

(University of Choice)

**MASINDE MULIRO UNIVERSITY OF
SCIENCE AND TECHNOLOGY
(MMUST)**

MAIN CAMPUS

**UNIVERSITY EXAMINATIONS
2018/2019 ACADEMIC YEAR**

**FIRST YEAR FIRST SEMESTER SUPPLEMENTARY/SPECIAL
EXAMINATIONS**

**FOR THE DEGREE
OF
BACHELOR OF SCIENCE IN DISASTER MITIGATION AND
SUSTAINABLE DEVELOPMENT (DMSD)**

COURSE CODE: DSM 100

COURSE TITLE: PRINCIPLES OF ECOLOGY

DATE: 25/9/2019


TIME: 12 - 2PM

INSTRUCTIONS TO CANDIDATES

- i) This paper contains **FOUR** Questions
- ii) Answer Question **ONE (1)** and any other **TWO (2)** Questions

TIME: 2 Hours

MMUST observes **ZERO** tolerance to examination cheating

This Paper Consists of 2 Printed Pages. Please Turn Over. 

QUESTION ONE

- a) Explain the following terms in ecological context:
- i) Biosphere [1 Marks]
 - ii) Biome [1 Marks]
 - iii) Habitat [2 Marks]
 - iv) Genera [2 Marks]
 - v) Strain [2 Marks]
 - vi) Ecological balance [2 Marks]
- b) Differentiate between population and community. [5 Marks]
- c) Outline the importance of maintaining ecological balance in ecosystems within Kakamega forest.. [7 Marks]
- d) Describe the causes and effects of ecological imbalance. [8 Marks]

QUESTION TWO

- i). Distinguish between the following pairs of terms used under population ecology:
- a). Territory and home range. [3 Marks]
 - b). Density- dependent factors and Density- independent factors. [3 marks]
 - c). Natality and mortality [3 marks]
 - d). Emigration and immigration [3 marks]
- ii). Identify the factors limiting the carrying capacity of a population. [4 Marks]
- iii). Explain the factors limiting species distribution. [4 Marks]

QUESTION THREE

UGive an account of the impact of human activities on natural resource management and the ecological balance of ecosystems within Kakamega forest.

[20 Marks]

QUESTION FOUR

- i). Define the term age pyramids [3 Marks]
- ii). Account for the limitations of exponential and geometric population growth models [4 Marks]
- iv). Examine the factors responsible for biodiversity loss in ecosystems. [7 Marks]
- iii). Discuss the effect of climate change on biodiversity in tropical ecosystems. [6 Marks]