Exam. Code : 103206
Subject Code : 1353

B.A./B.Sc. 6ᵗʰ Semester

BIOINFORMATICS

(Structural Biology & Molecular Modelling)

Time Allowed—3 Hours]　　　　　[Maximum Marks—75

Note :— Answer *one* question each from Sections B, C, D

E and all questions from Section A.

SECTION—A

1. Explain the following terms :

   (a) Ion exchange chromatography

   (b) MALDI-TOF

   (c) Secondary structure of protein

   (d) Protein motif

   (e) QSAR descriptors

   (f) Lipinsky rule of five

   (g) Hansch equation

   (h) Helix

   (i) Force field

   (j) Molecular dynamics. 　　　　$10 \times 1.5 = 15$

SECTION—B

2. What is Edman degradation ? Discuss principle and application.

OR

3. Explain principle and application of electron microscopy. 　　　　15

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SECTION—C

4. Explain GOR method for protein secondary structure prediction.

OR

5. What are CATH and PDB ? Discuss their significance.

15

SECTION—D

6. Discuss computer aided drug designing methods.

OR

7. What do you understand by QSAR ? Explain its significance. 15

SECTION—E

8. What is relative free energy ? Explain how molecular dynamics technique can used in protein structural studies.

OR

9. Discuss principle and application of simulated annealing.

15