

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

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

BIOC 100: INTRODUCTION TO BIOCHEMISTRY AND BIODIVERSITY

STREAMS: BSC (BIOC)

TIME: 2 HOURS

DAY/DATE: THURSDAY 17/12/2020

11.30 AM – 1.30 PM

INSTRUCTIONS:

- Answer question ONE and any other TWO questions
- Do not write on the question paper

QUESTION ONE

- a) State any five applications of Biochemistry. (5 marks)
- b) Give the different types of chemical reactions encountered in a living cell. (5 marks)
- c) (i) Distinguish between extirpation and extinction. (4 marks)
- (ii) State the current single greatest threat to biodiversity. (1 mark)
- d) (i) State the lineage to which the flatworms belong. (1 mark)
- (ii) Give any 4 features of flatworms. (4 marks)
- e) State functions of proteins in living organisms. (5 marks)
- f) (i). Explain the importance of using scientific names while naming living things. (3 marks)
- (ii). State the type of bond which link monosaccharides to form polysaccharides. (1 mark)
- (iii) State the molecule which is released during the formation of the bond in f(ii). (1 mark)

QUESTION TWO

- a) Explain the three levels of biological diversity. (6 marks)
- b) Describe the characteristic features of living organisms. (10 marks)
- c) Using examples, describe the 'elaborate disguises' used by insects to evade their predators. (4 marks)

QUESTION THREE

- a) Describe the biological functions of carbohydrates. (7 marks)
- b) Briefly describe the evolutionary history of the animal kingdom. (10 marks)
- c) Give three components of a nucleotide. (3 marks)

QUESTION FOUR

- a) Explain the major causes of loss of biodiversity. (10 marks)
 - b) Discuss the different adaptations of land plants. (10 marks)
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