

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

Test -1, SEPT, EXAMINATION - 2016

B.Tech (BT) IIIrd SemesterCOURSE NAME: **BIOCHEMISTRY**

MAX.MARKS:15

COURSE CODE:10B11BT312

MAX.TIME: 1 HR.

Note: Carrying of mobile phones during examinations will be treated as a case of unfair means.

Q1. Explain how D-glucose, D-galactose and D-mannose are structurally interrelated. Justify your answer with suitable structures. (2 marks)

Q2. Differentiate between reducing and non-reducing sugars with examples. (1.5 marks)

Q3. Explain the principle of Fehling reaction for detection of sugars. (1.5 marks)

Q4. Define the biological significance of following sugars. (2 marks)

a) N-acetyl glucoseamine

b) Lactose

Q5. Why glucose is not stored in its monomeric form in human? Also name the molecule which gets stored in human hepatocytes as an alternate form. (2 marks)

Q6. Explain various internal interactions of a protein required for the stabilization of its structure. (3 marks)

Q7. You want to purify histone protein (H3) from a nuclear extract. Name the chromatography technique/s which may be utilized for its purification. Explain the principle of that purification method. (3 marks)