

MSc DEGREE EXAMINATION MAY 2026

(Second Semester)

Branch - **ZOOLOGY**

ANIMAL PHYSIOLOGY AND BIOCHEMISTRY

Time: Three Hours

Maximum: 75 Marks

SECTION-A (10 Marks)

Answer **ALL** questions

ALL questions carry **EQUAL** marks

(10 × 1 = 10)

Module No.	Question No.	Question	K Level	CO
1	1	Which of the following blood cells play an important role in blood clotting? (i) Thrombocytes (ii) Neutrophils (iii) Leucocytes (iv) Erythrocytes	K1	CO1
	2	Which of the following are parts of the human respiratory system? (i) Pharynx (ii) Diaphragm (iii) Lungs (iv) Liver	K2	CO1
2	3	Animals which excrete urea are known as..... (i) Aminotelism (ii) Ureotelism (iii) Uricotelism (iv) Ammonotelism	K1	CO2
	4	The hormone primarily responsible for regulating the sleep-wake cycle in response to darkness is (i) Cortisol (ii) Melatonin (iii) Adrenalin (iv) Insulin	K2	CO2
3	5	In muscle contraction, this ion is essential..... (i) Cl (ii) Ca (iii) K (iv) Na	K1	CO3
	6	In Ear is a ...receptor (i) Phonoreceptor (ii) Photoreceptor (iii) Thermoreceptor (iv) Gustatory receptor	K2	CO3
4	7	What type of bond connects amino acids to form the primary structure of a protein? (i) Hydrogen bond (ii) Peptide bond (iii) Disulfide bond (iv) Ionic bond	K1	CO4
	8	Scientific name of vitamin K is..... (i) Ascorbic acid (ii) Tocopherol (iii) Pantothenic Acid (iv) Phytonadione	K2	CO4
5	9	Glycosidases, lipases and proteases belong to which class of enzymes? (i) Hydrolases (ii) Ligases (iii) Isomerases (iv) Transferases	K1	CO5
	10	The Lock and Key model of enzyme action was proposed by (i) Daniel Koshland (ii) Emil Fischer (iii) Linus Pauling (iv) Michaelis and Menten	K2	CO5

Cont...

SECTION - B (35 Marks)Answer **ALL** questions**ALL** questions carry **EQUAL** Marks

(5 × 7 = 35)

Module No.	Question No.	Question	K Level	CO
1	11.a.	Identify and explain the Respiratory pigments.	K2	CO2
		(OR)		
	11.b.	Outline the temperature regulation in homeotherms with an example.		
2	12.a.	Discuss about osmotic regulation with an example.	K3	CO3
		(OR)		
	12.b.	Define Pheromones and identify its types with suitable examples.		
3	13.a.	Analyze the role of neurotransmitters in man.	K4	CO4
		(OR)		
	13.b.	Examine the chemical basis of muscle contraction.		
4	14.a.	Define monosaccharides and classify.	K2	CO2
		(OR)		
	14.b.	Enumerate the salient features of essential and non-essential fatty acids.		
5	15.a.	List out the properties of enzymes.	K5	CO5
		(OR)		
	15.b.	Compare isoenzymes and coenzymes.		

SECTION -C (30 Marks)Answer **ANY THREE** questions**ALL** questions carry **EQUAL** Marks

(3 × 10 = 30)

Module No.	Question No.	Question	K Level	CO
1	16	Trace the mechanism of blood clotting in man with suitable illustration.	K4	CO4
2	17	Discuss about the physiology of urine formation.	K3	CO3
3	18	Demonstrate the process of hearing in man.	K2	CO2
4	19	Analyze the sequence of lipid metabolism in man.	K4	CO4
5	20	Elaborate the mechanism of enzyme action with example.	K5	CO5

Z-Z-Z

END