



# MACHAKOS UNIVERSITY

University Examinations for 2017/2018

SCHOOL OF ENVIRONMENT AND NATURAL RESOURCES MANAGEMENT

DEPARTMENT OF ENVIRONMENTAL STUDIES AND COMMUNITY  
DEVELOPMENT

FOURTH YEAR FIRST SEMESTER EXAMINATION FOR BACHELOR OF SCIENCE  
IN AGRICULTURAL EDUCATION AND EXTENSION

AGR 483: CLIMATE CHANGE AND ADAPTATION IN AGRICULTURE

DATE: 11/12/2017

TIME: 11.00-1.00 PM

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**INSTRUCTIONS:**

Answer question ONE and any other TWO questions

**QUESTION ONE (30 MARKS)**

- a) Explain the following terms
  - i. Weather (2 marks)
  - ii. Climate (2 marks)
  - iii. Climate change (2 marks)
  - iv. Carbon sequestration (2 marks)
- b) Using relevant examples, explain carbon trading in Kenya (4 marks)
- c) Explain “the greenhouse effect” and its importance to life on earth (8 marks)
- d) Discuss the impacts of climate change in Kenya (10 marks)

**QUESTION TWO (20 MARKS)**

Discuss the recommendations that would guide the development of water supply response measures in the face of climate change (20 marks)

**QUESTION THREE (20 MARKS)**

- a) Discuss the actions Parties to REDD+ are encouraged to take to ensure the success of the initiative? (12 marks)
- b) What are the FOUR key targets of The Paris Agreement? (8 marks)

**QUESTION FOUR (20 MARKS)**

Using Kenya as an example, discuss some possible climate change agro-ecosystem impacts and management responses.

**QUESTION FIVE (20 MARKS)**

In May 2016, the Climate Change Bill was finally passed and enacted into law giving rise to the Climate Change Act (2016).

- a) Explain FOUR key actions the Kenya government need to make the Climate Change Act operational? (8 marks)
- b) Discuss the expected outcomes of the Climate Change Act (2016) in Kenya (12 marks)