QP CODE: 25019367

25019367

Reg No : .....

Name : .....

B.Sc DEGREE (CBCS)) REGULAR/ IMPROVEMENT/ REAPPEARANCE / MERCY CHANCE EXAMINATIONS, FEBRUARY 2025

Fourth Semester

B.Sc Bioinformatics Model III

Core Course - BI4CRT11 - STRUCTURAL BIOINFORMATICS

2017 Admission Onwards

EB1C169F

Time: 3 Hours Max. Marks : 80

Part A

*Answer any **ten** questions.*

*Each question carries **2** marks.*

1. What are Chaperonins and what is their role in protein structure?
2. Is globular protein a tertiary structure?
3. What is the composition of amino acids?
4. Mention coiled coil.
5. What are the 3 types of DNA?
6. What form of DNA did Watson and Crick discover?
7. Define HMM.
8. Mention any two applications of domain interaction.
9. What is the function of DNA binding proteins?
10. Comment on the levels of Specificity.
11. List any three applications of Protein-DNA binding interactions.
12. Define Chou fasman method.

(10×2=20)

Part B

*Answer any **six** questions.*

*Each question carries **5** marks.*

13. What disulfide bonds do for a protein?

14. Why is identification of protein and domains an important part of biological sequence determination?

15. What is protein torsion angle?

16. Draw and explain clover model of tRNA.

17. Explain Dipole moment with a diagram.

18. Comment on computational methods for identifying PPIs.

19. Elongate PSSM.

20. What is Structural bioinformatics?

21. What are the advantages of SPDBV?

(6×5=30)

Part C

*Answer any **two** questions.*

*Each question carries **15** marks.*

22. Write a detailed note on peptide formation.

23. What are the forces that stabilize protein structure?

24. Explain the general ab-initio prediction process in detail with neat diagram.

25. What is molecular visualization? Explain.

(2×15=30)