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(CBCS)

(2nd Semester)

ZOOLOGY

SECOND PAPER

(Chordate Biology and Anatomy)

Full Marks : 75

Time : 3 hours

The figures in the margin indicate full marks for the questions

(SECTION : A—OBJECTIVE)

(Marks : 10)

Tick (✓) the correct answer in the brackets provided :

1×10=10

1. A universal structure in all chordates is the

- (a) cranium () (b) notochord ()
(c) spinal cord () (d) vertebral column ()

2. *Branchiostoma* belongs to the Protochordata group is called

- (a) Cephalochordata () (b) Urochordata ()
(c) Hemichordata () (d) Tunicata ()

3. In *Scoliodon*, the internal ear functions as an organ of

- (a) osmoregulation ()
(b) thermoreception ()
(c) hearing and equilibrium ()
(d) chemoreception ()

- 4.** Frogs can live in water or near water as they
- (a) respire through the skin ()
- (b) use water as nutrient source ()
- (c) have webbed limbs ()
- (d) obtain food from water ()
- 5.** Venoms that cause destruction of red blood cells are called
- (a) myotoxins ()
- (b) cytotoxins ()
- (c) cardiotoxins ()
- (d) hemotoxins ()
- 6.** Tail feathers and wing feathers of birds are known as
- (a) filoplumes and contours ()
- (b) contours and rectrices ()
- (c) rectrices and remiges ()
- (d) remiges and filoplumes ()
- 7.** The part of the rabbit's eye which acts like the diaphragm of the camera is
- (a) iris ()
- (b) cornea ()
- (c) pupil ()
- (d) lens ()
- 8.** Alimentary canal is the longest in
- (a) detritivores ()
- (b) omnivores ()
- (c) carnivores ()
- (d) herbivores ()
- 9.** The coronary valve is guarded by
- (a) mitral valve ()
- (b) Thebesian valve ()
- (c) semilunar valve ()
- (d) tricuspid valve ()
- 10.** A fibrous connective tissue that attaches bone-to-bone and usually serves to prevent dislocation of bones and joint twist is known as
- (a) tendon ()
- (b) elastic cartilage ()
- (c) ligament ()
- (d) fibrous cartilage ()

(SECTION : B—SHORT ANSWER)

(Marks : 15)

Write notes on the following :

3×5=15

UNIT—I

1. Salient features of Protochordata

OR

2. Affinities of Urochordata

UNIT—II

3. Migration of fish

OR

4. Neoteny and paedogenesis

UNIT—III

5. Snake venom

OR

6. Functions of feathers in birds

UNIT—IV

7. Functions of integuments

OR

8. Phonoreceptor

UNIT—V

9. Dentition in mammals

OR

10. Functions of ligaments

(SECTION : C—DESCRIPTIVE)

(Marks : 50)

Answer the following :

10×5=50

UNIT—I

1. Describe the circulatory system of *Herdmania*.

OR

2. Give an outline classification of Chordata up to classes giving one example for each class.

UNIT—II

3. Describe the various types of scales of fishes.

OR

4. Explain the process of respiration in *Rana tigrina*.

UNIT—III

5. Describe the principle and modes of flight in birds.

OR

6. Give an account on poison apparatus and biting mechanism of snakes.

UNIT—IV

7. Describe the structure of brain of rabbit.

OR

8. Give an account on the receptor organs in mammals.

UNIT—V

9. Describe with suitable diagrams the various modifications of hearts in vertebrates.

OR

10. Explain in detail the structure and composition of bones.
