

Code No. : 7786

Sub. Code : WZOM 11

M.Sc. (CBCS) DEGREE EXAMINATION,
NOVEMBER 2023.

First Semester

Zoology – Core

STRUCTURE AND FUNCTIONS OF
INVERTEBRATES

(For those who joined in July 2023 onwards)

Time : Three hours

Maximum : 75 marks

PART A — (15 × 1 = 15 marks)

Answer ALL the questions.

Choose the correct answer :

1. Which of the following is not a part of a scientific name under the binomial nomenclature?
- (a) Genus (b) Family
(c) Order (d) Species

2. What is the final step in the taxonomic procedure to ensure the accuracy and reliability of taxonomic work?
- (a) Classification
(b) Observation
(c) Verification
(d) Collection and identification
3. Coelomates have a true body cavity which is lined with _____
- (a) Endoderm (b) Mesoderm
(c) Ectoderm (d) None
4. Which group of animals has acoelomate body?
- (a) Annelids (b) Arthropods
(c) Platyhelminthes (d) Echinoderms
5. Select the structures which aid in capturing food particles in filter feeding
- (a) Tentacles (b) Mandibles
(c) Gills (d) Palps

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6. Choose the respiratory pigment present in annelids.
- (a) Chlorocruorin (b) Haemoerythrin
(c) Cytochrome (d) Molpadin
7. Choose the phylum which has Coelomoducts as the excretory structure.
- (a) Arthropods (b) Annelids
(c) Mollusks (d) Protozoa
8. Malpighian tubules are the respiratory organs of _____.
- (a) Molluska (b) Flat worms
(c) Crustaceans (d) Insects
9. Identify the larval form of Ascaris.
- (a) Trochophore (b) Rhabditiform larva
(c) Hook worm (d) Loa loa
10. Select the common name of Nemertinea.
- (a) Ribbon worm (b) Dicyemida
(c) Anopla (d) All the above

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11. What is the biological species concept primarily based on?
- (a) Morphological similarity
(b) Reproductive isolation
(c) Ecological niche
(d) Genetic diversity
12. Which of the following structure is a characteristic of Protostomia?
- (a) Deuterostomous development
(b) Coelom formed by enterocoely
(c) Spiral cleavage
(d) Determinate cleavage
13. How do most Porifera obtain their food?
- (a) Filter-feeding through specialized cells called choanocytes
(b) Capturing prey with tentacles and stinging cells
(c) Absorbing nutrients directly through their body surface
(d) Engulfing food particles through phagocytosis

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[P.T.O.]



14. Insects have a well-developed nervous system that includes a highly organized structure known as the
- (a) Insect brain (b) Nerve cord
(c) Brain head (d) Ganglion
15. The free-swimming larval form found in the life cycle of many crustaceans, including crabs and lobsters, is known as
- (a) Planula (b) Trochophore
(c) Nymph (d) Zoea

PART B — (5 × 4 = 20 marks)

Answer ALL questions, choosing either (a) or (b).

16. (a) Discuss the species concept.
Or
(b) Elaborate the binomial nomenclature.
17. (a) Differentiate an acelomates and pseudocoelomates.
Or
(b) Enumerate the ciliary movement in protozoa.
18. (a) Explain the digestion in Metazoa.
Or
(b) Discuss the respiratory mechanism.

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19. (a) Elaborate the trends in neuralevolution.
Or
(b) Explain the role of nephridia in excretion.
20. (a) Discuss the salient features of Ectoprocta.
Or
(b) Elaborate the characteristics of branchiopoda.

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b)

21. (a) Discuss the International code of Zoological nomenclature.
Or
(b) Write the taxonomic procedures involved in the systematic approach in classifying organism.
22. (a) Enumerate the types of Coelomates.
Or
(b) Discuss the hydrostatic movement in annelida.
23. (a) Elaborate the respiratory organs in various animals.
Or
(b) Discuss the filter feeding in Polychaetes.

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24. (a) Explain the following excretory organs;
(i) coelom
(ii) Ammonotelic animals.
Or
(b) Discuss the advanced nervous system in Echinodermata.
25. (a) Assess the larval forms of helminthic parasites.
Or
(b) Enumerate the evolutionary significance of larval forms.

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