Exam.Code:0001
Sub. Code: 0059

2012

B.A./B.Sc. (General) First Semester

Biochemistry

Paper - B: Nitrogen Containing Bio-molecules

Time allowed: 3 Hours

Max. Marks: 45

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

x-x-x

I. Explain briefly the following terms:

a) Native protein

b) Globular protein

c) Denaturation of DNA

d) Conjugated protein

e) Stereoisomerism

f) Biologically active peptides

g) Biological important nucleotides

h) Salting in and salting out protein

i) Ribozyme (9x1)

UNIT – I

II. a) Classify amino acids based on R groups. Draw the structure of positively charged amino acids.

b) Explain physical and chemical properties of amino acids. (5,4)

III. a) Discuss α-helix and β-pleated sheets of polypeptides.

b) Discuss titration curve of glycine. (5,4)

UNIT – II

IV. a) Explain various forces stabilizing structure and shape of proteins.

b) Describe amino acids present in proteins and non-proteins. (5,4)

V. a) Discuss structural levels of proteins.

b) Elaborate briefly fibrous proteins. (5,4)

P.T.O.

UNIT – III

VI. a) Discuss different forms of DNA.

b) Explain double helical model of DNA. (5.4)

VII. a) Explain physical and chemical properties of nucleic acids.

b) Elaborate different types of RNA. (5.4)

UNIT – IV

VIII. a) Write short notes on metalloporphyrin.

b) How will you detect porphyrin by spectrophotometrically. (5.4)

IX. a) Explain chemical and physiological significance of bile pigments.

b) Discuss porphyrin nucleus and classification of porphyrin. (5.4)

x-x-x