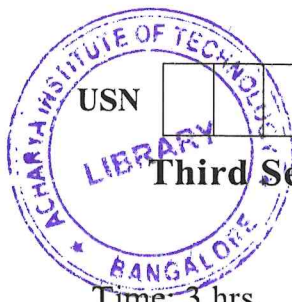


CBCS SCHEME



BBT303

Third Semester B.E./B.Tech. Degree Examination, June/July 2026 Biochemistry + Lab

Time: 3 hrs.

Max. Marks: 100

*Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.
2. M : Marks, L: Bloom's level, C: Course outcomes.*

Module – 1			M	L	C
Q.1	a.	Derive Henderson- Hasselbalch equation. Explain the mechanism of action of buffer with an example.	10	L2	CO1
	b.	List the different levels of protein structure and explain the relationship between them.	10	L1 L2	CO1
OR					
Q.2	a.	Define and classify Polysachcharides and discuss in detail each classification with one example each with structures.	10	L1 L2	CO1
	b.	Write the classification of RNA and discuss the structure and functions of any one type of RNA.	10	L1 L2	CO1
Module – 2					
Q.3	a.	List the high energy compounds. Taking any one as the example give the chemical basis for the large –ve energy associated with it.	10	L3	CO2
	b.	Write short notes on : i) Inhibitors of oxidative phosphorylation ii) Oxidative stress	10	L2	CO2
OR					
Q.4	a.	Elaborate on energy flow cycle.	10	L3	CO2
	b.	Explain Z-scheme of photosynthesis.	10	L2	CO2
Module – 3					
Q.5	a.	Assess the regulation of glycolysis in detail.	10	L4	CO4
	b.	Illustrate the glycogenolysis pathway.	10	L3	CO3
OR					
Q.6	a.	Justify the statement “TCA cycle is amphibolic in nature”.	10	L3 L4	CO3
	b.	Discuss the metabolic disorder diabetes.	10	L3 L4	CO4
Module – 4					
Q.7	a.	Illustrate the metabolic pathway of biosynthesis of Palmitic acid.	10	L3	CO3
	b.	Outline the reasons for LDL-hypercholesterolemia.	10	L4	CO4
OR					
Q.8	a.	Give an account of Lipoproteins. Add a note on functions of apolipoproteins.	10	L3	CO3
	b.	Define Atherosclerosis. Appraise the pathogenesis of Atherosclerosis.	10	L4	CO3
Module – 5					
Q.9	a.	Explain transamination and deamination of amino acids with examples.	10	L3 L2	CO3
	b.	Assess the metabolic disorder alkaptonuria.	10	L4	CO4
OR					
Q.10	a.	Illustrate the denovo synthesis of pyrimidines.	10	L3	CO3
	b.	Mention the disorders associated with purine metabolism. Explain and assess any one of the disorders in detail.	10	L1 L4	CO4
