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Reg. No. : .....

Code No. : 5443

Sub. Code : ZZOM 11

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

First Semester

Zoology-Core

STRUCTURE AND FUNCTION OF INVERTEBRATES

(For those who joined in July 2021 onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. Organizing taxonomic information in logical classification is called \_\_\_\_\_
- (a) systematic (b) phenetic  
(c) phylogenetic (d) dendogram

6. Which of the following pigment imparts green colour to the blood?
- (a) Haemoglobin  
(b) Haemocyanin  
(c) Chlorocruorin  
(d) None of these

7. Collection of nerve cell bodies inside the CNS are called \_\_\_\_\_
- (a) nerves (b) ganglia  
(c) tracts (d) none of these.

8. Terminal ganglionic mass in Hirudinaria is formed by the fusion of \_\_\_\_\_ of embryonic ganglia
- (a) four (b) three  
(c) two (d) seven

9. Miracidium larva belong to which phylum
- (a) Arthropoda  
(b) Coelenterata  
(c) Mollusca  
(d) Platyhelminthes

10. Bipinnaria larva is the free-swimming larva of
- (a) Antedon (b) Star-fish  
(c) Echinus (d) Holothuria

2. New systematic differs from classical systematic in employing \_\_\_\_\_
- (a) experimental taxonomy  
(b) biochemical and cytotoxicology  
(c) all biological parameters  
(d) numerical taxonomy
3. Simplest mode of locomotion is \_\_\_\_\_
- (a) swimming (b) creeping  
(c) floating (d) walking
4. The digestion in Sponges is
- (a) Intercellular (b) Extracellular  
(c) Intracellular (d) Holozoic
5. The subclass of Bivalvia in which gills degenerate and respiratory function is entirely taken up by the mantle
- (a) Protobranchia  
(b) Septibranchia  
(c) Filibranchia  
(d) Eulamellibranchia

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PART B — (5 × 5 = 25 marks)

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

Each answer should not exceed 250 words

11. (a) Differentiate the Acoelomates and Pseudocoelomates.
- Or
- (b) Explain the species concept.
12. (a) Describe the locomotory organelle in amoeba
- Or
- (b) Illustrate the hydrostatic movements in coelenterates.
13. (a) List out the types of lungs
- Or
- (b) Explain the excretory system in Arthropods.
14. (a) Write the cockroach nervous system.
- Or
- (b) Explain the earthworm nervous system.

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[P.T.O.]

15. (a) Illustrate the evolutionary significance of larval forms.

Or

(b) Write the distinctive characters of phylum Mesozoa.

PART C — (5 × 8 = 40 marks)

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

Each answer should not exceed 600 words

16. (a) Discuss the Binomial nomenclature.

Or

(b) Differentiate between Protostomia and Deuterostomia.

17. (a) Describe the filter feeding mechanism in Polychaeta.

Or

(b) Illustrate the feeding mechanism in echinoderms.

18. (a) Enumerate the gills in Arthropoda.

Or

(b) Elucidate about Nephridia

19. (a) Specify the nervous system of Nereis

Or

(b) Discuss the trends in neural evolution

20. (a) Illustrate the larval forms of parasites

Or

(b) Describe the salient features and affinities of Endoprocta.