



# MASENO UNIVERSITY

## UNIVERSITY EXAMINATIONS 2017/2018

### THIRD YEAR FIRST SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN CLIMATE CHANGE AND DEVELOPMENT WITH INFORMATION TECHNOLOGY

#### MAIN CAMPUS

#### NCA 308: CLIMATE CHANGE MITIGATION

Date: 23<sup>rd</sup> February, 2018

Time: 8.30 - 11.30am

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#### **INSTRUCTIONS:**

- Answer Question ONE and any other TWO
- Sketch maps and diagrams should be used whenever appropriate



## NCA 308: Climate Change Mitigation

### QUESTION 1

Discuss the opportunities available for greenhouse gas emission reduction in the following sectors.

- a) Construction (10 marks)
- b) Industry( 10 marks )
- c) Transportation ( 10 marks)

### QUESTION 2

- a) Explain the likely effects of global climate change on
  - i) Agriculture ( 5marks )
  - ii) Human Health ( 5 marks)

b) Describe greenhouse gas emission efficiency and list key measures necessary to achieve it (10 marks)

### QUESTION THREE

Discuss the sources and sinks of the following greenhouse gases.

- a )Carbon dioxide ( 5 marks)
- b )Methane ( 5 marks)
- c )Nitrous oxide ( 5 marks)
- d )Chlorofluorocarbon (5 marks)

### QUESTION FOUR

a) List five economic sectors with the highest annual greenhouse emissions levels, starting with those with highest to the least emitters. (10 marks)

- b) Discuss the role of the following in climate change mitigation
  - i) Forestry (5marks )
  - ii) Agriculture ( 5 marks)

### QUESTION FIVE

a) Describe climate change mitigation opportunities of various renewable sources of energy (10 marks)

b) Discuss strategies to reduce GHG emissions from waste management (10 marks)

## QUESTION SIX

- a) Explain how technological investments in the energy sector can contribute to GHG emission mitigation (10 marks)
  
- b) Explain how sustainable development in agriculture, water resource management and disaster risk management can contribute to climate change mitigation (10 marks)