

**Sr.No.3332**

**Exam Code: 103206**  
**Subject Code: 1357**

**B.A./B.Sc. - 6th Semester**  
**(2720)**

**Paper: Bioinformatics (Structural Biology & Molecular Modelling)**

**Time allowed: 2 hrs.**

**Max. Marks: 75**

**Note: Attempt any four questions. All questions are of equal marks.**

- 1) What is mass spectroscopy? Discuss methods used for protein isolation and purification.
- 2) What do you understand by tertiary structure of proteins? Discuss X-ray diffraction method for determination of tertiary structure of proteins.
- 3) What is a motif? Discuss Pfam and CATH database.
- 4) What is secondary structure of protein? Explain methods used for prediction of secondary structures of proteins.
- 5) What is a drug? Discuss steps involved in ligand based drug designing.
- 6) Explain QSAR descriptor. Discuss its significance in drug designing.
- 7) What do you understand by simulated annealing? Explain principle molecular dynamics simulation techniques.
- 8) What are force fields? Discuss calculation of relative free energy using simulation techniques.

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