

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

EXAMINATION FOR THE AWARD OF DEGREE OF BACHELOR OF SCIENCE IN BIOC 100: INTRODUCTION TO BIOCHEMISTRY AND BIODIVERSITY

STREAMS: Y1S1 BSC BIOCHEMISTRY

TIME: 2 HOURS

DAY/DATE: MONDAY 11/12/2017

11.30 A.M – 1.30 P.M

INSTRUCTIONS:

Instructions:

- Answer question one and any other two questions
- Do not write on the question paper

Question One (30 marks)

- a. State two characteristics of carbon that makes it to be a universal component of biomolecules (2 marks)
- b. Outline the four major macromolecules and their respective constituents (4 marks)
- c. State and briefly explain the three basic body planes of invertebrates. (3 marks)
- d. Apart from anthropogenous causes of species extinction, state other four proximate causes of extinction. (4 marks)
- e. What are the three main features of chordates? (3 marks)
- f. Briefly describe the main plant organelles of metabolisms. (4 marks)
- g. Briefly outline the process of bioremediation in plants. (4 marks)
- h. Explain how *Partola turgida* snail species became extinct. (4 marks)
- i. State four weak chemical forces or non-covalent bonds that maintain biological structure of biomolecules. (2 marks)

Question Two (20 marks)

- a. Discuss evolutionary processes that influence genetic diversity. (10 marks)
- b. Distinguish between living organisms and inanimate objects. (10 marks)

Question Three (20 marks)

- a. Discuss the role of various groups of hormones in plants. (10 marks)
- b. Describe amino acid biosynthesis in plants. (10 marks)

Question Four (20 marks)

- a. Discuss how birds are adapted for flight. (10 marks)
 - b. Outline the characteristics of the various types of flatworms. (10 marks)
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