K24U 3439

Reg. No. : .....

Name : .....

III Semester B.Sc. Degree (C.B.C.S.S. – O.B.E.-Regular/Supplementary/ Improvement) Examination, November 2024
(2019 to 2023 Admissions)
GENERAL AWARENESS COURSE IN MICROBIOLOGY
3A12MCB : Bioinformatics and Bioinstrumentation

Time : 3 Hours Max. Marks : 40

PART – A

Answer **all** questions. **Each** carries **1** mark. **(6×1=6)**

1. Taq polymerase.
2. Define NCBI.
3. What is ODBC ?
4. Define polymerization.
5. Buffer.
6. PHYLIP.

PART – B

Answer **any 6** questions. **Each** carries **2** marks. **(6×2=12)**

7. Transcriptome.
8. BLASTX
9. Define reference sequence.
10. Principles of chromatography.
11. What is the function of Clustal W ?
12. What is the primary function of PCR in molecular biology ?
13. In UV-visible spectroscopy, what does the absorbance of a sample indicate ?
14. What is BLOSUM ?

P.T.O.

PART – C

Answer **any 4** questions. **Each** carries **3** marks. **(4×3=12)**

15. What is database ? Explain different types of databases.
16. Comment on Local and Global alignment.
17. Describe phylogenetic analysis.
18. Explain how the charge of a molecule influences its movements in electrophoresis ?
19. What is the Beer-Lambert Law and how is it applied in spectrophotometry ?
20. Describe homology modelling and its applications.

PART – D

Answer **any 2** question. **Each** question carries **5** marks. **(2×5=10)**

21. Give detailed description on specialized databases.
22. Describe the principle, applications and working requirements of agarose electrophoresis.
23. Describe in detail the basic principles of chromatography and its types.
24. Write a note on expression proteomics, structural proteomics and functional proteomics.

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