



# 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>
<b>Instructions: Answer Question ONE and any other TWO Questions.</b>	

- 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
- ii) Population size and population density (4 marks)
- c) State the importance of mapping in ecology. (2 marks)
- d) Explain the following terms: -
- i) Eutrophication
- ii) Succession
- iii) Biodiversity (6 marks)
- 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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