

**M.Sc. 1st Semester Examination, 2024**

**ZOOLOGY**

( *Chordate Biology* )

PAPER — ZOOL-102

*Full Marks : 25*

*Time : 1 hour*

**Answer all questions**

*The figures in the right hand margin indicate marks*

*Candidates are required to give their answers in their own words as far as practicable*

**GROUP — A**

1. Answer any *two* of the following questions : 2 × 2

(a) What do you mean by Acoustic Guild ?

(b) Distinguish between the Catagen and Telogen phases of hair cycle.

( Turn Over )

- (c) Do freshwater fish have Chloride cells ?  
State the role of Chloride cells in Osmo-  
regulation. 1 + 1
- (d) Write a note on : Hatschek's pit.

**GROUP – B**

2. Answer any *two* questions from the follo-  
wing : 4 × 2
- (a) "Splanchnocranium is attached with the  
neurocranium to form a full fledged skull"  
– Justify your answer with the help of  
logical illustration.
- (b) What is RAM ventilation ? Cite the adap-  
tive features that enable certain fishes to  
exhibit RAM ventilation. 2 + 2
- (c) "In Echolocation Doppler shift and Clutter  
are two important aspects" – Discuss.

( 3 )

- (d) Write notes on : 2 × 2
- (i) Apocrine sweat gland
  - (ii) Metanephric kidney.

**GROUP – C**

3. Answer any *one* question of the following : 8 × 1
- (a) Echolocational signals are niche based—justify. What are the sensory adaptation relating to basilar membrane and inner ear of bat to support echolocation ? 2 + 6
  - (b) Discuss on : 4 + 4
    - (i) Thyroid and endostyle development in cyclostomes
    - (ii) Aquatic surface respiration (ASR).

**[ Internal Assessment – 5 Marks ]**

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