Exam.Code:0439
Sub. Code: 3492

2031

M.Sc. (Bio-Informatics) First Semester

MBIN-8004: Macromolecular Bio-Chemistry

Time allowed: 3 Hours Max. Marks: 60

NOTE: *Attempt five questions in all, including Question No. I which is compulsory and selecting atleast one question from each Unit.*

x-x-x

I. Attempt the following:-

a) Conformation

b) Non polar interactions

c) Fibrous protein

d) Thermodynamics

e) Disulphide bonds

f) Partition function.

g) Levinthal paradox.

h) Glycoproteins (8x1½)

UNIT – I

II. a) Discuss helices and its significance in protein structure.

b) Discuss the importance of cystines pairing in protein. (2x6)

III. a) What are peptide bonds and properties?

b) Write a note on protein denaturation. (2x6)

UNIT – II

IV. a) Discuss protein and misfolding pathways and its significance.

b) Write a note on Helix coil transition in proteins. (2x6)

V. a) What are statically thermodynamics & its significances?

b) Write a note on application of statistical thermodynamics. (2x6)

P.T.O.

UNIT – III

VI. a) Discuss DNA polymorphism and its different form.

b) What is secondary & tertiary structure of polysaccharides? (2x6)

VII. a) Discuss sequence analysis of polysaccharides.

b) Discuss conformation of pectins & glycogen. (2x6)

x-x-x