

SHRIMATHI DEVKUNVAR NANALAL BHATT VAISHNAV COLLEGE FOR WOMEN
(AUTONOMOUS)

(Affiliated to the University of Madras and Re-accredited with 'A+' Grade by NAAC)
Chromepet, Chennai - 600 044.

M.Sc.PBPBT - END SEMESTER EXAMINATIONS - NOV'2024

SEMESTER - III

24PPBET3B04 - Bioinformatics

Total Duration : 1 Hrs. 30 Mins.

Total Marks : 40

Section B

Answer any **TEN** questions ($10 \times 2 = 20$ Marks)

1. Define BLAST and Accession code.
2. Describe PAM and BLOSUM substitution matrices.
3. How do gap penalties affect clustal alignment?
4. What is bootstrapping in phylogenetics?
5. Discuss nucleotide diversity.
6. Name any two methods suggested for organising expression data.
7. Define a protein motif.
8. What are the hub proteins in the context of PPI?
9. Why protein tertiary structure is important?
10. What is GBFF?
11. Describe bootstrapping in phylogenetics.
12. Name any two methods suggested for organising expression data.

Section C

I - Answer any **FOUR** questions ($4 \times 5 = 20$ Marks)

13. Explain NCBI and its objectives.
14. Differentiate between global and local sequence alignments.
15. Describe the sum-of-pairs (SP) scoring method in detail.
16. Describe the process of rooting trees in phylogenetics and its importance.
17. Examine the process of X-ray crystallography in determining proteins 3D structure.
18. Outline the tools and database available for exploring PPI.
