

2022

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) Distinguish between 'Ductus Arteriosus' and 'Ductus Caroticus'.
  - (b) What is branchiostegal membrane? Where is it found?
  - (c) Distinguish between 'Conus arteriosus' and 'Bulbus arteriosus'.
  - (d) What do you mean by opisthonephric kidney?
  - (e) Distinguish between a single circuit heart and a double circuit heart with suitable examples.
  - (f) What is craniostylic jaw suspension? Where is it found?
  - (g) Distinguish between Pallium and Neopallium.
  - (h) What is gyri and sulci?
2. Answer **any four** questions from the followings :
- (a) Describe the structural peculiarities of Pronephros and Metanephros kidneys with proper diagrams. Define Wolffian duct and Mullerian duct. (3+3)+2+2
  - (b) Describe the structure of Teleost gill with diagram. Describe the process of respiration in Teleost. (4+2)+4
  - (c) Draw and describe the modifications of aortic arches in reptiles. Distinguish between heart of fish and heart of Amphibia. Name three epidermal derivatives in mammals. 4+3+3
  - (d) Give a comparative account of cerebrum and cerebellum of Reptiles and Mammals with diagrams. Comment on 4 cranial nerves and their distribution in Amniotes. 6+4
  - (e) Comment on the role of anaerobic bacterial function in ruminant stomach of Bos. Define four types of dentition in mammals with labelled diagram and example. 4+(4+2)
  - (f) How does the skin of amphibians help them in respiration and water absorption? What do you mean by tadpoles tooth? Name the bones of pelvic girdle in Pigeon. 5+2+3

**Please Turn Over**

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

5×2

- (i) Poison glands in Amphibians
- (ii) Function of Mammalian ear in balancing and hearing
- (iii) Olfactory receptors in fish.

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

2½×4

- (i) Salt gland and Sweat gland
  - (ii) Air sac and Air capillary
  - (iii) Rectrices and Remiges
  - (iv) Foramen Magnum and Foramen Monro
  - (v) Molar and Pre molar.
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