

MSc Sem.-1 Examination

402

Zoology

February-2025

Time : 2-30 Hours]

[Max. Marks : 70

Q-I	1	Derive the Michaelis-Menten Equation. State the assumptions and limitations.	(07)
	2	Explain enzyme regulation by Covalent modification and in Multienzyme complexes.	(07)
	OR		OR
	1	Write a note on the factors affecting enzyme activity.	(07)
	2	Discuss the role and properties of isoenzymes.	(07)
Q-II	1	Explain the detailed mechanism of reaction for enzyme Enolase.	(07)
	2	Explain the process of glycogenesis.	(07)
	OR		OR
	1	Explain the detailed mechanism of reaction for enzyme pyruvate dehydrogenase.	(07)
	2	Write a note on connection of TCA cycle with amino acid and fatty acid metabolism.	(07)
Q-III	1	What is Homeostasis? Write down the feedback mechanism, control of homeostasis and homeostatic imbalances in detail.	(07)
	2	Explain the symptom, diagnosis and treatment of Chronic obstructive pulmonary disease, Emphysema and Tuberculosis.	(07)
	OR		OR
	1	Explain the process of systemic and pulmonary circulation of blood in human circulatory system.	(07)
	2	Explain in detail: Diagnosis and treatment of Chronic kidney disease and Glomerulonephritis.	(07)
Q-IV	1	Give a note on Excitation-Contraction (EC) coupling.	(07)
	2	Explain "HCl formation" in detail.	(07)
	OR		OR
	1	Explain the molecular mechanism of the power stroke in muscle contraction.	(07)
	2	Give a note on stimulatory and inhibitory events of gastric juice secretion.	(07)
Q-V	Answer any SEVEN out of TWELVE.		(14)
	1	What are ribozymes? Give 2 examples.	02
	2	Explain: EC number of an enzyme. Give an example.	02
	3	Distinguish between Competitive and Non-competitive enzyme inhibition.	02
	4	Explain the regulation of glycolysis by enzyme phosphofruktokinase.	02
	5	Briefly describe the Cori cycle.	02
	6	What is glutathione? Give its functions.	02
	7	Give the full name: ASD & VSD	02
	8	What is Embolism? What are the causes of it?	02
	9	What are the main symptoms of Acute Kidney Injury (AKI)?	02
	10	Explain the subunits of "Troponin"?	02
	11	What is end plate potential?	02
12	What content should be examined for gastric juice analysis?	02	