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**M.Sc. (First Semester)
EXAMINATION, Dec. - Jan., 2021-22
ZOOLOGY
Paper Second
(Structure and Function of Invertebrates)**

[Time : Three Hours]

[Maximum Marks : 80]

Note - Attempt all sections as directed

Section - A

(Objective / Multiple choice questions)

Note : Attempt all questions.

Choose the correct answer:

(1 mark each)

1. Which of the following class of protozoa does not generally contain contractile vacuoles?
(A) Sporozoa
(B) Rhizopoda
(C) Flagella
(D) Ciliata

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2. Sponges free swimming larva is called as -
(A) Veliger
(B) Trochophore
(C) Parenchymula
(D) Bipinnasia
3. This group is commonly known as sea stick
(A) Porifera
(B) Coelenterata
(C) Arthropoda
(D) Echinodermata
4. Presence of hepatopancreas is character of
(A) Annelida
(B) Echinodermata only
(C) Arthropods only
(D) Both (A) and (C)
5. Which things is common in each mosquito bed bug and rat
(A) All have anticoagulation
(B) All have nucleus
(C) All have no cellular membrane
(D) All have several phase

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6. A Moth is closely related to
- (A) Butterfly
 - (B) Cricket
 - (C) Beetle
 - (D) Wasp
7. This phylum shows the presence of nerve cells and absence of nerves
- (A) Coelenterata
 - (B) Porifera
 - (C) Nematelminthes
 - (D) Platyhelminthes
8. Which of the following is a free living flat worm -
- (A) Planaria
 - (B) Taenia
 - (C) Pheretima
 - (D) Fasciola
9. Infection of Ascaris usually occurs due to -
- (A) Mosquito bite
 - (B) Contaminated food and water
 - (C) Air
 - (D) Housefly

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10. Platyhelminthes represents an example of
- (A) Cellular grade of organisation
 - (B) Tissue grade of organisation
 - (C) Organ system grade of organisation
 - (D) Tissue organ grade of organisation
11. Metamerically segmented body is present in
- (A) Earth worm
 - (B) Leech
 - (C) Nereis
 - (D) All of the above
12. Which of the following is muscular sac which controls tube feet by forcing water in to it in the sea star ?
- (A) Mandibles
 - (B) Ampulla
 - (C) Septa
 - (D) Stone canal
13. Foot is displaced to the neighbourhood of mouth and divided into arms in -
- (A) Ostrea
 - (B) Pila
 - (C) Sepia
 - (D) Chiton

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14. What are the three body parts of a crustacea called?
- (A) Head, Throat, abdomen
 - (B) Head, middle, tail
 - (C) Theeostracea, Throat, abdomen
 - (D) Malacostraca, Throat, abdomen
15. The mouth parts of house fly are
- (A) Piercing and suckig type
 - (B) Biting and chewing type
 - (C) Sucking and sponging type
 - (D) Biting sucking and lapping type
16. Which one of the following is not hermaphrodite animal?
- (A) Leeches
 - (B) Poly chaetes
 - (C) Flatworms
 - (D) Earth worm
17. Closed blood vascular system lives cells in the blood and chitinous setae or parapodia are the characteristics of
- (A) Nematoda
 - (B) Annelida
 - (C) None of there
 - (D) Arthropoda

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18. The echinoderms are related to chordates by their similarity in the development of
- (A) Crust
 - (B) Nerves system
 - (C) Heart
 - (D) Coelom
19. Echinoderms are triploblastic
- (A) yes
 - (B) No
20. Gemmates are helpful in
- (A) Digestion
 - (B) Several reproduction
 - (C) Secretion of speceis
 - (D) Survival in drought

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Section - B
(Very Short Answer Type Questions)

(2 marks each)

Note : Attempt all questions in 1-2 sentences.

1. Describe the structure of scypha.
2. What is Pinocytosis?
3. What do you understand by hydrostatic movement in Coelentrata?
4. What are trachea in Arthropoda?
5. What are the excretory and osmoregulatory organ of insects ?
6. Nervous system of Hydra.
7. Characteristics of Crustacea.
8. Explain locomotion of Hydra.

Section - C

(Short Answer Type Questions)

(3 marks each)

Note : Attempt all questions in about 75 words.

1. Explain the affinities of Rotifera.
2. Give a general account of the class Amphineura.
3. What is torsion? Explain it.
4. Describe the various types of species in Porifera.
5. Give a detailed structure of the body wall of Sycon.
6. Explain the Brachiolaria larva.
7. Explain reproduction in Ctenophora.
8. Explain nervous system in Mollusca.

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Section - D
(Long Answer Type Questions)

(5 marks each)

Note : Attempt all questions in about 150 words. Attempt one question from each unit.

Unit - I

1. Describe the Acoelomates and pseudocoelomate.

or

Explain the Hydrostatic movement in Coelenterata.

Unit - II

2. Describe the mechanism of feeding in phylum Protozoa.

or

Explain the respiratory pigments in invertebrates.

Unit - III

3. Describe the excretory process of invertebrates.

or

Describe the nervous system of Echinodermata.

Unit - IV

4. Give an account of Rotifera.

or

Describe the larval forms of phylum Arthropoda.

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