Roll No. .....

E–323

M. Sc. (First Semester)
EXAMINATION, Dec.-Jan., 2020-21

ZOOLOGY

Paper Second

(Structure and Function of Invertebrates)

Time : Three Hours] [*Maximum Marks : 80*

Note : Attempt all Sections as directed.

Section—A 1 each

(Objective/Multiple Choice Questions)

Note : Attempt all questions.

Choose the correct answer :

1. Which protozoan shows coprozoic nutrition ?
   (a) Amoeba
   (b) Paramecium
   (c) Vorticella
   (d) Clamydophrys
2. Phylum-Annelida is not characterized by :
   (a) Segmentation
   (b) Closed circulatory system
   (c) Ventral nerve cord
   (d) Pseudocoelom

3. Excretion is performed by which structure in flatworms ?
   (a) Nephridia
   (b) Flame cells
   (c) Green glands
   (d) Malpighian tubules

4. Tube feet are found in :
   (a) Cuttle fish
   (b) Jelly fish
   (c) Star fish
   (d) Cray fish

5. In nNereis, gaseous exchange takes place through :
   (a) Skin
   (b) Gills
   (c) Book lungs
   (d) Parapodia

6. Tracheoles are found in :
   (a) Insects
   (b) Pila
   (c) Star fish
   (d) Balantidium

7. In cnidaria, latticework condacted impulses towards the body parts, by :
   (a) Nerves
   (b) Nerve net
   (c) Neurofibril nodes
   (d) Neurons

8. The nervous system in the flatworms is composed of :
   (a) Ganglia
   (b) Myofibrils
   (c) Nerve net
   (d) Motor nerves

9. Ganglia function as a/an :
   (a) Messenger
   (b) Network
   (c) Primitive brain
   (d) Interneuron

10. Solenocyte and nephridia are respectively found in :
   (a) Platyhelminthes and Annelida
   (b) Annedlida and Nematoda
   (c) Mollusca and Protozoa
   (d) Mollusca and Echinodermata

11. In cockroach, excretion is performed by :
   (a) Renette cells
   (b) Flame cells
   (c) Nephridia
   (d) Malpighian tubules

12. Auricularia is the larva of :
   (a) Echinoidea
   (b) Asteroidea
   (c) Ophiuroidea
   (d) Holothuroidea

13. Identify the larva which is present only in members of gastropods :

    (a) Trochophore

    (b) Veliger

    (c) Glochidium

    (d) Muller's larva

14. In Annelida, free swimming larva is produced, called :

    (a) Brachiolaria

    (b) Trochophore

    (c) Tornaria

    (d) Planula

15. Development of mouth later than anus is the condition called :

    (a) Brachiostomatic

    (b) Schizo stomatic

    (c) Deuterostomatic

    (d) Protostomatic

16. In Ctenophores, what are used to swim ?

    (a) Tentacles

    (b) Statocyst

    (c) Comb plates

    (d) None of these

17. The Rotifers are initially named as :
    (a) Crowned organism
    (b) Wheel animalcules
    (c) Collared organism
    (d) Rods

18. Epidermis secretes a gelatinous, chitinous or calcium-stiffend exoskeleton of many chambers, wach called zoecium often with a trap door operculum, found in :
    (a) Coelenterata
    (b) Rotifera
    (c) Ctenophora
    (d) Ectoprocta

19. How does an annelid's skeleton function ?
    (a) Through the interaction of bones and cartilage
    (b) They have an external exoskeleton
    (c) Hydrostatic pressure gives the coelom shape
    (d) Microtubules give the coelom shape

20. The basic microtubular structure of cilia and flagella is called :
    (a) radial spoke
    (b) axoneme
    (c) nexin
    (d) dyenein

Section—B 2 each

(Very Short Answer Type Questions)

Note : Attempt all questions in 1-2 sentences.

1. Name *two* pseudocoelomate phyla.

2. What do you understand by hydrostatic skeleton ?
3. What is cyclosis ?
4. What is the difference between book lung and gill ?
5. Name the excretory organ of phylum Arthropoda.
6. Write the difference between commissure and connective.
7. Write three main characteristic features of phylum Rotifera.
8. Write the names of larval forms found in phylum Arthropoda.

Section—C 3 each

(Short Answer Type Questions)

Note : Attempt all questions in about 75 words.

1. Write the difference between cilia and flagella.
2. Define the Shizocoelous coelom.
3. Explain the pattern of feeding in Amoeba.
4. Write the significance of tracheal system.
5. Explain the excretory system of Platyhelminthes.
6. Draw a well labelled diagram of nervous system of Prawn.
7. Describe the digestive system of phylum Ectoprocta.
8. Explain the Veliger larva.

Section—D 5 each

(Long Answer Type Questions)

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

UNIT—I

1. Describe the Protosomia and Deuterostomia.

Or

Explain the hydrostatic movement in Echinodermata.

UNIT—II

2. Describe the mechanism of filter feeding in Polychaeta.

Or

Explain the mechanism of respiration in phylum Mollusca.

UNIT—III

3. Describe the Osmoregulatory process of aquatic invertebrates.

Or

Describe the nervous system of coelenterata.

UNIT—IV

4. Give an account of Ctenophora.

Or

Describe the larval forms of phylum Annelida.