



# TECHNICAL UNIVERSITY OF MOMBASA

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Faculty of Applied and Health Sciences

Department of Environment & Health Sciences

## UNIVERSITY EXAMINATION FOR:

**BACHELOR OF SCIENCE IN; FISHERIES AND OCEANOGRAPHY/  
MARINE RESOURCE MANAGEMENT/ JOURNALISM/ JOURNALISM AND  
MASS COMMUNICATION**

**BSFO17S/BSMR17S/ BBJ17S/ BJMC 17S/ /YEAR 1/SEMESTER 1**

**AES 4101: ENVIRONMENTAL STUDIES**

**SPECIAL/ SUPPLEMENTARY EXAMINATIONS**

**SERIES: SEPTEMBER 2018**

**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.*

*Mobile phones are NOT allowed in the examination room*

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### QUESTION ONE

- (a) Differentiate between the following concepts as used in environmental Studies.
- (i) Sustainability and Sustainable development. (2 marks)
  - (ii) Ecosystem and Biodiversity. (2 marks)
  - (iii) Photosynthesis and cellular respiration. (2 marks)
  - (iv) Rift and Rift Zones. (1marks)
- (b) Briefly explain the plate tectonic theory as an Earth forming process. (3 marks)
- (c) Human Health is at risk due to Environmental Variability, using three examples Illustrate. (3 marks)

- (d) List the two laws of Thermodynamics. (2 marks)
- (e) Differentiate the three types of grassland found in an Ecosystem. (3 marks)
- (f) What are the principal characteristics of the lentic versus the lotic freshwater Ecosystem? (3 marks)
- (g) Define Eutrophication? (2 marks)
- (h) List three Ecosystem distresses common in Marine Environment. (3 marks)
- (i) Briefly illustrate importance of decomposers in the Environment. (2 marks)

## **QUESTION TWO**

- (a) What are the three responses of the Environment to Pollution? (5 marks)
- (b) What is the importance of an environmental assessment for the management of a terrestrial or marine based ecosystem? (15 marks)

## **QUESTION THREE**

- (a) Using examples define the five types of terrestrial ecosystems and their importance in Sustainability. (10 marks)
- (b) Using examples explain the total economic values of environmental resources. (5 marks)
- (c) Explain the importance of a well-managed and maintained climate. (5 marks)

## **QUESTION FOUR**

- (a) Using an illustration explain the water cycle. (5 marks)
- (b) Explain the major processes in carbon cycle, and its importance in waste management. (5 marks)
- (c) Analyze the effects of policy on air and water pollution and Health Management. (10 marks)

## **QUESTION FIVE**

- (a) List and explain the advantages and disadvantages of these Energy sources. (10 marks)
- (c) In your opinion can Kenya possibly use safe Energy sources? Explain. (5 marks)
- (d) Elaborate on importance of environment. (5 marks)