

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT
TEST -1 EXAMINATIONS-2022

B.Tech-III Semester (BT)

COURSE CODE (CREDITS): 18B11BT312 (3)

MAX. MARKS: 15

COURSE NAME: **Biochemistry**

COURSE INSTRUCTOR: **Dr. Jitendraa Vashistt**

MAX. TIME: 1 Hour

Note: All questions are compulsory. Marks are indicated against each question in brackets.

- Q1. How do you differentiate between α -D glucose and β -D glucose? Which confirmation is predominant in nature? (2marks) (CO-I)
- Q2. If you want to check, whether a given molecule is reducing sugar, then how will you proceed? (2marks) (CO-I)
- Q3. If you are supplied with 1 gram of carbohydrate and 1 gram of fatty acid, then which molecule will provide the more energy after complete oxidation? Justify your answer with suitable example. (2 marks) (CO-I)
- Q4. A protein may lose its biological activity by changing the pH, temperature etc.; however the primary structure of protein can't be degraded easily. Which bond makes this structure stable and how this bond is different from other bonding structures in a protein? (3 marks) (CO-I)
- Q5. Why it is not advisable to reuse the cooking oil while preparing the food. What are the chemical/structural changes observed in the fatty acid molecules during the re-boiling of lipids? (3marks) (CO-I)
- Q6. A sweetener which is not a sugar, usually taken by diabetic persons in their daily life. Identify this molecule with its composition. Also, define a biochemical abnormality in which these artificial sugars must be avoided. (3 marks) (CO-I)