

RAMAKRISHNA MISSION VIDYAMANDIRA

(Residential Autonomous College affiliated to University of Calcutta)

B.A./B.Sc. FOURTH SEMESTER EXAMINATION, MAY 2025

SECOND YEAR [BATCH 2023-27]

Date : 03/05/2025

ZOOLOGY

Time : 11 am – 1 pm

Paper : 4ZOOMJC1

Full Marks : 50

1. Answer **any five** questions : [5×2]

- State four reptilian characters of Monotremata.
- Write down the differences between down feather and filoplume.
- What is arrector pili muscle? State its function.
- How do sharks maintain buoyancy without a swim bladder?
- What are neuromast organs?
- Differentiate between placoid and ctenoid scales.
- Enumerate four features of the Order Squamata.
- What is wheel organ?

Answer **any four** questions: [4×10]

- “In *Ascidia*, adapting sessile nature by adult is advantageous than the life of a motile larva” – justify.
 - Mention two important features of Tornaria larva, which are similar to an echinoderm larva.
 - Difference between Artiodactyla and Perissodactyla.
 - What are the identifying characters of the order Columbiformes?
 - “Hydrodynamic stimuli facilitate a fish to sustain in aquatic environment” – Explain. [3+2+2+1+2]
- Describe the structure of a typical feather.
 - Mention a few important characteristic features found in Suborders Strigiformes and Pelecaniformes.
 - Mention the role of pharynx in filter feeding of *Amphioxus* with a suitable diagram. [3+4+3]
- Differentiate between poisonous and non-poisonous snakes.
 - Illustrate the biting mechanism of solenoglyphous snake with a suitable diagram.
 - What is ASVS? [3+5+2]
- What is pterylosis?
 - Compare horn and antler with suitable diagrams.
 - Compare between Anura and Urodela.
 - Enumerate the factors involved in Neoteny. [1+3+4+2]
- Distinguish between Hagfish and Lamprey.
 - What is weberian apparatus?
 - Describe the accessory respiratory organ in *Clarias* sp.
 - Comment on the cause of origin of accessory respiratory organs. [2+2+4+2]
- Compare between physostomous and physoclistous swim bladders.
 - State the functions of the red gland and rete mirabile.
 - Mention the salient features (external & internal) of Axolotl larva. [3+3+4]
- How is the food circulated and digested in the rumen of the ruminant stomach of cattle?
 - How does echolocation work in dolphins?
 - State the role of larynx and ear muscles in echolocation of bats. [4+3+3]

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