

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST 1 EXAMINATION- Sept. 2018

B.Tech. IIIrd Semester

COURSE CODE: 10B11BT312

MAX. MARKS: 15

COURSE NAME: BIOCHEMISTRY

COURSE CREDITS: 04

MAX. TIME: 1Hrs

Note: All questions are compulsory. Carrying of mobile phone during examinations will be treated as case of unfair means.

Q1. You are given a mixture of five proteins (A, B, C, D and E) of molecular weight ranges 10 kDa to 100 kDa. The three proteins are of low molecular weight (A, D and E) and two higher molecular weight proteins (B and C) are multimeric globular proteins of opposite charge to each other.

- Describe an experiment strategy for purification of protein B, if protein C is a basic globular protein. (2 marks)
- Describe an experiment to prove (or disprove) that protein B is composed of more than one subunit. (2 marks)

Q2. Explain the role of following in biological system. (2X4=8 marks)

- Henderson- Hasselbalch equation
- Peptide bond characteristics
- Modified amino acids in collagen protein
- Vitamin D2 and Vitamin D3

Q3. Explain with a suitable justification: "Vitamin E and Vitamin C work complementary to each other". (3 marks)