

99

**JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT**  
**TEST -1 EXAMINATION- 2025**

**M.Sc.-I Semester (Biotechnology/Microbiology)**

**COURSE CODE (CREDITS): 20MS1BT111 (3)**

**MAX. MARKS: 15**

**COURSE NAME: Biochemistry**

**COURSE INSTRUCTORS: Jitendraa Vashistt**

**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	Explain the various properties of water which makes it a best molecule for cells and organism.	3
Q2	Define the following in brief. a) Hydrogen bonding b) Henderson-Hasselbalch Equation and its usage	3
Q3.	What is the optimum pH of human blood and explain how the acid-base homeostasis of blood carried out in human body?	3
Q4.	How do you calculate the $H^+$ ion concentration in 0.2M NaOH solution?	3
Q5	How do you define the following in relation to their charge and molecular structures? Also define their significance. a) Aromatic amino acids b) Hydrophilic amino acids	3