

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

MSc DEGREE EXAMINATION MAY 2023
(Second Semester)

Branch – ZOOLOGY

ANIMAL PHYSIOLOGY AND BIOCHEMISTRY

Time: Three Hours

Maximum: 50 Marks

SECTION-A (5 Marks)

Answer ALL questions

ALL questions carry EQUAL marks

(5 x 1 = 5)

1. Fibrin-stabilizing factor is otherwise called as
(i) factor X (ii) factor XI
(iii) factor XIII (iv) factor XII
2. The term circadian rhythm was first coined by an American ethologist ----- in 1959.
(i) Khorna (ii) Franz Halberg
(iii) Hamberger (iv) Kerb
3. Which one is amine inhibitory neurotransmitter?
(i) Histamine (ii) Acetylcholine
(iii) Serotonin (iv) Dopamine
4. ----- is also called as animal starch.
(i) Glycogen (ii) Chitin
(iii) Lactose (iv) Cellulose
5. Pick out the iso-enzyme from the following:
(i) Aspartate transaminase (ii) Alanine transaminase
(iii) Alkaline phosphatase (iv) Lactate dehydrogenase

SECTION - B (15 Marks)

Answer ALL Questions

ALL Questions Carry EQUAL Marks

(5 x 3 = 15)

6. a. Analyze temperature regulation strategies in homeotherms.
OR
b. Analyze the term chloride shift in transport of CO₂.
7. a. Elucidate the structure of nephron with neat diagram.
OR
b. Biorhythms are found in almost all the major taxonomic groups of animal kingdom - Justify.
8. a. Summarize the electrical events during process of hearing.
OR
b. Discuss about the mechanism of muscle contraction with its energetic.
9. a. Categorize the different types of proteins based on their role.
OR
b. Give Bloor's classification of lipids with suitable examples.
10. a. Describe the term isoenzymes with cited examples.
OR
b. Tabulate the list of different co-enzymes that take part in metabolism.

Cont...

SECTION -C (30 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks

(5 x 6 = 30)

11. a. Analyze the mechanism of blood clotting process.
OR
b. Analyze the mechanism of transport of O₂.
12. a. Expound the mechanism of formation of urine in Man.
OR
b. Bioluminescence is the dominant source of light in the deep ocean –Justify.
13. a. Classify the neurotransmitters with cited examples.
OR
b. Critically analyze the Photochemical Changes in Rhodopsin –Wald Visual Cycle.
14. a. Trace out steps involved in HMP shunt with flow chart.
OR
b. Summarize different steps of β-oxidation of fatty acids.
15. a. Enlist the different classes of enzymes.
OR
b. Expound the mechanism of enzyme action with suitable theories.

Z-Z-Z

END