

(3 Hours)

[Total Marks: 80]

N.B: (1) Question No.1 is compulsory.

(2) Attempt any three questions out of remaining five questions.

(3) Draw diagrams/ figure wherever necessary.

Q.1. Write short note on followings

(20M)

- a) Membrane protein and their function
- b)Cholesterol
- c) Protein folding
- d) Motifs

Q. 2. a) Explain membrane fluidity& various diffusion pattern of lipids into membrane. (10M)

b) What is Bragg's law of Diffraction? Explain X'ray crystallography. (10M)

Q.3. a) Give details about infrared spectroscopy. (10M)

b) Explain role of molecular chaperon in protein folding. (10M)

Q.4. Discuss the following (20M)

a) Circular Dichroism

b) Lipoprotein and their types

c) Zing finger protein

d) Carrier RNA

Q.5. a) Explain in detail Fluid Mosaic model of plasma membrane (10M)

b) What is the principle and instrumentation of NMR spectroscopy? (10M)

Q.6. a) How thermodynamics affect the protein folding, Explain. (10M)

b) Nuclear transport is responsible for transport of substance across the membrane. Justify the statement. (10M)