

**Bs/ZOO/M3**

**2024**

**( FYUGP )**

**( 3rd Semester )**

**ZOOLOGY**

**( Minor )**

**Paper Code : ZOO/M3**

**( Diversity of Chordates )**

**Full Marks : 75**

**Pass Marks : 40%**

**Time : 3 hours**

**( PART : B—DESCRIPTIVE )**

**( Marks : 50 )**

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

- 1. What are cephalochordates? Describe the  
general characteristics of cephalochordates.**

**2+8=10**

**Or**

**Give a detailed account on the retrogressive  
metamorphosis in urochordates.**

**10**

2. Explain in detail the advanced features of vertebrates over protochordates. 10

Or

Write the general characteristics of Agnatha.  
Give suitable examples. 8+2=10

3. What is osmoregulation? Explain the various modes of migration in fishes. 2+8=10

Or

Classify class Amphibia up to order with suitable examples. 10

4. Give a detailed account on the biting mechanism in snakes. Add a note on the poison apparatus. 6+4=10

Or

Discuss in detail why *Archaeopteryx* is considered as a connecting link between reptiles and birds. 10

5. Explain in detail the adaptive radiation with reference to locomotory appendages in mammals. 10

Or

Write an account on zoogeographical realms. 10

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( PART : A—OBJECTIVE )

( Marks : 25 )

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**SECTION—I**

( Marks : 15 )

Put a Tick (✓) mark against the correct answer in the brackets provided : 1×15=15

1. *Balanoglossus* is included in which subphylum?

- (a) Urochordata ( )
- (b) Hemichordata ( )
- (c) Cephalochordata ( )
- (d) None of the above ( )

2. The condition in which the coelom and mesoderm initially develops as a pocket of the primitive gut is known as

- (a) enterocoelous ( )
- (b) metacoel ( )
- (c) diverticulum ( )
- (d) None of the above ( )

3. In which of the subphylum notochord and nerve cord is present throughout the life?

- (a) Hemichordata ( )
- (b) Urochordata ( )
- (c) Cephalochordata ( )
- (d) Both (b) and (c) ( )

4. Which of the following is considered a hypothetical larva of the ancestral echinoderms?

- (a) Dipleurula ( )
- (b) Ascidian larva ( )
- (c) Tornaria larva ( )
- (d) None of the above ( )

5. Which of the following evidences is not supporting the echinoderm theory of chordate origin?

- (a) Similarity in embryonic development ( )
- (b) Presence of pharyngeal slits ( )
- (c) Radial symmetry in adult echinoderm ( )
- (d) Similarities in larval form ( )

6. The advanced features of vertebrates over protochordata is

- (a) open circulatory system ( )
- (b) presence of cranium ( )
- (c) absence of vertebral column ( )
- (d) None of the above ( )

7. Cyclostomes are primarily characterized by

- (a) presence of jaws ( )
- (b) absence of jaws ( )
- (c) presence of paired fins ( )
- (d) presence of bony skeleton ( )

8. Catadromous migration is exhibited by

- (a) Salmon ( )
- (b) *Anguilla* sp ( )
- (c) Tuna ( )
- (d) All of the above ( )

9. Osteichthyes are primarily distinguished by

- (a) presence of a cartilaginous endoskeleton ( )
- (b) presence of a bony endoskeleton ( )
- (c) lack of paired fins ( )
- (d) absence of a jaw ( )

10. Bufo frog is included in the order

- (a) Anura ( )
- (b) Urodela ( )
- (c) Squamata ( )
- (d) Apoda ( )

11. Which of the following is true about the circulatory system of reptiles?

- (a) They have four-chambered heart ( )
- (b) They have three-chambered heart ( )
- (c) They have an open circulatory system ( )
- (d) Both (b) and (c) ( )

12. The poison apparatus in snakes is primarily composed of which of the following?

- (a) Tail stinger and poison gland ( )
- (b) Venomous skin and fangs ( )
- (c) Poison gland and fangs ( )
- (d) None of the above ( )

13. Which type of migration involves birds travelling short distances to more favourable conditions within the same region?

- (a) Longitudinal migration ( )
- (b) Latitudinal migration ( )
- (c) Altitudinal migration ( )
- (d) Diagonal migration ( )

14. The duck-billed platypus belongs to which order of mammals?

- (a) Monotremata ( )
- (b) Symmetrodonta ( )
- (c) Triconodonta ( )
- (d) None of the above ( )

15. The palaearctic realm covers which of the following regions?

- (a) South America ( )
- (b) Africa and Europe ( )
- (c) North America and Greenland ( )
- (d) South-East Asia and Australia ( )

( ( 7 ) )

SECTION—II

( Marks : 10 )

Write short notes on any *five* of the following :  $2 \times 5 = 10$

1. Urochordata

2. Dipleurula concept

Write short notes on any five of the following :  
( Marks : 10 )

(b) Sympleurodonta

(c) Triconodonta

(d) None of the above

15. The palaeogeographic regions?

(a) South America

(b) Africa

(c) North America

(d) Europe

3. Osteichthyes

4. Flight adaptation in bird

4. Flight adaptation in bird

5. Sphenodon

Geographical region

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6. Zoogeographical realm

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