THE CATHOLIC UNIVERSITY OF EASTERN AFRICA

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MAIN EXAMINATION

AUGUST - DECEMBER 2015 TRIMESTER

FACULTY OF SCIENCE

DEPARTMENT OF BIOLOGY

REGULAR PROGRAMME

BIO 102: INTRODUCTION TO ECOLOGY AND BIOANALYSIS

Date: DECEMBER 2015	**Duration: 2 Hours**
INSTRUCTIONS: Answer Question ONE and ANY other THREE Questions	

Q1. a) Define the following terms
- i Ecosystem
- ii Community
- iii Succession. **(3 marks)**

b) Outline the scope of radiation ecology and palaeoecology. **(2 marks)**

c) Illustrate nutrient cycling in a named ecosystem. **(3 marks)**

d) Differentiate between the following
- i Autotrophs and heterotrophs
- ii Commensalism and neutralism. **(4 marks)**

e) Explain the following terms
- i Antagonistic relationships
- ii Ecological indicators. **(4 marks)**

f) State the advantages of the pyramid of productivity. **(3 marks)**

g) Briefly explain the concept at trophic efficiency. **(4 marks)**

h) Outline THREE vertical subdivisions of a forest community. **(3 marks)**

i) Explain TWO categories of competition according to schooner (1983). **(4 marks)**

Q2. Using relevant examples explain the role of light and temperature in ecosystem **(20 marks)**

Q3. Describe the methods you can use to determine primary production in lake Victoria. **(20 marks)**

Q4. Explain the characteristics of a biotic community. **(20 marks)**

Q5. Outline the classification of ecosystem functions, goods and services according to de Groot *et al* (2002) **(20 marks)**

END