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JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -1 EXAMINATION- Sep 2018

BT/BTDD VII<sup>th</sup> Semester

COURSE CODE: 18B1WBT732

MAX. MARKS: 15

COURSE NAME: Peptide Therapeutics

COURSE CREDITS: 3

MAX. TIME: 1Hr

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

Q1. Answer the following questions.

[3]

- a) If the amino acid in peptide were D- amino acid instead of L-amino acid? What would be implication for the structure for the alpha helices?
- b) What is the stereochemistry of peptide bond in protein or peptides?
- c) Draw and explain structure of Beta amino acid.
- d) What is the effect of N-terminal acetylation on peptide structure?

Q2. Design a 14 residues amphipathic peptide having cationic charge of +4 using hydrophilic and hydrophobic residues and represent it on schiffer Edmundson helical wheel diagram.

[3]

Q3. Explain solid phase peptide synthesis briefly. How it is advantageous for synthesis of peptides as compared to solution phase synthesis? What is the difference between fmoc and boc chemistry in solid phase peptide synthesis?

[4]

Q4.a) What are various types of turns in peptide structure and conformations? Explain any one of them.

[2]

b) What is circular dichroism spectroscopy? Explain its principle. How it is used for studying change in conformation of proteins and peptides?

[3]