

**PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)**

**MSc DEGREE EXAMINATION MAY 2024
(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	Name Factor I is otherwise called as -----, (A) Fibrinogen (B) Stuart-Prower factor (C) Prothrombin (D) Christmas factor	K1	CO1
	2	Infer Oxygen carrying capacity of 1 gram of hemoglobin is-----, (A) 134 mL /g (B) 1.34 mL/g. (C) 0.134 mL/g (D) 13.4 mL/g	K2	CO1
2	3	Find Gross filtration force which is responsible for the filtration in glomerulus is -----, (A) 25mm Hg (B) 50mm Hg (C) 75mmHg (D) 80 mm Hg	K1	CO1
	4	Interpret Osmoregulators carry out excretion of salt through_____. (A) fins (B) gills (C) scales (D) air bladder	K2	CO1
3	5	Relate a nerve impulses which travels through nerve fibre only if its membrane suddenly becomes more permeable to ions of -----, (A) Chloride (Cl ⁻) (B) Potassium (K ²⁺) (C) Sodium (Na ²⁺) (D) Magnesium (Mg ²⁺)	K1	CO1
	6	Illustrate the space lying between the cornea and the iris in human eye, is called ----- (A) Anterior chamber (B) Aqueous humor (C) Vitreous humor (D) Posterior chamber	K2	CO1
4	7	Which one of the following is not enzyme act on carbohydrate? (A) Maltase (B) Sucrase (C) Amylase (D) Lipase	K1	CO1
	8	Relate trypsin is digesting of----- (A) Carbohydrate (B) Proteins (C) Fats (D) Nucleic acids	K2	CO1
5	9	Classify, an enzyme that catalyses the conversion of an aldose sugar to a ketose sugar would be as one of the following: (A) Transaminase (B) Isomerases (C) Oxido-reductases (D) Hydrolases	K2	CO2
	10	Which coenzymes that transfer of groups other than hydrogen is_____ (A) CoA-SH (B) NAD ⁺ , NADP (C) FMN, FAD (D) Coenzyme Q	K1	CO2

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.	Organize the different components of ECG.	K3	CO2
		(OR)		
	11.b.	Identify the different thermoregulation mechanism in homeotherms.		
2	12.a.	Examine the structure of nephron with neat diagram.	K4	CO3
		(OR)		
	12.b.	Analyse term Biological rhythms and its types with suitable examples.		
3	13.a.	Construct the ultra structure of skeletal muscle.	K3	CO2
		(OR)		
	13.b.	Illustrate the physiology of photochemical changes in Rhodopsin in human eye.		
4	14.a.	Inspect the steps involved in the process of TCA cycle.	K4	CO3
		(OR)		
	14.b.	Inspect the different steps of β -oxidation of fatty acids.		
5	15.a.	Identify the different classes of enzyme based on IUB.	K3	CO2
		(OR)		
	15.b.	Tabulate the list of different co-enzymes that take part in metabolism.		

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	Describe the physiological mechanism of transport of CO ₂ .	K3	CO2
2	17	Organize the step involved in the mechanism of urine formation.	K3	CO2
3	18	Organize the transmission of nerve impulse through synapses.	K3	CO2
4	19	Analyse the different level of structure of proteins.	K4	CO3
5	20	Critically examine the mechanism of enzyme action with relevant theory.	K4	CO3

Z-Z-Z

END