



# MACHAKOS UNIVERSITY

University Examinations for 2018/2019 Academic Year

SCHOOL OF ENVIRONMENT AND NATURAL RESOURCES MANAGEMENT

DEPARTMENT OF ENVIRONMENTAL SCIENCES

FIRST YEAR SPECIAL/SUPPLEMENTARY EXAMINATION FOR

BACHELOR IN ENVIRONMENTAL SCIENCE

ECD 105: POPULATION DYNAMICS AND RESOURCE USE

DATE: 26/7/2019

TIME: 11.00-1.00 PM

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## INSTRUCTIONS:

Answer question ONE and any other TWO questions

### QUESTION ONE

- a) Define the following terms related to human population.
- i. Life expectancy (2 marks)
  - ii. Mortality rate (2 marks)
  - iii. Population growth rate (2 marks)
  - iv. Population density (2 marks)
  - v. Fecundity (2 marks)
- b) Discuss 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

- a) Discuss the importance of human population census in environmental management (10 marks)
- b) Explain five policy options that can be applied in Kenya to enhance sustainable use of natural resources (10 marks)

### **QUESTION THREE**

Discuss the potential impacts of population dynamics on the following.

- a) Food security (10 marks)
- b) Forests (10 marks)

### **QUESTION FOUR**

- a) Compare and contrast Malthus' and Boserup's theories of population growth (10 marks)
- b) Discuss the following paradigms of resource use.
  - i. Deep ecology (5 marks)
  - ii. Environmental protection. (5 marks)

### **QUESTION FIVE**

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