

2025

(FYUGP)

(2nd Semester)

ZOOLOGY

(MINOR)

Paper : ZOO/M2

(Non-Chordates II : Coelomates)

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. How did metamerism evolve over time? Add a note on the functional significance of metamerism. 6+4=10**

Or

Write a detailed account on the evolutionary significance of onychophora. 10

2. Classify phylum Annelida up to classes with examples. 10

Or

Provide a comprehensive explanation of the excretory mechanism in Annelida. 10

3. Give the general characteristics of phylum Arthropoda. 10

Or

Explain the different types of respiratory organs in Arthropods. 10

4. Outline the classification of Mollusca up to classes with suitable examples. 10

Or

Define pearls. Describe their formation process in bivalves. 2+8=10

5. Write the key characteristics of phylum Echinodermata. 10

Or

6. Categorize phylum Echinodermata up to class level with relevant examples. 10

Write a detailed account on the evolutionary significance of onychophora. 10

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ZOOLOGY

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Paper : ZOO/M2

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(PART : A—OBJECTIVE)

(Marks : 25)

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

1. The evolutionary significance(s) of metamerism is/are

- (a) it improves locomotion efficiency
- (b) it leads to the evolution of specialised body regions
- (c) Both (a) and (b)
- (d) Only (b)

2. Onychophorans were considered a connecting link between

- (a) Annelida and Mollusca ()
- (b) Annelida and Echinodermata ()
- (c) Arthropoda and Mollusca ()
- (d) Arthropoda and Annelida ()

3. Reproduction in Onychophorans is

- (a) Oviparous ()
- (b) Viviparous ()
- (c) Both oviparous and viviparous ()
- (d) asexual reproduction ()

4. The nervous system of annelids consists of

- (a) a ventral nerve cord with paired ganglia ()
- (b) a single nerve ring ()
- (c) a dorsal nerve cord ()
- (d) a single ganglia ()

5. Which of the following is false for annelids?

- (a) Body is bilaterally symmetrical ()
- (b) Blood vascular system closed ()
- (c) Excretory organ is nephridia ()
- (d) Coelom is enterocoelous ()

6. The main function of setae in earthworm is

- (a) respiration ()
- (b) locomotion ()
- (c) excretion ()
- (d) digestion ()

7. The exoskeleton in arthropods is composed of

- (a) chitin ()
- (b) keratin ()
- (c) cellulose ()
- (d) All of the above ()

8. The respiratory organs in most terrestrial arthropods are

- (a) book gills ()
- (b) lungs ()
- (c) tracheal system ()
- (d) nephridia ()

9. The study of insect is called

- (a) entomology ()
- (b) epidemiology ()
- (c) malacology ()
- (d) arthropodology ()

10. Effect of torsion is

- (a) displacement of mantle cavity ()
- (b) looping in alimentary canal ()
- (c) endogastric coil ()
- (d) All of the above ()

11. How many ventricles does the molluscan heart have?

(a) One ()

(b) Two ()

(c) Three ()

(d) Four ()

12. Excretion in Mollusca is by paired

(a) protonephridia ()

(b) mesonephridia ()

(c) metanephridia ()

(d) None of the above ()

13. Asterias belongs to class

(a) echinoidea ()

(b) asteroidea ()

(c) ophiuroidea ()

(d) holothuroidea ()

14. Coelom in echinodermata is

(a) enterocoelous ()

(b) schizocoelous ()

(c) Both (a) and (b) ()

15. Water-vascular system contains

(a) madreporite ()

(b) stone canal ()

(c) ring canal ()

(d) All of the above ()

(7)

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

1. Significance of coelom

Write short notes on any five of the following

2. Parthenogenesis

1. Significance of coelom

(a) acoelous ()

(b) schizocoelous ()

(c) Both (a) and (b) ()

(d) None of the above ()

18. Water vascular system contains

(a) nephridia ()

(b) star cells ()

(c) both (a) and (b) ()

(d) All of the above ()

3. Setae and parapodia

4. Vision in insects

4. Vision in insects

5. Metamorphosis

6. Torsion in gastropods

6. Torsion in gastropoda

7. Water-vascular system

8. Bipinnaria larva

9. Velar band

10. Velar band

11. Velar band

12. Velar band

13. Velar band

14. Velar band

15. Velar band

16. Velar band

17. Velar band

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8. Bipinnaria larva

Water-vascular system

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