

BINDURA UNIVERSITY OF SCIENCE EDUCATION  
BIOLOGICAL SCIENCES DEPARTMENT  
SYSTEMATICS AND TAXONOMY (BZH 217)

**EXAMINATION**

**2 HOURS (100 MARKS)**

*OCT 2024*

**INSTRUCTIONS**

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 subdivisions, the mark value of each subdivision is given in brackets. Illustrate your answers 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 process of collection and preparation of herbarium specimens in the field. (15 marks)  
(b) Outline the information that should be recorded when collecting these specimens. (10 marks).

**SECTION B**

2. (a) Explain the different components of taxonomy. (20 marks)  
(b) State five features of a scientific name of an organism. (5 marks)
3. Discuss the importance of Museums and Herbaria.
4. (a) Explain artificial, natural, and phylogenetic systems of biological classification. (15 marks)  
(b) Why is Carl Linneaus's classification considered to be artificial? (10 marks)
5. Explain each of the following terms and their relevance to systematics and taxonomy:
  - i. Monophyletic (5 marks)
  - ii. Polyphyletic (5 marks)
  - iii. Paraphyletic (5 marks)
  - iv. Homology (5 marks)
  - v. Homoplasy (5 marks)
6. Discuss the different sources of taxonomic information.

**END OF EXAMINATION QUESTION PAPER**