



# MACHAKOS UNIVERSITY

University Examinations for 2016/2017

SCHOOL OF AGRICULTURE AND NATURAL RESOURCES MANAGEMENT

DEPARTMENT OF ENVIRONMENTAL SCIENCES

FIRST YEAR FIRST SEMESTER EXAMINATION FOR BACHELOR OF SCIENCE IN  
ENVIRONMENTAL STUDIES AND COMMUNITY DEVELOPMENT

ECD 105: POPULATION DYNAMICS AND RESOURCE USE

Date: 8/12/2016

Time: 11:00 – 1:00 PM

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**INSTRUCTIONS:**

**Answer Question ONE and TWO Other Questions**

**QUESTION ONE**

- a) Define the following terms related to human population.
- i) Carrying capacity (2 marks)
  - ii) Population structure. (2 marks)
  - iii) Growth rate (2 marks)
  - iv) Population density (2 marks)
  - v) Fertility rate (2 marks)
- b) Explain five reasons why the study of human population is crucial in environmental management. (10 marks)
- c) Explain five determinants of population change. (10 marks)

**QUESTION TWO (20 MARKS)**

- a) Compare and contrast Malthus' and Boserup's theories of population growth (10 marks)
- b) Discuss the following paradigms of resource use.
- i) Resource management (5 marks)
  - ii) Frontier economics. (5 marks)

**QUESTION THREE (20 MARKS)**

- a) Discuss the trend of population growth in Africa. (10 marks)
- b) Explain the environmental implications of population structure. (10 marks)

**QUESTION FOUR (20 MARKS)**

Discuss the potential impacts of population growth of the following resources.

- a) Land (10 marks)
- b) Water (10 marks)

**QUESTION FIVE (20 MARKS)**

- a) Discuss the linkages between population and climate change. (10 marks)
- b) Explain five benefits of population census to a country's growth. (10 marks)