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(Knowledge for Development)

KIBABII UNIVERSITY

UNIVERSITY EXAMINATIONS 2017/2018 ACADEMIC YEAR

SECOND YEAR SECOND SEMESTER MAIN EXAMINATION

FOR THE DEGREE OF BACHELOR OF SCIENCE IN BIOLOGY

COURSE CODE: SBL 221

**COURSE TITLE: BASICS OF LABORATORY PRACTICE AND
SAFETY**

DATE: MONDAY 30TH July, 2018.

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



KIBU observes ZERO tolerance to examination cheating

- Q1 (i) Define the following terms
a) laboratory
b) Risk assessment
c) Clinical pathology laboratory
d) Building code
e) Quality manual (5 marks)
- (ii) Outline factors addressed by Quality Management System (5 marks)
- (iii) Explain the basic requirements of a Biological Sciences laboratory. (5 marks)
- (iv) Compare and contrast Biosafety Level 3 (BSL3) and Biosafety Level 4 (BSL4) laboratories. (5 marks)
- (v) Distinguish between
a. Cabinet and suit laboratory
b. Open and closed laboratories
c. Quality control and Quality assurance
d. Physical and Ergonomic hazards
e. Class D and K fires (5 marks)
- (vi) (a) List common laboratory hazards in the laboratory (2 mks)
(b) Explain how such hazards can be controlled (3 mks)

Q2 As the Virologist in charge, you receive blood samples from a patient allegedly infected with *Hepatitis A*. Describe the biosafety level containment laboratory you will use to handle the samples. (20 marks)

Q3 Discuss Fire safety and its elements (20 marks)

Q4 Discuss International Institutions and Organisations involved in External Quality Assessment and accreditation of laboratories. (20 marks)

Q5 Describe Material Safety Data Sheets (20 marks)