial seeds prepared?
16. Give a brief account of the Sanger method of DNA sequencing.
17. Give details on the DNA polymerase enzyme in PCR.
18. Comment on the recombinant DNA technology in medicine.
19. Give a brief account of the Primary protein sequence database.
20. Which are the categories of genomics
21. What is the use of RasMol?

Part C

III. Answer any Two questions. Each question carries 10 marks **(2x10=20)**

22. Explain the Murashige and Skoog medium composition and its preparation.
23. Clarify the procedures in recombinant DNA technology.
24. Explain the Biological databases with examples.
25. Explain the molecular visualization tool. List the basic commands used in the tool.