



K24U 1703

Reg. No. :

Name :

**Second Semester B.Sc. Degree (CBCSS – OBE – Regular/Supplementary/
Improvement) Examination, April 2024**

(2020 Admission Onwards)

Core Course in Life Sciences (Zoology) and Computational Biology

**2B02ZCB : FUNDAMENTALS OF COMPUTATIONAL BIOLOGY AND
BIOINFORMATICS**

Time : 3 Hours

Max. Marks : 40

PART – A

Write about **each** of the following in **2** or **3** sentences. **Each** question carries **1** mark.

(6×1=6)

1. Proteomics.
2. MEGA.
3. SWISS-PROT.
4. Cladogram.
5. Maximum parsimony.
6. Data mining.

PART – B

Explain about **any 6** of the following. **Each** question carries **2** marks.

(6×2=12)

7. PDB.
8. BLOSUM.
9. BLAST.
10. Genomics.

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11. Ultra metric trees.
12. Multiple sequence alignment.
13. PHYLIP.
14. Global sequence alignment.

PART – C

Answer **any 4** questions. **Each** question carries **3** marks.

(4×3=12)

15. Discuss the emerging areas of bioinformatics.
16. Briefly explain any two database search tools used in bioinformatics.
17. Explain PAM.
18. Comment on FASTA.
19. What are the goals of HGP ?
20. Comment on KEGG.

PART – D

Answer **any 2** questions. **Each** question carries **5** marks.

(2×5=10)

21. Discuss various applications of bioinformatics.
 22. Briefly explain the different types of databases used in bioinformatics.
 23. Elaborate on the dynamic programming methodologies for sequence alignment.
 24. Briefly explain any two distance based methods of phylogenetic tree construction.
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