

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT  
T1 EXAMINATIONS, FEBRUARY-2020

B.TechIVSemester

Course Code:18B11BI413

MAX. MARKS: 15

Course Name: Structural Biology

MAX. TIME: 1Hour

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*Note: All questions are compulsory. Carrying of mobile phone during examinations will be treated as case of unfair means. Marks are indicated in square brackets against each question.*

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Q1. Each question carries one mark:

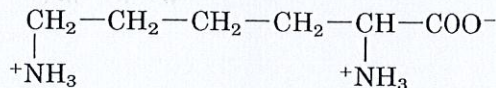
i)The Nobel Prize in Chemistry 1962 was awarded jointly to .....and.....for their studies of the structures of globular proteins. (1 mark)

ii)What are three-letter and one-letter codes for asparagine, arginine, tryptophan, and tyrosine? (1 mark)

iii) Which amino acids are preferred in  $\alpha$ -helix secondary structure? (1 mark)

iv) What is a  $3_{10}$ -helix?(1 mark)

v) Name the amino acid below and write down its carbon atom labels.(1 mark)



Q2. What are turns and loops in protein structure?(2 marks)

Q3. Write a short note on domain swapping.(2 marks)

Q4. Describe various biological roles of proteins.(3 marks)

Q5. What is protein packing process? What are various molecular interactions responsible for protein tertiary structure stabilization? (3 marks)