K22U 2257

V Semester B.C.A. Degree (CBCSS-OBE – Regular/Supplementary/Improvement) Examination, November 2022
(2019 Admission Onwards)
Core Course
5B16BCA – E04 : BIO-INFORMATICS

Time : 3 Hours

Max. Marks : 40

PART – A
Short Answer

Answer **all** questions :

(6×1=6)

1. What do you mean by computational molecular biology ?

2. What do you mean by SQL ?

3. What is a prokaryotes cell ?

4. What do you mean by pairwise sequence alignment ?

5. Expand the term PAM.

6. What do you mean by PDB ?

PART – B
Short Essay

Answer **any 6** questions :

(6×2=12)

7. List out the subfields of bioinformatics.

8. What are various types of biological databases ?

9. List out differences between prokaryotes and eukaryotes cell.

10. What do you mean by sequence identity ?

P.T.O.

11. What are the differences between global and local pairwise sequence alignment ?

12. What are the benefits of Expasy bioinformatic tool ?

13. What are the features of scoring matrices ?

14. Write note on secondary structures.

PART – C
Essay

Answer **any 4** questions :   (4×3=12)

15. Briefly explain the limitations of bioinformatics.

16. What are the pitfalls of biological databases ?

17. Explain cell structure with suitable diagram.

18. Short note on BLOSUM matrices.

19. Explain any one structural forms of protein.

20. Explain dynamic programming used in sequence alignment.

PART – D
Long Essay

Answer **any 2** questions :   (2×5=10)

21. Describe various information retrieval methods from biological databases.

22. Explain chemical nature of DNA in detail.

23. Compare BLAST and FASTA similarity searching.

24. Explain protein structure visualisation tools.

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