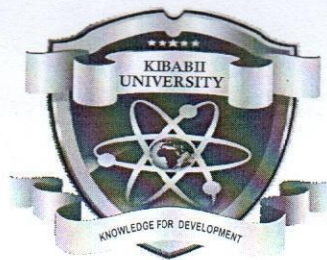


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(Knowledge for Development)

KIBABII UNIVERSITY

UNIVERSITY EXAMINATIONS 2022/2023 ACADEMIC YEAR

FIRST YEAR FIRST SEMESTER MAIN EXAMINATION

**FOR THE DEGREE OF BACHELOR OF EDUCATION IN
AGRICULTURAL EDUCATION AND EXTENSION AND BACHELOR
OF SCIENCE IN BIOLOGY**

COURSE CODE: SBL 100
COURSE TITLE: LABORATORY PRACTICE, BIOSAFETY AND
BIOETHICS


DATE: 13TH DECEMBER 2022

TIME: 2.00 – 5.00 PM

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: 3 Hours

This paper consists of 2 printed pages. Please Turn Over 

KIBU observes ZERO tolerance to examination cheating

- Q1(i) Distinguish between Bright Field Microscopy (BFM) and Electron Microscopy (EM). (5 marks)
- (ii) Outline the essential requirements of a science laboratory. (5 marks)
- (iii) Classify science laboratories based on Biosafety levels (5 marks)
- (iv) Distinguish between Good Laboratory Practice (GLP) and Standard Operating Procedure (SOP) (5 marks)
- (v) Identify and explain the organizations that perform External Quality Assessment (EQA) and accreditation of laboratories both nationally and international in Kenya. (5 marks)
- (vi) As a Biosafety Officer explain the bioethical issues in the conduct of Biological and Agricultural experiments and research (5 marks)
- Q2 As a Quality Officer, you have been requested to prepare a standard operating procedure for disposal of laboratory chemicals. Explain the process and the content of the standard. (20 marks)
- Q3 Discuss the importance of Material Safety Data Sheets (MSDS) in the management and use of laboratory chemicals. (20 marks)
- Q4 Discuss the role of laboratories in teaching and research in agricultural and biological sciences (20 marks)
- Q5 Enumerate the quality management system model essentials in diagnostic, teaching and research laboratories. (20 marks)