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# KIBABII UNIVERSITY

**UNIVERSITY EXAMINATIONS  
2019/2020 ACADEMIC YEAR**

**FIRST YEAR FIRST SEMESTER  
SUPPLEMENTARY/SPECIAL EXAMINATIONS  
FOR THE DEGREE OF B.SC AND B.ED (SCIENCE)**

**COURSE CODE:** SCH 113

**COURSE TITLE:** SAFETY AND LABORATORY MANAGEMENT

**DURATION:** 2 HOURS

**DATE:** 2/02/21 **TIME:** 8:00 - 10:00 AM

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### INSTRUCTIONS TO CANDIDATES

- Answer **QUESTION ONE** (Compulsory) and any other two (2) Questions.
- Indicate **answered questions** on the front cover.
- Start every question on a new page and make sure question's number is written on each page.

This paper consists of 2 printed pages. Please Turn Over



KIBU observes ZERO tolerance to examination cheating

**Question 1(30 marks)**

- (a) In many laboratories, a simple computerized system can be set up for management of inventory. State the advantages of such a system **(5marks)**
- (b) Discuss how inventory monitoring can be done effectively in the laboratory. **(4marks)**
- (c) Storage of reagents and supplies is a very important part of inventory control. **(5marks)**
- (d) Outline the essential objectives of a safety programme. **(3marks)**
- (e) For effective management of a laboratory, there is need to have a safety officer. Discuss the duties of a safety officer. **(5marks)**
- (f) State the meaning of the following terms in relation to fire hazards:
- i) Flash point **(2marks)**
  - ii) Ignition temperature **(2marks)**
  - iii) Fire point **(2marks)**
  - iv) Limits of flammability **(2marks)**

**Question 2 (20 marks)**

- (a) All laboratory personnel should be trained on what to do in an emergency. State six topics necessary for emergency training. **(6marks)**
- (b) One of the most important elements of emergency preparedness in the laboratory is the communication. Describe the different ways of communication. **(4marks)**
- (c) In order to reduce the decision making burden during an emergency, there is need to have a sample laboratory priority list. Give an example of a laboratory priority list. **(4marks)**
- (d) Discuss the steps involved in developing an emergency preparedness plan. **(6marks)**

**Question 3 (20 marks)**

- a) In the event that an emergency causes laboratory personnel to stay at work, there is need for the personnel to keep a survival kit. What are the items that should be included in a survival kit? **(3marks)**
- b) State the responsibilities of a laboratory manager/supervisor. **(6marks)**
- c) What are the properties of hazardous waste? **(4marks)**
- d) Explain what laboratory security planning entails. **(7marks)**

**Question 4 (20 marks)**

- a) Identify three special systems necessary in a laboratory **(3marks)**
- b) State the basic aims of a fire prevention strategy **(4marks)**
- c) Discuss how chemicals cause injuries and damage. **(4marks)**
- d) Outline the priorities in first aid treatment. **(9marks)**