



KIBABII UNIVERSITY
UNIVERSITY EXAMINATIONS
2015/2016 ACADEMIC YEAR
SECOND YEAR SECOND SEMESTER
MAIN EXAMINATION

**FOR THE DEGREE OF BACHELOR OF EDUCATION (SCIENCE) (B. ED
SCIENCE) AND BACHELOR OF SCIENCE (B. SC BIOLOGY)**

COURSE CODE: SZL 223
COURSE TITLE: ZOOLOGICAL TECHNIQUES

DATE: 4th May 2016

TIME: 9:00 – 11:00 a.m.

INSTRUCTIONS TO CANDIDATES

Answer Question one (1) and any other two (2) Questions. Question one is compulsory and carries 30 marks, the other Questions carry 20 marks each.

TIME: 2 Hours

This paper consists of 2 printed pages. Please Turn Over 
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Question ONE

- a) Briefly describe some of the essential requirements of a zoological laboratory (3 marks)
- b) Briefly explain the following tissue preparations
 - i. Teased preparations
 - ii. Touch preparations
 - iii. Squash preparations (3 marks)
- c) i) Define the term clearing as used in a histological laboratory (1 marks)
ii) State any two types of clearing agents commonly used in a zoological laboratory (2 marks)
- d) Using diagrams outline four different types of microtome knives (3 marks)
- e) Justify the importance of biological stains during zoological procedures (3 marks)
- f) Briefly explain how a microtome knife can be sharpened (3 marks)
- g) List any 4 types of moulds used during tissue embedding (3 marks)
- h) Define the following terms as used in a zoological laboratory:
 - i. Histology
 - ii. Microphotography
 - iii. Mounting (3 marks)
- i) Briefly justify the need of taxidermy or stuffing of animals (3 marks)
- j) Briefly explain any 3 reasons for specimen preservation (3 marks)

2. Discuss various types of microscopes that can be found in a zoological laboratory and their uses (20 marks)

3. Fixation is a necessary process in tissue examination. Discuss this statement under the following themes: a) qualities of a good fixative; b) importance of fixation c) types of fixatives (20 marks)

4. Filters are essential components for tissues examination using various histological process. Discuss the above statement under the following subtitles:

- i. Uses of filters (10 marks)
- ii. Types of filters (10 marks)

5. Discuss the techniques of preserving specimens in a zoological laboratory (20 marks)