

Roll No. :

Total No. of Questions : 11]

[Total No. of Printed Pages : 3

BPMS–505

M.Sc. (Previous) Examination, 2023

ZOOLOGY

Paper - I

**(Taxonomy, Phylogeny, Structure and
Function in Invertebrates)**

Time : 3 Hours]

[Maximum Marks : 75

Section–A

(Marks : 2 × 10 = 20)

Note :- Answer all *ten* questions (Answer limit **50** words). Each question carries **2** marks.

Section–B

(Marks : 5 × 5 = 25)

Note :- Answer all *five* questions. Each question has internal choice (Answer limit **200** words). Each question carries **5** marks.

Section–C

(Marks : 10 × 3 = 30)

Note :- Answer any *three* questions out of five (Answer limit **500** words). Each question carries **10** marks.

Section–A

1. (i) Define Species.
- (ii) Explain Trinomial Nomenclature with example.

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- (iii) Explain Phylogenetic significance of planula larva in brief.
- (iv) What do you understand by Radiata ?
- (v) What is Stone Canal ?
- (vi) What do you understand by Arthropodization ?
- (vii) Name any *four* respiratory pigments found in invertebrates.
- (viii) Name any *four* excretory organs found in invertebrates.
- (ix) Chemoreceptor in invertebrates.
- (x) Name any *four* larval forms found in platyhelminthes.

Section-B

2. Write a short note on population systematics.

Or

Write briefly about the preparation and uses of taxonomic keys.

3. Write a short note on the origin of multicellularity.

Or

Describe the affinities of invertebrate deuterostome phyla.

4. Explain the flight mechanism in insects.

Or

Describe the physiological mechanism of ciliary and flagellar movement in invertebrates.

5. Describe the larval forms met within different invertebrate groups and their significance.

Or

Explain the photoreception by compound eye in invertebrates.

6. Describe the life cycle of *Trichinella spiralis* and its economic importance.

Or

Describe the different types of invertebrate parasites and their host.

Section–C

7. Describe the principles and theories of biological classification.
8. Describe the phylogenetic relationship between the coelomate phyla.
9. Describe the endocrine system of insects and its role in the developmental events.
10. Describe the life cycle of *Trypanosoma gambiens* with suitable diagrams.
11. Explain the osmoregulation and ionic regulation mechanism in freshwater, marine and terrestrial invertebrate forms.