

**Post Graduate Teaching Department of Zoology**  
**An Autonomous Department of**  
**Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur**  
**Programme: M. Sc. Zoology Semester -I (CBCS)**  
**Theory Examination Winter-2022**  
**Code and Name of Paper: PGZO1T1 Paper-1T1-Structure and function of**  
**Invertebrates**

**Time: 3hrs**

**Maximum Marks: 60**

**Note**

- 1. All the questions are compulsory.**
- 2. All questions carry equal marks.**
- 3. Draw well labelled diagrams and charts wherever necessary.**

**Q.1** Describe the basic concept of biosystematics. **12**  
OR

**Write notes on: -**

- (a) Ultrastructure of cilia.
- (b) Syconoid type of canal system in sponges.

**Q.2** Describe in detail the excretory system and the process of excretion in Annelids with specific examples. **12**  
OR

**Write notes on: -**

- (a) Classification of coelomates based on coelom formation.
- (b) Structural comparison of Coelenterata and Ctenophora.

**Q.3** Explain the filter feeding mechanism in invertebrates. **12**  
OR

**Write notes on: -**

- (a) Affinities and taxonomic position of Peripatus.
- (b) Organs and mechanism of respiration in Arthropoda.

**Q.4** Explain the structure and function of water vascular system in Echinodermata. **12**  
OR

**Write notes on: -**

- (a) Systematic position and general organization of Bryozoa.
- (b) Mechanism of locomotion in Invertebrates based on hydrostatic skeleton.

**Q. 5 Write in brief on the followings: -** **12**

- (a) Molecular taxonomy.
- (b) Metamerism.
- (c) Affinities of Neopilina.
- (d) Bipinnaria larva.