

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT
TEST -1 EXAMINATION- 2023

B.Tech.-III Semester (BT)

COURSE CODE(CREDITS):18B11BT312(3)

MAX. MARKS: 15

COURSE NAME: **Biochemistry**

COURSE INSTRUCTOR: **JitendraaVashistt**

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 biomolecule has amino as well as carboxyl group in its basic constituents and it may attain the zwitterionic form at physiological pH. Identify this biomolecule and explain the three levels structural complexities of above asked biomolecule. (2 marks) (CO I)
- Q2. "Artificial sugar is not a sugar". Is the statement is correct or not? Justify your answer with suitable formulation of artificial sugars. (2marks) (CO I)
- Q3. You are provided equal amount of glucose and a fatty acid. Which of the biomolecule can provide more energy as compared to other and why? (2marks) (CO I)
- Q4. If you need to identify the reducing sugar in a test sample, then how will you proceed? Explain the principle of test required as well the reaction involved in during the experimental procedure. (2.5 marks) (CO I)
- Q5. Is it possible to mimic biological membranes and synthesize artificial membranes? Justify your answer with suitable example and if yes, then it's potential applications. (2.5 marks)(CO II)
- Q6. How do you differentiate the following on the basis of structural elucidations?
a) Alpha D glucose and Beta D glucose (2marks)(CO I)
b) PUFA and saturated fatty acids (2marks) (CO I)