

2024

ZOOLOGY — HONOURS

Paper : CC-8

(Comparative Anatomy of Vertebrates)

Full Marks : 50

The figures in the margin indicate full marks.

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

1. Answer **any five** questions :

2×5

- (a) What are gill rakers?
- (b) Distinguish between conus arteriosus and bulbus arteriosus.
- (c) What is craniostylic jaw suspension?
- (d) What do you mean by granular gland?
- (e) State the difference between Wolffian and Müllerian duct.
- (f) What is gyri and sulci?
- (g) Comment on the role of air capillaries in avian respiration.
- (h) What is carotid body? State its function.

2. Answer **any four** questions :

- (a) Describe the structure of omasum and abomasum in ruminant stomach of a mammal. Discuss the structure of pronephros with diagram. (2½+2½)+(3+2)
- (b) How does the skin of amphibians help them in respiration and protection? What do you mean by Tadpole's tooth? Name the bones of pelvic girdle in pigeon. 5+2+3
- (c) Draw and discuss in brief the structural peculiarities of a mammalian heart. Define four types of *dentition* in mammals with labelled diagram and example. 4+(4+2)
- (d) Give a comparative account of cerebrum and cerebellum of Reptiles and Mammals. Comment on four cranial nerves and their distribution in amniotes. 6+4
- (e) Elucidate the structural differences of gills in Chondrichthyes and Osteichthyes. Explain the role of diaphragm in mammalian respiration. What do you mean by pulmonary surfactant? 5+3+2
- (f) What is the basic pattern of aortic arches in vertebrates? Describe the modification of this pattern found in reptiles with diagram. Differentiate between rectrices and remiges. 2+5+3

Please Turn Over

(g) Write short notes on (*any two*) :

5×2

- (i) Olfactory receptors in fish
- (ii) Modification of reptilian heart over amphibian heart
- (iii) Function of mammalian ear in balancing and hearing.

(h) Distinguish between (*any four*) :

2½×4

- (i) Horn and Antler
 - (ii) Salt gland and Sweat gland
 - (iii) Larynx and Syrinx
 - (iv) Pallium and Neopallium
 - (v) Foramen Magnum and Foramen of Monro.
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