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D6BBT2102

Reg.No.....

Name:

SIXTH SEMESTER B.Sc. DEGREE EXAMINATION, APRIL 2024

(Regular/Improvement/Supplementary)

BOTANY

GBOT6B11T:BIOTECHNOLOGY, MOLECULAR BIOLOGY & BIOINFORMATICS

Time: 2 Hours

Maximum Marks: 60

SECTION A: Answer the following questions. Each carries *two* marks.

(Ceiling 20 Marks)

1. What is T-DNA?
2. List any four essential features of vector.
3. Write an account on open access journals.
4. What is the purpose of nylon membrane in southern blotting?
5. State Chargaff rule.
6. What do you mean by 'capping' in post transcriptional modification of RNA?
7. Comment on induced mutations.
8. What is temisnism?
9. What is BLAST?
10. Write a short note on PDB.
11. What is molecular docking?
12. Give an account on INFLIBNET.

SECTION B: Answer the following questions. Each carries *five* marks.

(Ceiling 30 Marks)

13. Describe the technique of blue white screening. Add a note on its application.
14. What is golden rice? How was it made? What is its application?
15. Explain the working of trp operon in the presence of tryptophan.
16. Describe the features of genetic code.
17. Give an account on Sanger's Sequencing Procedure.
18. Describe CADD and its applications.
19. Briefly describe the steps involved in genome sequence assembly.

SECTION C: Answer any *one* question. Each carries *ten* marks.

20. Give an account on the structural changes in chromosomes with suitable illustrations. Add a note on the genetic effects brought about by these aberrations.
21. Briefly describe the various methods of gene transfer in rDNA technology.

(1 x 10 = 10 Marks)