

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -1 EXAMINATION- 2024

B.Tech-IV Semester (BI)

COURSE CODE(CREDITS): 18B11BI413 (3)

MAX. MARKS: 15

COURSE NAME: Structural Biology

COURSE INSTRUCTORS: Dr. Raj Kumar, Dr. Poonam Sharma

MAX. TIME: 1 Hour

Note: (a) All questions are compulsory.

(b) Marks are indicated against each question in square brackets.

(c) The candidate is allowed to make Suitable numeric assumptions wherever required for solving problems

Q1. (a) Elaborate the nutritional classification of amino acids. (CO-1) [1]
(b) Discuss the chemical properties of amino acids. (CO-1,2) [3]

Q2. Discuss some powerful methods to determine three-dimensional macromolecular structures, which are required to understand biological processes and to develop new therapeutics against diseases. (CO-2) [2]

Q3. Write the general structure of an amino acid. Write down the general equation for used to describe the polypeptide formation. (CO-1,2) [2]

Q4. Write down the full names of the given amino acids: KWNQ? (CO-1) [2]

Q5. Write a short note on selenocysteine. (CO-1) [1]

Q6. Proteins are large biomolecules and macromolecules that comprise one or more long chains of amino acid residues. Describe some important biological roles of proteins in a living cell. (CO-1,2) [3]