

**Question Bank- B.Sc (Hons.) Sem II**

**Paper- C-3**

**(NON-CHORDATES- II)**

**A. Choose the correct option:**

1. In some animal groups, the body is found divided into compartments with at least some organs/ organ repeated. This characteristic feature is named
  - a. Segmentation
  - b. Metamerism
  - c. Metagenesis
  - d. Metamorphosis
2. Body cavity is the cavity present between body wall and gut wall. In some animals the body cavity is not lined by mesoderm. Such animals are called
  - a. Acoelomate
  - b. Pseudocoelomate
  - c. Coelomate
  - d. Haemocoelomate
3. Type of coelom found in annelida is
  - a. Schizocoelom
  - b. Enterocoelom
  - c. Pseudocoelom
  - d. protocoelom
4. In segmented worms, the coelom functions as
  - a. Respiratory system
  - b. Digestive system
  - c. Skeletal system
  - d. Circulatory system
5. Metamerism is characteristic feature of
  - a. Platyhelminthes
  - b. Mollusca
  - c. Porifera
  - d. Annelida
6. Coelom is absent in
  - a. Porifera
  - b. Coelenterata
  - c. Platyhelminthes
  - d. All of the above
7. Acoelomate condition is found in
  - a. Jelly fish
  - b. Star fish
  - c. Round worm
  - d. Tape worm
8. Echinoderms and chordates have

- a. Pseudocoelom
  - b. Schizocoelom
  - c. Enterocoelom
  - d. Haemocoel
9. An animal with metameric segmentation is
- a. Housefly
  - b. Earth worm
  - c. Round worm
  - d. *Planaria*
10. True coelom occurs in
- a. *Hydra*
  - b. *Taenia*
  - c. *Pheretima*
  - d. *Sycon*
11. True coelom appeared first in the course of evolution in
- a. Aschelminthes
  - b. Chordata
  - c. Echinodermata
  - d. Annelida
12. Animal with pseudocoelom is
- a. Leech
  - b. *Ascaris*
  - c. Liver fluke
  - d. House fly
13. Animal group with pseudocoelom is
- a. Echinodermata
  - b. Mollusca
  - c. Nematoda
  - d. Annelida
14. Coelom, a cavity between alimentary canal and body wall, is enclosed by
- a. Ectoderm and Endoderm
  - b. Mesoderm and Ectoderm
  - c. Ectoderm on both sides
  - d. Mesoderm on both sides
15. Coelom formed by splitting of mesoderm is
- a. Enterocoelom
  - b. Schizocoelom
  - c. Pseudocoelom
  - d. None of the above
16. One of the following is not an Annelid
- a. *Nereis*
  - b. Earthworm
  - c. Leech
  - d. Urchins
17. Trochophore larva is found in
- a. Annelida and Porifera
  - b. Cnidaria and Annelida
  - c. Mollusca and Annelida
  - d. Mollusca and Cnidaria
18. Characteristic feature of polychaeta is:



- XVI. Dipleurula larva
- XVII. Doliolaria larva
- XVIII. Torsion
- XIX. Trochophore larva

**C. Answer the following (Long Answer Questions):**

1. What was the evolutionary significance of metamerism and the coelom to its earliest possessors?
2. Discuss the development of different types of coelom with illustrative diagrams.
3. In soft-bodied annelids, coelom acts as a hydrostatic skeleton. Justify the statement.
4. Distinguish among the classes of the phylum Annelida.
5. What are the main differences in reproduction and development among the three classes of annelids?
6. What are the excretory products of Annelida? Distinguish between a protonephridium and a metanephridium.
7. In what annelid groups are septa between coelomic compartments lost? What advantages does this loss give each group?
8. Write the general characteristics and evolutionary significance of Onychophora.
9. Illustrate the process of pearl formation in bivalves.
10. Discuss the general characters of phylum Arthropoda. Classify Arthropoda upto classes with one example of each class.
11. Describe in details the mechanism of vision in Arthropoda with the help of diagram.
12. What is metamorphosis? What are the various stages of metamorphosis in insects? Diagrammatically explain the stages of metamorphosis in any one insect.
13. Discuss the endocrine control of metamorphosis in insects.

14. Discuss the various castes of honey bees for various social activities. What are the structural and functional differences of these castes?
15. How is honey prepared by bees? Explain the protocol.
16. What are the various caste division in termites? Explain their structural and functional differences.
17. Discuss the general characteristics of phylum Mollusca. Classify it upto class with one example of each.
18. Describe the mechanism of different types of respiration in classes of phylum Mollusca.
19. Illustrate the process of torsion and detorsion in gastropods.
20. What are the general characters of phylum Echinodermata?
21. What is Water vascular system? Explain its significance in Echinodermata.
22. Diagrammatically explain the various structures of water vascular system in Asterias. What are the functions of each structure?
23. Discuss any three larval forms of Echinodermata with the help of diagrams.
24. What is the evolutionary significance of Echinodermata with reference to vertebrates?