

TECHNICAL UNIVERSITY OF MOMBASA
FACULTY OF APPLIED AND HEALTH SCIENCES

DEPARTMENT OF ENVIRONMENT & HEALTH SCIENCES

**UNIVERSITY EXAMINATION FOR THE DIPLOMA IN
ENVIRONMENTAL SCIENCE.**

DES 16S /YEAR1/ SEMESTER1

AES 2108 GLOBAL ECOSYSTEMS & ENVIRONMENTAL ISSUES

END OF SEMESTER EXAMINATION

SERIES:DECEMBER2016

TIME: 2HOURS

DATE:Pick DateDec2016

Instructions to Candidates

You should have the following for this examination

-Answer Booklet, examination pass and student ID

This paper consists of **FIVE**Question(s). Attemptquestion ONE (Compulsory) and any other TWO questions.

Question one

a) Define the following terms;

- i. Ecology (2 marks)
- ii. Ecosystem. (2 marks)
- iii. Niche. (2 marks)

b) Heterotrophs can be further sub-divided into different functional groups. Explain. (4 marks)

c) Differentiate between;

- i. Migration and dispersal (4 marks)
- ii. Food chain and food web (4 marks)
- iii. A trophic level and pyramid of numbers (4 marks)

d) Outline the characteristics of a population found in an ecosystem (4 marks)

e) State the major essential abiotic components of an ecosystem (4 marks)

Question two

a) Citing appropriate examples define the following categories of species (9 marks)

- i. Autotrophs
- ii. Heterotrophs
- iii. Detritivores

b) Define decomposition and briefly explain its importance to the ecosystem (6 marks)

Question three

Discuss the factors that drive dynamism of ecosystems (15 marks)

Question four

Using appropriate illustrations discuss a typical tropical pyramid. (15 marks)

Question five

Using living organisms of your choice draw a well illustrated food-web comprising of heterotrophs (herbivores, primary producers, and secondary producers), autotrophs and heterotrophs. (15 marks)