



# THE CATHOLIC UNIVERSITY OF EASTERN AFRICA

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**MAIN EXAMINATION**

**JANUARY – APRIL 2017 TRIMESTER**

**FACULTY OF SCIENCE**

**DEPARTMENT OF BIOLOGY**

**REGULAR PROGRAMME**

**BIO 405: Conservation Biology**

**Date: April 2017**

**Duration: 2 Hours**

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

Q1.

- a) State two reasons why conserving genetic diversity is important **(2 marks)**
- b) How important is an Environmental Impact Assessment (EIA) in biodiversity conservation? **(2 marks)**
- c) Outline three functions of biosphere reserves **(3 marks)**
- d) Explain how demographic stochasticity can influence conservation of small populations **(5 marks)**
- e) Briefly describe the role of IUCN in biodiversity conservation through its three appendices **(6 marks)**
- f) Summarize the two main approaches in reducing biodiversity loss **(6 marks)**
- g) Explain the three levels of biodiversity, and give a reason why each should be conserved **(6 marks)**

Q2.

- a) Give two key strategies in restoration of ecosystem processes **(2 marks)**

- b) Describe the various ecological restoration and management principles  
**(18 marks)**
- Q3. Many factors influence the design as well as the placement of nature reserves. Discuss these factors and the importance of considering each of them.  
**(20 marks)**
- Q4. Map out what is entailed in the following steps in an Environmental Impact Assessment (EIA) document and the importance of each step.
- i) background data and information
  - ii) Public Involvement
  - iii) Impacts in terms of magnitude and significance
  - iv) Socio-economic analysis of project effects/impact
  - v) Analysis of alternatives of the project
- (20 marks)**
- Q5.
- a) Demonstrate how the following factors can be a threat to biodiversity **(12 marks)**
- i) Land grabbing
  - ii) Global warming
  - iii) Invasive species
- b) Giving examples, discuss four points that indicate the impact of poverty and development on biodiversity conservation **(8 marks)**

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