

B.Sc. ZOOLOGY
FIRST SEMESTER
BIOLOGY OF NON-CHORDATES
BSZ-101
[USE OMR FOR OBJECTIVE PART]

2023/01

SET
B

Duration: 3 hrs.

Full Marks: 70

Time: 30 mins.

Marks: 20

(Objective)

Choose the correct answer from the following:

1 × 20 = 20

1. Autotomy is found in:
a. Molluscs
b. Leech
c. Aurelia
d. Sea stars
2. Green gland is an excretory organ of:
a. Butterfly
b. Prawn
c. Spider
d. Cockroach
3. Respiratory tree is a respiratory organ of:
a. Sea Urchin
b. Sea Cucumber
c. Sea Lily
d. Feather Star
4. Larval forms of Echinodermata is/are:
a. Bipinnaria
b. Auricularia
c. Doliolaria
d. All of the above
5. How many *Paramecia* produce after the conjugation?
a. Two
b. Four
c. Eight
d. Sixteen
6. Which among these is not a colonial Poriferan?
a. *Leucosolenia*
b. *Scypha*
c. *Lucernaria*
d. *Grantia*
7. The order Coronatae belongs to the following class of Coelentrata:
a. Hydrozoa
b. Anthozoa
c. Scyphozoa
d. Octocorallia
8. Calcareans of Porifera are of..... origin.
a. Limy
b. Silica
c. Phosphoric
d. All of the above
9. How many pairs of longitudinal nerves arise from the cerebral ganglion in *F. hepatica*?
a. 1
b. 2
c. 3
d. 4
10. The brain of *P. malcolmsonii*, gives off a pair of stout nerves posteriorly called:
a. Antennular nerve
b. Optic nerve
c. Sub-oesophageal ganglia
d. Circum-oesophageal commissure

11. Contractile vacuole is absent in:
 - a. Ciliata
 - b. Sarcodina
 - c. Sporozoa
 - d. Mastigophora
12. Juvenile hormone is secreted by:
 - a. Brain
 - b. Corpora cardiaca
 - c. Corpora allata
 - d. Prothoracic gland
13. Which of the following organism shows radial symmetry?
 - a. Earthworm
 - b. Grasshopper
 - c. Amoeba
 - d. Starfish
14. The respiratory pigment of insect is:
 - a. Haemoglobin
 - b. Haemocyanin
 - c. Haemoerythrin
 - d. None of the above
15. Genetic information in *Paramecium* is contained in:
 - a. Micronucleus
 - b. Macronucleus
 - c. Both
 - d. Mitochondria
16. Volvox is a protozoan with..... number of flagella.
 - a. 1 - 2
 - b. 2 - 4
 - c. 4 - 6
 - d. 6 - 8
17. For a Coelenterate to have polymorphic characters, how many body forms are usually present?
 - a. 2
 - b. 4
 - c. 5
 - d. 6
18. Cerianthus belongs to the category of:
 - a. Zoanthidea
 - b. Actinaria
 - c. Madreporia
 - d. Ceriantharia
19. In Hydra, the processes of nerve cells form synaptic junctions called:
 - a. Neuro-muscular system
 - b. Synaptic nerve net
 - c. Unpolarized nerve plexus
 - d. Polarized nerve plexus
20. The nerves which establish connections between two similar ganglia are called:
 - a. Connectives
 - b. Commissures
 - c. Vessels
 - d. None of the above

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(Descriptive)

Time : 2 hr. 30 mins.

Marks : 50

[Answer question no.1 & any four (4) from the rest]

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| 1. Write down at least 10 general characters of Phylum Coelenterata with three examples. | 10 |
| 2. Explain the different forms of asexual and sexual reproduction in Protozoa. | 5+5=10 |
| 3. Explain the water vascular system of Starfish. What are the functions of water vascular system? | 8+2=10 |
| 4. Write short note: (<i>any two</i>)
a) Contractile vacuole
b) Nephridia
c) Flame cell
d) Green gland | 5+5=10 |
| 5. Describe the nervous system of Nereis with proper diagram. | 4+6=10 |
| 6. Define metamorphosis. What are the different types of metamorphosis that occur in insects? Explain about hormonal regulation in metamorphosis. | 2+3+5=10 |
| 7. Write in brief about the three classes of Phylum Porifera with examples in each category. | 10 |
| 8. Write down the classification of Phylum Protozoa up to order with one example in each. | 10 |

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