

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST-2 EXAMINATIONS-2022

B. Tech III-Semester (BI)

COURSE CODE (CREDITS): 18B11BI311 (3)

MAX. MARKS: 25

COURSE NAME: CELL AND MOLECULAR BIOLOGY

COURSE INSTRUCTOR: DR. JATA SHANKAR

MAX. TIME: 1 Hour 30 minutes

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

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Q1. Prokaryotic and eukaryotic cells transport molecules ions, amino acids, glucose across the membrane, describe the different approaches for transportation of molecules [3 marks] CO I

Q2. What if RBC cells are placed in a hypertonic solutions, explain your answer with justification? [3 marks] CO II

Q3. Lipids are composed of C, H, O and long chain of hydrocarbon, and classified on the basis diverse group. What are different types of lipid and recommend which type of fats are suitable to avoid cardiovascular disease? [3 marks] CO II

Q4. Protein are large molecules made of amino acids to perform biological function and to provide structural component of the cell, these protein are sorted or trafficked to different organelle or to the cell surface, describe mechanism protein sorting ? [3 marks] CO I & II

Q5. What are different proposed models for plasma membrane? [3 marks] CO I

Q6. Explain/ draw (10 marks) CO I & II & III

a. Peptide bond between two amino acids

b. Phospholipids

c. Steroids

d. Eukaryotic cell and prokaryotic cells

e. Glycosidic-bond in Maltose