



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

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)