

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATION

RESIT /SPECIAL EXAMINATION

**EXAMINATION FOR THE AWARD OF DEGREE OF BACHELOR OF SCIENCE IN
BIOCHEMISTRY**

BIOC 342: INTEGRATED LAB TECHNIQUES

STREAMS:

TIME: 2 HOURS

DAY/DATE: THURSDAY 04/11/2021

8.30 A.M – 10.30 A.M

INSTRUCTIONS:

- i. Answer Question One and any other Two Questions**
- ii. Do not write on the question paper**

Question One (30 marks)

- a. Differentiate the two types of tissue fixation procedures. (5marks)
- b. Describe the Fuelgen reaction as applied in staining (5 marks)
- c. Give the working principle of spectrophotometry and outline its advantages. (5 marks)
- d. Explain the two types of density gradient centrifugation. (5 marks)
- e. Describe Bradford assay as a standard protein assay procedure. (10marks)

Question Two (20 marks)

- a. Describe the principle behind isoelectric focusing (10 marks)
- b. Describe how lactate dehydrogenase activity can be detected by gel electrophoresis. (10 marks)

Question Three (20 marks)

- a. Describe how polyacrylamide gels are prepared in order to achieve molecule separation. (10 marks)

- b. Explain how differential centrifugation can be achieved. (10 marks)

Question Four (20 marks)

- a. Describe the Edman degradation chemistry of protein mapping (10 marks)
b. Describe how proteases can be used to achieve peptide mapping (10 marks)
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