

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

B. Tech. Bioinformatics

Semester I Test 1 (September 2016)

Course Code: 13B11BI112

Max. Marks: 15

Course Name: Cellular and Molecular Biology

Max. Time: 1 Hr

Course Credit: 04

*Note: Attempt all questions. Be precise in answers*

1. Draw the structure of Lactose sugar showing glycosidic bond? (1 mark)
2. Draw the structure of phospholipids, highlight the difference importance difference functional groups? (1 mark)
3. Draw the structure of glycine (amino acid) showing peptide bond between them? (1 mark)
4. What are the differences between a prokaryotic and eukaryotic cell? Describe with diagram and with examples? (2 marks)
5. Describe five kingdom classification given by R. H. Whittaker? Highlight the characteristics of each kingdom with examples? (2.5 marks)
6. Distinguish Ribose, Deoxyribose and dideoxyribose sugar with a well labeled diagram? Highlight the importance Ribose sugar in the molecular biology? (2.5 marks)
7. What are carbohydrates? Discuss different types of carbohydrates with examples and draw structure with well labeled glycoside bond? Also give the importance of the carbohydrate in the cell? (2.5 marks)
8. What is a protein? Describe different types of proteins? Give example and draw any five amino acids? Also give the importance of the protein in the cell? (2.5 marks)