CBCS SCHEME

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BBT303

Third Semester B.E./B.Tech. Degree Examination, Dec.2023/Jan.2024
Biochemistry + Lab

Time: 3 hrs. Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

		Module – 1	M	L	C
Q.1	a.	List different types of Chemical reactions. Explain any two of them in detail with examples.	10	L2	CO1
	b.	Discuss Stereochemistry of carbon compounds.	10	L2	CO1
		OR			
Q.2	a.	Classify Carbohydrates and explain each classification with examples.	10	L2	CO1
	b.	Write short notes on : i) Saponification number and iodine number of lipids. ii) Base pairing and ribose puckering.	10	L2	CO1
		Module – 2			
Q.3	a.	Illustrate the chemical basis for large negative free energy for ATP.	10	L3	CO2
	b.	Discuss Z - Scheme of Photosynthesis.	10	L2	CO2
		OR			
Q.4	a.	Explain Electron transport chain and Oxidative phosphorylation.	10	L2	CO2
	b.	"Coupling reactions are important for biological systems". Justify the statement.	10	L4	CO2
		Module – 3			
Q.5	a.	Illustrate Oxidative Pentose Phosphate pathway. Highlight the significance of this pathway.	10	L3	CO3
	b.	Appraise on the metabolic disorder galectosemia.	10	L4	CO4
		OR			
Q.6	a.	Justify the statement "TCA cycle is amphibolic in nature". Write a note on significance of TCA cycle.	10	L4	CO3
	b.	Analyze the regulation of glyeogen metabolism.	10	L4	CO3
		Module – 4			
Q.7	a.	Discuss Digestion , Mobilization and Transport of fats.	10	L2	CO3
	b.	Outline the reasons for Acidosis – Ketosis in detail.	10	L4	CO4
		OR			

Q.8	a.	Illustrate β – oxidation of fatty acid taking palmitic acid as an example.	10	L3	CO3
	b.	Classify Lipoproteins and discuss them in detail.	10	L2	CO3
		Module – 5			
Q.9	a.	Identify the cycle that removes toxic NH_3 fro, Human body and analyze its regulation.	10	L4	CO3
	b.	Assess Alkaptoneuria under i) Enzyme defect ii) Biochemical manifestation iii) Diagnostic tests iv) Treatment.	10	L4	CO4
		OR			
Q.10	a.	Illustrate the general pathway of biosynthesis of AMP and GMP from IMP and analyze the regulation of purine biosynthesis.	10	L3 L4	CO3
	b.	Appraise the clinical disorder gout, its causes and modes of treatment.	10	L4	CO4

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