

[This question paper contains 3 printed pages.]

Sr. No. of Question Paper : 987 E Your Roll No.....

Unique Paper Code : 223203

Name of the Course : B.Sc. (H.) (Zoology)

Name of the Paper : Biodiversity III (Chordata II) [20HT-203]

Semester : II

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. Attempt five questions in all including question no. 1 which is compulsory.
3. All the parts of a question must be attempted together.

1. (a) Define:

(i) Accessory respiratory organ

(ii) Opisthonephros

(iii) Pentadactyly

(iv) Corpus callosum

(v) Physostomus

(5)

(b) Give the exact location of:

(i) Glenoid cavity

(ii) Urostyle

(iii) Cheveron bone

(iv) Fovea centralis

(v) Keel

(5)

P.T.O.

(c) Differentiate between the following:

- (i) Mesonephros and Metanephros kidney
- (ii) Anapsida and Diapsida skull
- (iii) Acoelous and Procoelous centrum
- (iv) Holobranch and Demibranch
- (v) Motor and Sensory nerves (2×5=10)

(d) State whether the following statements are true or false:

- (i) Red glands are present in swim bladder
- (ii) Chelonians have 1 occipital condyle
- (iii) Larynx is the voice box of birds
- (iv) All mammals have a hepatic portal system
- (v) Synsacrum in birds is formed by the fusion of posterior vertebrae and pelvic girdle
- (vi) Stapes is the smallest bone of vertebrates
- (vii) Mitral valve is also known as bicuspid valve (7)

2. (a) Describe various modifications of first two visceral arches in vertebrates.

(b) Give an account of adaptations of mammalian hind limbs for terrestrial locomotion. (5,7)

3. Discuss the evolution of aortic arches in vertebrates. (12)

4. Trace the evolution of kidney in various groups of vertebrates. (12)

5. Explain respiratory structures and mechanism of respiration in birds. (12)

6. Give the names, nature, distribution and functions of cranial nerves in mammals. (12)

7. Write short notes on any **three** of the following:

(a) Neuromast organs

(b) Types of uteri in mammals

(c) Male urinogenital ducts

(d) Portal system

(4,4,4)