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 203: PRINCIPLES OF ECOLOGY

Date: DECEMBER 2015	**Duration: 3 Hours**
INSTRUCTIONS: Answer Question ONE and ANY other THREE Questions	

Q1. a) Outline THREE methods used in estimation of number of animals in a population. **(6 marks)**

b) State THREE qualitative characters studied in vegetation. **(3 marks)**

c) Briefly explain why radioactive tracer is a useful technique in ecology. **(3 marks)**

d) State the use of the following in ecology
   i Haldane – Gutherie apparatus
   ii Meyer sampler
   iii Munsell's chart. **(3 marks)**

e) State the fate of the following in a food chain
   i Home range
   ii Metabolic cost
   iii Feeding specialization. **(3 marks)**

f) Differentiate between the following
   i Temporary and permanent aggregation
   ii Solitary and gregarious animals. **(4 marks)**

g) Briefly describe the following parameters of a population
   i Age composition
   ii Size and density **(4 marks)**

h) Define the following terms
   i Sere
   ii Climax community
   iii Environmental toxicology
   iv Bio concentration. **(4 marks)**

Q2. Describe the behaviour phenomena in social animals. **(20 marks)**

Q3. Explain community dynamics and succession. **(20 marks)**

Q4. Describe FIVE major biomes in a terrestrial community. **(20 marks)**

Q5. Discuss the impacts of global warming. **(20 marks)**

END