

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: 2017

TIME:2HOURS

DATE: SEPT 2017

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). Attempt question ONE (Compulsory) and any other TWO questions.

QUESTION ONE

- a) Differentiate between the following
 - i) Habitat and niche (4 marks)
 - ii) Ecosystem and biodiversity (4 marks)
- b) Briefly describe the process of nutrients cycling in the ecosystem. (5 marks)
- c) Briefly describe the major drivers of environmental degradation in Kenya today (5 marks)

d) Define the following categories of species in an ecosystem. (6 marks)

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

e) Outline the characteristics of the individuals belonging to a population (6 marks)

A population consists of individuals of the same species that live, interact, and migrate through the same niche and habitat.

QUESTION TWO

Discuss the impacts of invasive alien species with special reference to water hyacinth in Kenya (15 marks)

QUESTION THREE

Using a well labeled diagram of a frog illustrate energy flow in an ecosystem. (15 marks)

Question four

Discuss any five Environmental Issues and Challenges facing Kenya today. (15 marks)

QUESTION FIVE

Using appropriate illustrations describe the nitrogen cycle (15 marks)