

2124

B.Sc. (Hons.) Bio-Informatics (FYUP)

First Semester

BINF-1001: Introduction to Biomolecules

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

1. Give the answer of following question in very brief:-
- Write unique feature of double helical structure of DNA?
 - What is nucleoside?
 - Who is given double helical structure of DNA?
 - Write name of palindromic sequence.
 - What is central dogma of molecular biology?
 - Write function of tRNA?
 - Write name of one aromatic amino acid.
 - Give two functions of proteins.
 - Write name of two transport proteins.
 - Give name of a globular protein.
 - Where is collagen is present?
 - Who was Ramchandran?

(12x1)

UNIT - I

2. (a) Describe the double helical structure of DNA.
(b) Write the merit and demerits of double helical structure model of DNA. (6,6)
3. (a) Write a short note on types of RNA.
(b) Describe in brief the structure of rRNA. (6,6)
4. (a) What do you mean by Noncoding RNAs? Write the name various types of noncoding RNAs.
(b) Write short notes on tertiary structure of tRNA. (6,6)

P.T.O.

(2)

UNIT - II

5. (a) Write biological functions of proteins.
(b) Describe in brief the different levels of protein structure. (6,6)
6. (a) What is the relationship between peptide bond and Ramchandran plot?
(b) Briefly describe the structure of myoglobin. (6,6)
7. (a) What is the protein denaturation?
(b) Write the characteristics of fibrous protein. Briefly describe the structure. (6,6)

x-x-x