

1129

B.Sc. (Hons.) Bio-Informatics
First Semester
BIN-1007: Introduction to Biochemistry

Time allowed: 3 Hours**Max. Marks: 60**

NOTE: Attempt five questions in all, including Question No. 1 which is compulsory and selecting two questions from each Unit.

x-x-x

I. Answer the following:-

- a) What is secondary fold of protein?
- b) Justify the statement 'DNA is stable as helix
- c) What is Central dogma of molecular biology?
- d) What is splice variants?
- e) What is amino acid ionization?
- f) Define EXON.
- g) What is canonical form of DNA?
- h) What are glycoproteins?

(8x1½)

UNIT - I

II. a) What is the concept of Intron & Exons?

b) Discuss DNA helix structure.

(2x6)

III. a) Discuss the role of pKa & titration of amino acids.

b) Write a note on central dogma of molecular biology.

(2x6)

IV. a) Write a note on water & its significance.

b) Write a note on semi conservative replication.

(2x6)

UNIT - II

V. a) What are Ramachandran Plot and its significance?

b) Differentiate specificity and efficiency of enzyme.

(2x6)

VI. a) Discuss different level of protein structure.

b) What is secondary & tertiary structure of polysaccharides?

(2x6)

(2)

VII. a) Discuss physical properties of carbohydrates & their structure.

b) Discuss classification of amino acids.

(2x6)

x-x-x