JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT
TEST -1 EXAMINATION- 2025
Ph.D.-I Semester (BT/BI)

COURSE CODE (CREDITS): 24 P1WBT231(2)

COURSE NAME: Biochemical Calculations

COURSE INSTRUCTORS: Dr. Poonam Sharma

MAX. MARKS: 15

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	Marks
Q1(a)	Elaborate the type of solutions based upon the concentration of solute.	2
(b)	Intermolecular forces are also important in determining the solubility of a substance. Justify	2
Q2(a)	Explain the reason for positive and negative deviation for non- ideal solutions	2
(b)	Ammonium nitrate (NH_4NO_3) is an important compound in the fertiliser industry. What is the mass % composition of ammonium nitrate?	3
Q3	A solution contains 410.3 grams of H_2SO_4 per liter of Solution at 20^0 C. If the density is 1.243 gm/ml. What will be its Molarity, Normality & Molality.	3
(b)	A mixture of C_2H_5OH & water contains 54% water by weight. Calculate the mole fraction of alcohol and water in this mixture.	3