

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

**SET**  
**B**

Duration: 3 hrs.

Full Marks: 70

Time: 30 mins.

Marks: 20

**( Objective )**

**Choose the correct answer from the following:**

**1 × 20 = 20**

- Polyp stage is absent in which class of coelenterates?
  - Hydrozoa
  - Anthozoa
  - Both a and b
  - None of these
- The respiratory organ of Annelida is:
  - Skin
  - Gill
  - Lungs
  - None of these
- In *F. hepatica*, brain forms a collar or ring around pharynx called:
  - Connectives
  - Commissures
  - Cerebral ring
  - Ventral ganglion
- In *P. malcolmsonii*, brain is a .....structure.
  - Single lobed
  - Bilobed
  - Multilobed
  - Trilobed
- The genital periaemal sinuses in *Asterias* is a part of:
  - Haemal system
  - Radial sinuses
  - Periaemal system
  - None of the above
- Contractile vacuole is noticed among *Amoeba* in:
  - Sea water
  - Fresh water
  - Both a and b
  - None of the above
- Which of the following phylum is exclusively marine?
  - Echinodermata
  - Annelida
  - Mollusca
  - Rotifera
- Insects have:
  - 2 pairs of legs
  - 3 pairs of legs
  - 4 pairs of legs
  - 5 pairs of legs
- Favosites belongs to the category of:
  - Zoanthidea
  - Tabulata
  - Madreporia
  - Ceriantharia
- Aphrodite is a free swimming:
  - Protozoan
  - Cnidarina
  - Annelid
  - Helminths

11. Hydra and Obelia are members of class:
- Anthozoa
  - Hydrozoa
  - Schyphozoa
  - All of these
12. In Metridium:
- Polyp stage is absent
  - Medusa stage is absent
  - Both Polyp and Medusa present
  - None of these
13. The nervous system in Hydra is present in the form of:
- Nerve net
  - Axon
  - Dendrite
  - None of the above
14. Where are the nuchal organs present in Nereis?
- Posterior dorsal surface of prostomium above eyes
  - Posterior dorsal surface of prostomium behind eyes
  - Anterior dorsal surface of prostomium above eyes
  - Anterior dorsal surface of prostomium behind eyes
15. A pair of roughly triangular ganglia situated anteriorly on the dorso-lateral sides of the buccal mass in Pila is called:
- Buccal ganglia
  - Pleuro-pedal ganglia
  - Visceral ganglia
  - Cerebral ganglia
16. Leishmania falls in the category of:
- Protozoa
  - Cnidaria
  - Porifera
  - Platyhelminthes
17. Which type of symmetry can be found in complex animals that have well-formed head?
- Spherical symmetry
  - Asymmetry
  - Radial symmetry
  - Bilateral symmetry
18. Which of the following insect is holometabolous?
- Grasshopper
  - Butterfly
  - Dragonfly
  - Cockroach
19. Euglena is a protozoan with..... number of flagella.
- 1 or 2
  - 2 or 4
  - 4 or 6
  - 6 or 8
20. Which among these is a Hydrozoan?
- Obelia*
  - Periphylla*
  - Rhizostoma*
  - Tubipora*

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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. Describe the types of body symmetry in animals with suitable example and diagram.  | 10       |
| 2. Define metamorphosis. What are the different types of metamorphosis occur in insects. Explain about hormonal regulation in metamorphosis.        | 2+3+5=10 |
| 3. What is parasitic respiration? In which phylum parasitic respiration is seen? Describe the process of parasitic respiration with proper example. | 2+1+7=10 |
| 4. Describe the general characters of Coelenterates. Classify Coelenterates up to class with examples and characters.                               | 5+5=10   |
| 5. Explain with the proper illustration about the nervous system of <i>Pila</i> .   | 4+6=10   |
| 6. Write down the classification of Phylum Annelida up to order with one example in each.   | 10       |
| 7. Write in brief about the classification of Phylum Arthropoda.  | 10       |
| 8. Write down at least 10 general characters of Phylum Protozoa with three examples.  | 10       |

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