
CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

SECOND YEAR EXAMINATION FOR THE AWARD OF DEGREE
OF BACHELOR OF SCIENCE IN BIOCHEMISTRY

BIOC 240: BIOCHEMICAL INSTRUMENTATION

STREAMS: B.Sc (BIOCHEMISTRY) Y2S1

TIME: 2 HOURS

DAY/DATE: WEDNESDAY 5/12/2018

8.30 A.M - 10.30 A.M.

INSTRUCTIONS:

- Answer Question ONE and any TWO Questions

QUESTION ONE: [30 MARKS]

- (a) Describe biological instruments as a major cause of dangers and accidents in laboratories. [6 Marks]
- (b) Describe in brief four types of firefighting equipment. [4 Marks]
- (c) Discuss setbacks while using the ultraviolet visible spectrophotometry (UV-VIS). [6 Marks]
- (d) Outline four reasons why laboratory equipment often requires continuous maintenance and calibration. [4 Marks]
- (e) Briefly give existing differences between optical sensors and ultrasonic sensors. [6 Marks]
- (f) Briefly explain the importance of using a spectrophotometry during sample analysis. [4 Marks]

QUESTION TWO: [20 MARKS]

- (a) Describe five types of biological equipment often used in scientific research. [10 Marks]
- (b) Discuss applications of electrochemistry in daily life. [10 Marks]

BIOC 240

QUESTION THREE: [20 MARKS]

- (a) Describe telemedicine as a major achievement in administration and delivery of health services. [10 Marks]
- (b) Discuss advantages of using ultrasonography as a diagnostic tool. [10 Marks]

QUESTION FOUR

- (a) Describe the biomedical circle and derive its contribution to science. [10 Marks]
 - (b) With the aid of a sketch, discuss the parts, installation, use and maintenance of an optical microscope. [10 Marks]
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