



# THE CATHOLIC UNIVERSITY OF EASTERN AFRICA

**A. M. E. C. E. A**

**MAIN EXAMINATION**

**JANUARY – APRIL 2015 TRIMESTER**

**FACULTY OF SCIENCE**

**DEPARTMENT OF NATURAL SCIENCES (BIOLOGY)**

**SCHOOL FOCUSED PROGRAMME**

**BIO 203: PRINCIPLES OF ECOLOGY**

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<b>Date: April 2015</b>	<b>Duration: 2 Hours</b>
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<b>Instructions: Answer Question ONE and any other TWO Questions.</b>
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- Q1. a) i) Explain one method that you can use to determine primary production. **(4 marks)**
- ii) Differentiate between primary and secondary succession. **(2 marks)**
- iii) State two disadvantages of the harvest method used in primary production. **(2 marks)**
- b) Differentiate between the following:
- i) List count and list quadrants **(4 marks)**
- ii) Population size and population density **(2 marks)**
- c) State the importance of mapping in ecology. **(2 marks)**
- d) Explain the following terms: -
- i) Eutrophication **(6 marks)**
- ii) Succession
- iii) Biodiversity
- e) i) Outline TWO negative effects of eutrophication in aquatic ecosystems. **(2 marks)**
- ii) What are the major causes of eutrophication in lakes? **(2 marks)**
- f) Explain THREE general trends along food chain. **(6 marks)**
- Q2. Explain the factors that contribute to biodiversity loss in our planet. **(20 marks)**

- Q3. Describe the methods that can be used to determine animal population sizes in different ecosystems. **(20 marks)**
- Q4. Discuss the properties of a population. **(20 marks)**
- Q5. a) Explain the processes that take place during succession. **(10 marks)**  
b) Describe the results of succession. **(10 marks)**

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