

POST-GRADUATE COURSE

Term End Examination — June, 2023/December, 2023

ZOOLOGY

**Paper-1A : STRUCTURAL ORGANIZATION OF CHORDATES
AND NON-CHORDATES**

Time : 2 hours]

[Full Marks : 50

Weightage of Marks : 80%

Special credit will be given for precise and correct answer. Marks will be deducted for spelling mistakes, untidiness and illegible handwriting. The figures in the margin indicate full marks.

1. Answer *two* questions : 9 × 2 = 18
 - a) i) Discuss modern concept on the origin of chordates with illustrations. 9
 - ii) What do you mean by protochordates ? 7 + 2
 - b) Classify class Reptilia up to living Orders with distinctive characters and examples. 9
 - c) Why feather in birds is considered as unique character ? Classify different types of feathers found in birds. Draw, label and describe the structure of a contour feather. 2 + 3 + 4
 - d) Describe with a labelled diagram the structure of a neuromast cell and mention its function. Compare the electroreception of a fish with that of monotreme. (3 + 2) + 4
2. Answer *three* questions : 6 × 3 = 18
 - a) Describe with illustration two parasitic larval forms of invertebrates. 3 + 3
 - b) Give an account of the structures and functions of exocrine glands in vertebrates.
 - c) Give an illustrated account of the ultrastructure of a renal corpuscle with suitable diagram.
 - d) Give a comparative account of forebrain in vertebrate series.

- e) Discuss about water vascular system in Echinodermata with suitable diagram.
- f) Discuss the chemical nature of the following respiratory pigments : 3 × 2
- i) Haemoglobin
 - ii) Haemocyanin
 - iii) Haemoerythrin.
3. Answer *two* questions : 4 × 2 = 8
- a) Draw and explain the mechanism of excretion through a coelomoduct and a nephridium of any annelid worm. 2 + 2
 - b) Write short notes on the following : 2 × 2
 - i) Planula larva
 - ii) Trochophore larva.
 - c) Draw, label and distinguish between an artery and a vein.
 - d) Write the salient features of mammalian jaw.
4. Answer *two* questions : 3 × 2 = 6
- a) Define excretion and osmoregulation. Explain the relation between excretion and osmoregulation. 1 + 2
 - b) Write a short note on accessory respiratory organ in fish.
 - c) Explain vocalisation in relation to respiration.
 - d) What are propodium, epipodium and autopodium ? 1 + 1 + 1
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