

CHUKA



UNIVERSITY

**UNIVERSITY EXAMINATIONS
RESIT/SPECIAL EXAMINATIONS**

**EXAMINATION FOR THE AWARD OF DEGREE OF BACHELOR OF SCIENCE IN
AGRICULTURAL EDUCATION AND DEVELOPMENT, FOST , AGRICULTURE AND
HORTICULTURE,ANIMAL SCIENCE AND NATURAL RESOURCES**

BIOC 200: INTRODUCTORY BIOCHEMISTRY

STREAMS:Y2S2

TIME: 2 HOURS

DAY/DATE: THURSDAY 26/07/2018

11.30 A.M – 1.30 P.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 between phospholipids and sphingolipids (5marks)
- b. What is the role of urea cycle? (5 marks)
- c. Draw the structural illustrations of the bases Thymine and Guanine (5marks).
- d. Give the structural illustration of proline (5marks).
- e. Explain the concept of some sugars being ‘reducing sugars’ (5marks).
- f. What is the importance of glycolysis? (5marks)

Question 2 (20 marks)

- a. Derive Michaelis-Menten equations and explain its relevance in enzyme kinetics?

(14marks)

- b. List the levels of proteins classification to describe their varied structures (6marks)

Question 3 (20mks)

- a. Discuss in details, the models of enzyme action (10marks)
- b. Describe the electron transport chain pathway in energy biosynthesis (10marks)

Question 4 (20 marks)

- a. List the factors that affect the rates of an enzyme catalyzed reaction (8marks)
- b. Describe the process of glycolysis in energy production by the living cells (12marks)
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