

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

Test -1 EXAMINATION, September 2017

B.Tech III Semester (Biotechnology)

COURSE NAME: BIOCHEMISTRY

MAX.MARKS:15

COURSE CODE: 10B11BT312

MAX.TIME: 1 hour.

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

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- Q1. What are glycosidic bonds? Explain how O-glycosidic linkages are different from N-glycosidic linkages? (2 marks)
- Q2. Lactose, maltose and sucrose are disaccharide sugars, however, a biochemical difference makes them the part of two different groups.
- a) Define this differentiation of these sugars on their biochemical property. (2 marks)
- b) Explain the principle of the biochemical test which is generally utilized for the differentiation of above mentioned sugars. (3 marks)
- Q3. A solution of protein whose sequence contains one tryptophan and no other aromatic residue has an absorbance of 0.1 at 280 nm in a cell with a path-length of 1 cm. Estimate the concentration of protein in units of molarity. ( $\epsilon$  value =  $3400\text{M}^{-1}\text{cm}^{-1}$ ) (2 marks)
- Q4. Name the protein which is abundantly present in hairs and also explain the linkage responsible for curling of hairs. (2 marks)
- Q5. Explain the following in brief. (4 marks)
- a) Artificial sugars
- b) Salting out and protein fractionation
- c) Peptide bond characteristics
- d) Epimers

BT-6, BT