

Roll No. : .....

Total No. of Questions : 16 ]

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# **ZOOLSEM-109**

**M.Sc. (Ist Semester) Examination Dec., 2022**

## **ZOOLOGY**

Paper - I

**(Taxonomy and Invertebrate Phylogeny)**

*Time : 3 Hours ]*

*[ Maximum Marks : 40*

The question paper contains three Sections.

### **Section-A**

**(Marks : 1 × 10 = 10)**

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

### **Section-B**

**(Marks : 2 × 6 = 12)**

*Note :-* Answer any *six* questions by selecting at least *two* questions from each Unit  
(Answer limit **200** words). Each question carries **2** marks.

### **Section-C**

**(Marks : 6 × 3 = 18)**

*Note :-* Answer any *three* questions by selecting *one* question from each Unit  
(Answer limit **500** words). Each question carries **6** marks.

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**ZOOLSEM-109** P.T.O.

### Section–A

1. (i) Define Species.
- (ii) Difference between Protostomes and Deuterostomes.
- (iii) What is the difference between Acoelomate, Pseudocoelomate and Coelomate ?
- (iv) Define Metamerism.
- (v) Name the *two* examples of Phylum Ctenophora.
- (vi) Name the *two* endocrine glands found in Insects.
- (vii) Name *four* respiratory pigments founds in Invertebrates.
- (viii) Define term filter feeding with one suitable example.
- (ix) What do you mean by term Lophophora ?
- (x) What are Rotifers ?

### Section–B

#### Unit–I

2. Classify major coelomate groups of Invertebrates. Write briefly.
3. Write a note on theories of Biological Classification.
4. Write a note on Preparation and use of Taxonomic Keys.

#### Unit–II

5. How multicellular animals originated ? Explain the fact.
6. Enumerate the importance of the Planula Larva.
7. Explain Phylogenetic significance of Rhynchocoela.

### **Unit-III**

8. Write a short note on affinities and evolutionary significant of Priapulida and Sipuncula.
9. Explain affinities on Chaetognatha and Hemichordata.
10. Write a note on interrelationship of Pseudocoelomate groups.

### **Section-C**

#### **Unit-I**

11. Describe the rules of Nomenclature and add a note on Science of Taxonomy.
12. What is Cytotaxonomy ? Discuss importance of Cytology and genetics in Taxonomy.

#### **Unit-II**

13. Explain how Bilateria originated from Radiata.
14. Describe Phylogenetic interrelationship between Invertebrate Phyla.

#### **Unit-III**

15. Describe the phylogenetic relationship between Coelomate Phyla.
16. Describe Affinities and evolutionary significance of Lophophorate coelomate Phyla (Brachiopoda, Phoronida, Ectoprocta)