



MASENO UNIVERSITY
UNIVERSITY EXAMINATIONS 2015/2016

**FOURTH YEAR SECOND SEMESTER EXAMINATIONS FOR THE
DEGREE OF BACHELOR OF SCIENCE IN CLIMATE CHANGE AND
DEVELOPMENT WITH INFORMATION TECHNOLOGY**

MAIN CAMPUS

**NCA 404: CLIMATE CHANGE ADAPTATION IN
AGRICULTURE**

Date: 25th April, 2016

Time: 8.30 - 10.30 am

INSTRUCTIONS:

- Answer question ONE and any other TWO questions.
- Sketch maps and diagrams should be used whenever appropriate.



- 1.(a) Discuss the expected consequences on the environment due to the projected increase in global demand for crop products toward the year 2030. (10 Marks)
- (b) Explain the expected consequences of the strong growth in demand for animal food products in developing countries toward the year 2030. (10 Marks)
- (c) Examine the role of Agricultural Extension Services in climate change adaptation. (10 Marks)
2. Discuss Drip Irrigation as a technology for sustainable water use and management under a changing climate. (20 Marks)
3. Discuss Rainwater Harvesting as a technology for sustainable water use and management under a changing climate. (20 Marks)
- 4.(a) Explain five ways through which climate change affects cropping systems. (10 Marks)
- (b) List four crops that have been improved through research to adapt to climate change and indicate the special attributes that enable each of the crops to thrive under harsh climatic conditions. (10 Marks)
- 5.(a) State five strategies for managing risk. (5 Marks)
- (b) Explain the applicability of climate insurance products for agriculture. (15 Marks)
6. Discuss "Kilimo Salama" as an example of Index-based Climate Insurance for agriculture being implemented in Kenya. (20 Marks)