

**BINDURA UNIVERSITY OF SCIENCE EDUCATION  
BIOLOGICAL SCIENCES DEPARTMENT**

**BScBZH  
DIVERSITY OF LIFE II (BZH102)**

**FINAL EXAMINATION  
2 HOURS (100 MARKS)**

21- JUN 2023

**INSTRUCTIONS TO CANDIDATES**

Answer FOUR questions. You MUST answer QUESTION 1 (Section A) and any THREE questions from section B. Each question carries 25 MARKS. Where a question contains sub-divisions, the mark value of each sub-division is given in brackets. Illustrate your answer where appropriate with large clearly labelled diagrams. You should not spend more than thirty minutes on each question.

**Section A (Compulsory)**

1. (a) Describe the structure and functions of nematocysts. [10 marks]  
(b) With reference to *Obelia* species, describe the life cycles in the class hydrozoa. [15 marks]

**Section B**

2. Using annotated diagrams, compare the anatomy of a generalized Annelid with that of a generalized Platyhelminthes
3. Describe the general structure and functions of NAMED cell types found in phylum Porifera.
4. Write brief notes on any FIVE of the following:
  - a) Choanocytes [5 marks]
  - b) Radial symmetry. [5 marks]
  - c) Protostome. [5 marks]
  - d) Adaptive radiation. [5 marks]
  - e) Triploblastic body plan [5 marks]
  - f) Functions of the coelom [5 marks]
5. (a) Describe the structural organisation of organisms belonging to phylum Cnidaria. [10 marks]  
(b) Describe reproduction in phylum Porifera. [15 marks]
6. Outline the diversity in the feeding habits and locomotion in the phylum Arthropoda.

**END OF EXAMINATION QUESTION PAPER**