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 diagams. 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

(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.
