CBCS SCHEME

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BBT303

Third Semester B.E./B.Tech. Degree Supplementary Examination, June/July 2024

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	C1
Q.1	a.	What is Henderson Hesslebalch equation? Explain its applications.	10	L2	CO1
	b.	Describe buffer system and explain their properties.	10	L2	CO1
		OR			
Q.2	a.	Distinguish between the bimolecular based on the structure, properties, composition and function.	10	L4	CO1
	b.	Explain in detail about the stereochemistry of carbon.	10	L2	CO1
		Module – 2			
Q.3	a.	Explain the laws of thermodynamics.	10	L1	CO1
	b.	What are high energy compounds? Write a note on structure and properties of ATP.	10	L2	CO1
		OR			
Q.4	a.	Write short note on : i) Biological oxidation ii) Energetics and energy balance sheet.	10	L3	CO3
	b.	Give a detailed note on inhibitors of oxidative phosphorylation.	10	L2	CO3
		Module – 3			
Q.5	a.	Differentiate between aerobic and anaerobic pathway, regulation.	10	L4	CO3
	b.	Write a note on : i) Calvin cycle ii) Pentube phosphate Pathway.	10	L3	CO1
		OR			
Q.6	a.	Distinguish between Glycogenesis and Glycogeholysis with respect to their regulation.	10	L4	CO3
	b.	What is lactose intolerance? Add a note on its symptoms, causes and treatment.	10	L1	CO1
		Module – 4			
Q.7	a.	Describe the process of biodegradation of triglycerides and fatty acids.	10	L1	CO1
	b.	Write a note on physiology of lipids/lipoproteins and apolipoproteins.	10	L3	CO1

		OR			
Q.8	**a.**	Write a short note on : i) Gaucher diseases ii) LDL – hypercholesterolemia.	**10**	**L3**	**CO1**
	b.	Write a short note on : i) Acidosis – ketosis ii) Atherosclerosis	**10**	**L3**	**CO1**
		Module – 5			
Q.9	**a.**	Describe the process of transamidation and urea cycle.	**10**	**L2**	**CO1**
	b.	Write a short note on : i) Alkaptonuria ii) Thyrosinemia	**10**	**L3**	**CO3**
		OR			
Q.10	**a.**	Explain the process of biosynthesis and biodegradation of purines and pyrimidines.	**10**	**L1**	**CO1**
	b.	Write a short note on : i) Gout ii) Adenosine deaminase deficiency	**10**	**L3**	**CO3**

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