

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT  
TEST-1 EXAMINATION – February 2019  
B.Tech IInd Semester

COURSE CODE: 10B11BI211

MAX. MARKS: 15

COURSE NAME: Structural Biology

COURSE CREDITS: 04

MAX. TIME: 1 HR

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*Note: All questions are compulsory. Carrying of mobile phone during examinations will be treated as case of unfair means. Attempt all parts of a question together.*

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1. Write the three and one letter code for all 20 amino acids. **(1 Mark)**
2. Who coined the term primary, secondary, and tertiary structure of proteins? **(1 Mark)**
3. Which type of interaction Vitamin A makes with Retinol binding protein? **(1 Mark)**
4. Name some greek key incorporated structures. **(1 Mark)**
5. Draw topology of greek key. **(1 Mark)**
6. How many helices are present in globin fold? **(1 Mark)**
7. What causes sickle cell anemia? **(1 Mark)**
8. What is the explanation for four greek key motifs in gamma-crystallin protein? **(1 Mark)**
9. Draw the structure of beta helix. **(1 Mark)**
10. Draw the side chain structures of aromatic amino acids. **(1 Mark)**
11. Explain the mechanism of chaperone with a suitable figure. **(2.5 Mark)**
12. How can different amino acid sequence have similar 3D structure? What is the mechanism by which proteins adapt to mutations during evolution? **(2.5 Mark)**