

D 50108

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Name.....

Reg. No.....

**FIFTH SEMESTER (CUCBCSS—UG) DEGREE EXAMINATION
NOVEMBER 2023**

Botany

BOT 5B 08—GENERAL AND BIOINFORMATICS, INTRODUCTORY BIOTECHNOLOGY
AND MOLECULAR BIOLOGY

(2018 Admissions)

Time : Three Hours

Maximum : 80 Marks

Section A

*Answer all questions.
Each question carries 1 mark.*

1. What is an IP address.
2. What is a GM Crop ?
3. What is central Dogma ?
4. What is Cybridization ?
5. Expand PCR.
6. Name a website providing academic service.
7. What is a codon ?
8. Name two social network sites.
9. What is information overload ?
10. What are okazaki fragments ?

(10 × 1 = 10 marks)

Section B

*Answer all questions.
Each question carries 2 marks.*

11. Explain the nomenclature of pBR322 ?
12. What is INFLIBNET ? What is its significance ?
13. What are the salient features of PDB ?
14. What is green computing ?

Turn over

15. How is *trp* operon activated ?
16. Differentiate between cistrons and recons.
17. What is a protein database ?
18. What is Uni Prot ?
19. Define the working principle of autoclave.
20. What is the application of southern blotting ?

(10 × 2 = 20 marks)

Section C

*Answer any **six** questions.*

Each question carries 5 marks.

21. What are restriction endonucleases ? Explain types of endonucleases.
22. Write the advantages of Meristem culture.
23. Explain the process of southern blotting and its importance.
24. Explain different types of mutations ?
25. Explain information retrieval from biological databases by sequence alignment ?
26. Why is the structure of RNA unstable ?
27. How does Biotechnology help in Bioremediation ?
28. Explain the role and applications of IT in education ?

(6 × 5 = 30 marks)

Section D

*Answer any **two** questions.*

Each question carries 10 marks.

29. Explain the various steps involved in micro propagation and write its advantages
30. What is Mutation ? Explain different Types of Mutagens and its effect ?
31. Define sequence databases. Illustrate on various nucleotide sequence databases.

(2 × 10 = 20 marks)