

5662
M.Sc. (Previous) Examination, 2024
ZOOLOGY
Second Paper
(Structure & Function of Invertebrates)

2736630

Time Allowed: Three Hours

Maximum Marks: 100

Note: In M.Sc. Zoology Previous Examination the theory papers will have the following pattern.

Question papers will have 5(five) questions in all having equal marks.

- (i) *Question number 1 will be compulsory and will have 20 very short answer question of 1 mark each.*
- (ii) *Question numbers 2 and 3 will consist of only short answer type questions with 4 subdivisions of 5 marks each. There will be internal choice in these questions.*
- (iii) *Question numbers 4 and 5 will be long answer type questions with internal choice.*

No supplementary answer book will be given to any candidate. Hence the candidates should write the answer precisely in the main answer book only.

All the parts of one question should be answered at one place in the answer book. One complete question should not be answered at different places in the answer book.

1. Answer in short -

- (a) ✓ What do you mean by Lower Invertebrates?
- (b) What are the four types of Pseudopodia?
- (c) Define Mesenchymal coelomata.
- (d) What types of mouth present in Nereis?
- (e) What do you mean by Hemipneustic tracheal system?
- (f) Write about pallial gills.
- (g) ✓ Write about Tiedemann's bodies.
- (h) What adult form develops from a Bipinnaria larva?
- (i) What do you mean by holometabolous development?
- (j) What are minor phyla?
- (k) Give any two examples in which Haemocyanin found.
- (l) What is Blood Gills?
- (m) ✓ What is Aristotle's lantern?
- (n) ✓ Define Tiedemann's bodies.

- (o) What is hirudin?
- (p) What are ribbon worms?
- (q) Write the function of Statocyst of Prawn.
- (r) What is the function of Mandible?
- (s) Define Ambulacral system.
- (t) What is the function of operculum in Pila?

2. Write short notes on the following -

- (a) Acoelomates
- (b) Flagellar movement in protozoa
- (c) Trachea
- (d) Filter feeding in polychaeta

OR

- (a) Deuterostomia
- (b) Haemocyanin
- (c) Hydrostatic movement in Annelida
- (d) Filter feeding in Echinodermata

3. Write short notes on the following -

- (a) Coelomoducts
- (b) Nervous system of Annelida
- (c) Mesozoa
- (d) Trochophore larva

OR

- (a) Nephridia
- (b) Ctenophora
- (c) Nervous system of Insecta
- (d) Veliger larva

4. Explain the mechanism of respiration in insects.

OR

Explain the patterns of feeding and digestion in lower Metazoa.

5. How do Malpighian tubules contribute to the excretory system of insects and what substances do they remove from the haemolymph?

OR

Explain the strategies and evolutionary significance of larval forms.