

19 MAY 2022

[This question paper contains 4 printed pages.]

Your Roll No....



Sr. No. of Question Paper : 1155

Unique Paper Code : 32231401

Name of the Paper : Comparative Anatomy of Vertebrates

Name of the Course : B.Sc. (Hons.) ZOOLOGY

Semester : IV (LOCF)

Duration : 3 Hours

Maximum Marks : 75

Instructions for Candidates

1. Write your Roll No. on the top immediately on receipt of this question paper.
2. Answer five questions in all including Q. No. 1 which is compulsory.

1. (a) Explain the following terms :

- (i) Sigmoid notch
- (ii) Carnassial teeth
- (iii) Crop milk
- (iv) Polyphydont

P.T.O.



(v) Ampullae of Lorenzini (5)

(b) Give the exact location and functions of the following :

(i) Semilunar valves

(ii) Pecten

(iii) Diastema

(iv) Deltoid Ridge

(v) Pessulus

(vi) Aqueduct of Sylvius (6)

(c) Distinguish between the following :

(i) Plantigrade and digitigrade

(ii) Neurocranium and Splanchnocranium

(iii) Crista and Macula

(iv) Bipartite and Bicomuate uteri

(v) Pterylae and Apterylae

(vi) External and Internal Glomeruli (12)

(d) State whether the following statements are true or false and justify your answer :

(i) A rabbit has binocular vision.

(ii) The Reptilian skull is monocondylic.

(iii) IX cranial nerve is called Vagus.

(iv) Ductus caroticus is the dorsal aorta between aortic arches IV and V. (4)

2. Trace the evolution of heart in various groups of vertebrates with suitable diagrams. Differentiate between single and double circuit hearts. 12

3. (a) Give a comparative account of succession of kidney in vertebrates building upon a hypothetical basic pattern.

(b) Write short note on Syrinx in birds. (8,4)

4. (a) Classify vertebrae on the basis of centrum.

(b) Describe epidermal glands in vertebrates. (4,8)

5. (a) What is jaw suspensorium. Explain various types of jaw suspension in vertebrates. (9)

- (b) Differentiate between Lamelliform and Filliform gills. (3)
6. (a) Explain dentition taking following aspects into consideration –
- (i) degree of permanence
  - (ii) mode of attachment
  - (iii) morphological variants
  - (iv) patterns of cusps
- (b) Write short note on Ruminant stomach. (9,3)
7. Write short notes on **any three** of the following :
- (i) Swim bladder
  - (ii) Classification of receptors
  - (iii) Scales of fishes
  - (iv) Avian lungs (4,4,4)