(96)

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -1 EXAMINATION- 2025

Ph.D.-I Semester (BT/BI)

COURSE CODE (CREDITS): 24 P1WBT231(2) MAX. MARKS: 15

COURSE NAME: Biochemical Calculations

COURSE INSTRUCTORS: Dr. Poonam Sharma 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)	Explain the factors responsible for solubility of any solute.	2
(c)	Elaborate the colligative properties.	2
Q2(a)	When 19.0 ml of the citric acid solution is titrated with 30.09 ml of 0.1811 N KOH. Calculate citric acid concentration.	2
(b)	Calculate the mole fraction of ethyl alcohol and water in a solution made by dissolving 9.2 g of ethyl alcohol in 18 g of water	2
Q3(a)	Calculate the molality of 25.0 grams of KBr dissolved in 750.0 ml of pure water. Mol. Wt. of KBr = 119g/mol	2
(b)	A solution contains 410.3 g of H_2SO_4 per litre of solution at 20°C. If density is 1.243 g/ml. What will be its molarity, normality and molality?	3