



# THE CATHOLIC UNIVERSITY OF EASTERN AFRICA

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**MAIN EXAMINATION**

**JANUARY – APRIL 2018 TRIMESTER**

**FACULTY OF SCIENCE**

**DEPARTMENT OF BIOLOGY**

**REGULAR PROGRAMME**

**BIO 203: PRINCIPLES OF ECOLOGY**

**Date: APRIL 2018**

**Duration: 2 Hours**

**INSTRUCTIONS: Answer Question ONE and any other TWO Questions**

- Q1. a) Name three methods of study of qualitative characters of vegetation. **(3 marks)**
- b) Name and explain the various kinds of quadrats. **(4 Marks)**
- c) Define the term Biomagnification. **(1 mark)**
- d) Differentiate between population ecology and community ecology **(2 marks)**
- e) Name and explain in detail the ecosystem components **(8 marks)**
- f) List three major environmental problems of hydrosphere **(3marks)**
- g) Briefly describe:  
a) Frequency  
b) Density  
c) Abundance **(6marks)**
- h) Outline two methods that you can use to estimate production in grassland ecosystem. **(4 marks)**
- Q2. Explain the ecological mechanisms contributing to biodiversity. **(20 marks)**
- Q3. Using relevant examples explain the general trends in food chains. **(20 marks)**

Q4. Give a detailed account of fresh water and marine communities. **(20 marks)**

Q5. Describe the functional and structural components of a named ecosystem.  
**(20marks)**

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