TECHNICAL UNIVERSITY OF MOMBASA

FACULTY OF APPLIED AND HEALTH SCIENCES

DEPARTMENT OF ENVIRONMENT & HEALTH SCIENCES

UNIVERSITY EXAMINATION FOR:

BTRE15S, BTAP15S &BSMM15S SEMESTER II

AES 4101- ENVIRONMENTAL STUDIES SEMESTER EXAMINATION

SERIES: APRIL/MAY 2016

TIME: 2 HOURS

Instructions to Candidates

This paper consists of FIVE questions

Answer question ONE (COMPULSORY) and any other TWO questions

This paper consists of two printed pages.

Question One (Compulsory)

a. Define the following terms (**5 marks)**
   i. Species abundance
   ii. Gross Energy Requirement
   iii. Land degradation
   iv. Greenhouse effect
   v. Doubling time

b. i. Explain the ecosystem processes and functions. **(2marks**)
   ii. Describe the classifications of abiotic components in an ecosystem (**3marks**)

c. Describe the impacts of land degradation. (**4marks**).

d. Describe the various forms of energy that exist in the environment. **(4marks)**.

e. Explain the sources of phosphorus in the environment (**3marks**).

f. Describe three (3) characteristics of a population (**3marks).**

g. Outline the environmental implications of fishing as a water use practice. (**3marks**)

h. Using an illustration, describe the energy flow in an ecosystem (**3 marks**).

Question Two

Discuss the roles of biogeochemical cycle ***(*10marks**).
Describe the importance of biodiversity in the biogeochemical cycle. (**10mks**).

Question Three

Discuss the environmental implications of the rising human population growth (**20marks**).

Question Four

Compare and contrast Solar and fossils as energy sources (**20marks).**

Question Five

a. Using a well labeled diagram, describe the carbon cycle. (**10marks**).

b. Discuss the roles that individuals can take to prevent pollution of the environment (**10marks**).