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**3 (Sem-3/CBCS) ZOO HC 1**

**2022**

**ZOOLOGY**

(Honours)

Paper : ZOO-HC-3016

**(Diversity of Chordata)**

Full Marks : 60

Time : Three hours

**The figures in the margin indicate full marks for the questions.**

1. Answer the following questions : **(any seven)**

1×7=7

(i) Balanoglossus is an example of —

(a) Hemichordata

(b) Cephalochordata

(c) Urochordata

(d) Cyclostomata

*(Choose the correct option)*

Contd.

(ii) Ammocoete larva is the larval stage of —

- (a) Myxine
- (b) Lamprey
- (c) Herdmania
- (d) None of the above

*(Choose the correct option)*

(iii) Number of cranial nerves in fishes are —

- (a) 12 (twelve) pairs
- (b) 10 (ten) pairs
- (c) 8 (eight) pairs
- (d) 16 (sixteen) pairs

*(Choose the correct option)*

(iv) An example of anadromous migration is —

- (a) *Anguilla bengalensis*
- (b) *Hilsa ilisha*
- (c) Major carps
- (d) None of the above

*(Choose the correct option)*

(v) The sense organ present in most amphibians is —

- (a) Ampullae of Lorenzini
- (b) Organ of Jacobson
- (c) Flame cell
- (d) Booklung

*(Choose the correct option)*

(vi) The oldest surviving lepidosauria reptile and a living fossil is —

- (a) *Ichthyosaurus*
- (b) *Sphenodon*
- (c) *Placodus*
- (d) *Seymouria*

*(Choose the correct option)*

(vii) Sound producing organ in bird is —

- (a) Larynx
- (b) Syrinx
- (c) Trachea
- (d) Air-filled sacs

*(Choose the correct option)*

(viii) The posterior caudal vertebrae of bird are fused to form a structure called

- (a) Plumage
- (b) Synsacrum
- (c) Furcula
- (d) Pygostyle

*(Choose the correct option)*

(ix) The powerful down-stroke of the wing of bird during flight is due to —

- (a) Pectoralis minor
- (b) Coracobrachialis muscles
- (c) Pectoralis major
- (d) Tensores patagialis muscles

*(Choose the correct option)*

(x) The kidney in mammals is —

- (a) Mesonephric
- (b) Pronephric
- (c) Metanephric
- (d) Archinephric

*(Choose the correct option)*

(xi) In Amphibians respiration takes place by —

- (a) Gills, lungs, skin and buccal lining
- (b) Gills and lungs
- (c) Skin and gills
- (d) Gills, lungs and buccal lining

*(Choose the correct option)*

(xii) Members of order Dipnoi are commonly known as —

- (a) Pipe fishes
- (b) Cow fishes
- (c) Lung fishes
- (d) Cat fishes

*(Choose the correct option)*

2. Answer **any four** of the following :  $2 \times 4 = 8$

- (i) Write the general characteristics of Hemichordata.
- (ii) What do you mean by Retrogressive metamorphosis? Give example.
- (iii) Distinguish between Archaeornithes and Neornithes.

- (iv) Archaeopteryx is a connecting link between reptiles and birds — Justify.
- (v) Differentiate between poisonous and non-poisonous snakes.
- (vi) Write about the role of kidneys in osmoregulation of fishes.
- (vii) Write about the dentition in mammals.
- (viii) Write the salient features of Aves.

3. Answer **any three** of the following questions :  $5 \times 3 = 15$

- (i) Write the distinguishing characters between chondrichthyes and osteichthyes.
- (ii) Give a brief account of the general characters of Mammals.
- (iii) Discuss the mechanism of osmoregulation in freshwater fishes.
- (iv) Describe briefly about the various flight adaptations found in birds.
- (v) Write about the affinities of prototheria.
- (vi) Write the general characteristics of Amphibia.

(vii) Differentiate between petromyzon and myxine.

(viii) Write on the general characteristics of Agnatha.

4. Answer **any three** of the following :

$$10 \times 3 = 30$$

- (i) What do you mean by parental care ? Discuss about the various ways and mechanism of parental care in Amphibia.  $1 + 9 = 10$
- (ii) Discuss the poison apparatus of poisonous snakes. Write about the biting mechanism of a snake with suitable diagram.  $4 + 6 = 10$
- (iii) Write about the theories related to the distribution of animals in different geographical realms. Highlight on how different vertebrates are distributed in different geographical realms.
- (iv) Write about adaptive radiation in mammals with reference to locomotory appendages.
- (v) What are the advantages of migration in birds ? Give an account of different types of migration in birds.  $3 + 7 = 10$

(vi) Describe the retrogressive metamorphosis in urochordata with suitable diagrams.

(vii) Discuss the general characteristics of Reptilia and write about the affinities of sphenodon. 5+5=10

(viii) Write the distinguishing characters of fishes. Discuss about migration in fishes. 5+5=10