

**JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT**

**TEST -1 EXAMINATION- 2025**

**B.Tech-IIIrd Semester (BT/BI)**

**COURSE CODE (CREDITS): 25B11BT313 (4)**

**MAX. MARKS: 15**

**COURSE NAME: Biochemistry**

**COURSE INSTRUCTORS: Jitendraa Vashistt**

**MAX. TIME: 1 Hour**

*Note: (a) All questions are compulsory. (b) The candidate is allowed to make Suitable numeric assumptions wherever required for solving problems*

Q. No.	Question	CO	Marks
Q1.	Infants usually dependent on milk/dairy products. However, some infants get difficulty in digesting the milk. a) What is the problem associated with indigestion of milk or dairy products. b) Name the constituents of milk sugar and define their molecular structures.	II	3
Q2.	How do you identify, that a given sugar is a reducing sugar? Justify your answer with principle of experimental design along with negative control.	II	3
Q3.	"Sugar-free," or "low-calorie" molecules are usually seen in several food and drinks labels. What are these molecules and explain the structures of their constituents.	II	3
Q4.	DNA is a negative charged moiety and it gets bound with the special proteins in nucleus. Define the proteins which have the ability to bind DNA along with them. Also explain the structure of the constituent's amino acids which are primarily present in these proteins.	II	3
Q5.	Glucose, galactose and mannose share same molecular formula, however all these moieties have different structures. Name this phenomenon and write the molecular formula as well as the structures of above three molecules.	II	3