X/K/TY

Reg. No: 24BBTo300

Final Assessment Test – November 2025

VIT
Vellore Institute of Technology

Course: **BBIT202L - Biochemistry**
Class NBR(s): **0970 / 0972**
Time: **Three Hours**

Slot: **C2+TC2**
Max. Marks: **100**

- **KEEPING MOBILE PHONE/ANY ELECTRONIC GADGETS, EVEN IN 'OFF' POSITION IS TREATED AS EXAM MALPRACTICE**
- **DON'T WRITE ANYTHING ON THE QUESTION PAPER**

COs	CO Statements
CO1	Interpret cell behavior based on physical and chemical composition.
CO2	Relate interaction of water with macromolecules in biological system.
CO3	Analyze structure and function of biomolecules.
CO4	Infer metabolic reactions and their role in the cell.
CO5	Classify lipids and nucleic acids based on their composition.
CO6	Distinguish function of biomolecule based on its features.

BL – Blooms Taxonomy Level (1 – Remember, 2 – Understand, 3 – Apply, 4 – Analyse, 5 – Evaluate, 6 – Create)

Answer ALL Questions
(10 X 10 = 100 Marks)

1.	Detail on the distinguishing features of living organisms. How living organisms are classified based on energy and carbon source?	CO1	BL1
2.	What is Kw of water? Relate the equation and find out the pH of given solution of 0.1 M NaoH?	CO2	BL2
3.	Aminoacids are effective buffers- justify your answer with an example.	CO2	BL4
4.	Compare and contrast the structures of	CO3	BL2
	a) Hyaluronic acid and chondroitin sulphate [5]		
	b) Cellulose and glycogen [5]		
5.	Draw the structure of the peptide, LDEHRS. Calculate the net charge of the peptide at pH 7.	CO3	BL3
6.	Compare the structural and functional features of myoglobin with haemoglobin.	CO6	BL2
7.	Explain the structure and function of triacylglycerol and waxes.	CO5	BL2
8.	Outline the steps involved in the synthesis of CTP and TMP.	CO5	BL2
9.a)	Compare saturated fatty acids with unsaturated fatty acids and explain how they influence the fluidity of membrane.	CO6	BL4

OR

9.b)	Draw the structures of nucleoside and nucleotide forms of the monomeric units of DNA and label the phospho diester bond.	CO6	BL2
10.a)	Describe the role of weak interactions in the structure and stability of protein molecules and write the parameters responsible for denaturation of proteins.	CO4	BL3

OR

10.b)	Compare glycolysis with gluconeogenesis.	CO4	BL2

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