



MACHAKOS UNIVERSITY

University Examinations 2022/2023 academic Year

SCHOOL OF PURE AND APPLIED SCIENCES

DEPARTMENT OF BIOLOGICAL SCIENCES

FIRST YEAR FIRST SEMESTER EXAMINATION FOR

BACHELOR OF EDUCATION (SPECIAL NEEDS)

BACHELOR OF SCIENCE (AGRICULTURAL EDUCATION AND EXTENSION)

SZL 105/6: LABORATORY METHODS AND TECHNIQUES IN ZOOLOGY

DATE:

TIME:

INSTRUCTIONS

1. Answer question 1 (compulsory) and **any two** questions in Section B.
2. Use clean well labelled diagrams wherever appropriate.

SECTION A (COMPUOLSORY)

QUESTION ONE (30 MARKS)

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| a) | Differentiate between dry and wet preservation of specimens | (3 marks) |
| b) | Outline the importance of labeling laboratory samples. | (3 marks) |
| c) | Outline the categories of laboratory hazards | (3 marks) |
| d) | Outline the procedure for disposal of biological specimens | (3 marks) |
| e) | Discuss the laboratory reagents used in fixation and preservation of specimen. | (3 marks) |
| f) | Explain the purpose of proper record keeping in the laboratory | (3 marks) |
| g) | Discuss the contents of a First Aid Box in the laboratory | (3 marks) |
| h) | Illustrate a comparative chart compiled for procurement of apparatus | (3 marks) |
| i) | Highlight three aspects of laboratory management | (3 marks) |
| j) | Outline the precautionary measures to ensure safety in the laboratory | (3 marks) |

SECTION B: ANSWER ANY TWO QUESTIONS

QUESTION TWO (20 MARKS)

Discuss the keeping and maintenance of different types of laboratory inventory.

QUESTION THREE (20 MARKS)

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| a) | Discuss the acquisition and management of laboratory chemicals. | (14 marks) |
| b) | Discuss Fixation and Embedding of tissues | (6 marks) |

QUESTION FOUR (20 MARKS)

Discuss verification of stock items in the laboratory

QUESTION FIVE (20 MARKS)

Discuss factors to consider when designing a biological laboratory