



MACHAKOS UNIVERSITY

University Examinations for 2017/2018 Academic Year

SCHOOL OF PURE AND APPLIED SCIENCES DEPARTMENT OF BIOLOGICAL SCIENCES Second Year Second Semester Examination for Degree in Bachelor of Education in Science

**CODE: SZL 105 UNIT NAME: LABORATORY METHODS AND
TECHNIQUES IN ZOOLOGY**

Date: SCHOOL BASED

Time -----11.00 – 01.00

Instructions

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

SECTION A

Question 1. – Compulsory (30 marks)

- i. Describe the difference between wet and dry labs (3 marks)
- ii. Explain the ways of promoting aspects of sustainable laboratory design (3 marks)
- iii. Outline the categories of laboratory hazards (3 marks)
- iv. Outline the procedure for disposal of biological specimens (3 marks)
- v. Discuss the laboratory reagents used in fixation and preservation of specimen.(3 marks)
- vi. Differentiate between two types of servicing of laboratory apparatus (3 marks)
- vii. Discuss the contents of a First Aid Box in the laboratory (3 marks)
- viii. Illustrate a comparative chart compiled for procurement of apparatus. (3 marks)
- ix. Explain the options for dealing with “left over” biological specimens (3 marks)
- x. Outline the precautionary measures to ensure safety in the laboratory (3 marks)

SECTION B

- 2 Discuss the factors considered when designing a biological laboratory (20 marks)
3. Discuss the safe use and handling of toxic and corrosive chemicals (20 marks)
4. Describe the prohibitive and warning signs in the laboratory (20 marks)
5. Explain the procedure for verification of stock items in the laboratory (20 marks)