



## **MASENO UNIVERSITY**

### **UNIVERSITY EXAMINATIONS 2015/2016**

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

### **MAIN CAMPUS**

### **NCA 207: CLIMATE CHANGE AND AGRICULTURE**

Date: 9<sup>th</sup> April, 2016

Time: 8.30 - 10.30am

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#### **INSTRUCTIONS:**

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



- 1.(a) Describe three types of agricultural production systems. (15 Marks)
- (b) Explain three ways through which climate change and variability affects soil health. (3 Marks)
- (c) Explain four ways through which Conservation Tillage technologies contribute to resilience to climate change. (12 Marks)
2. Explain how climate change impacts the following:
- (i) Crops (5 Marks)
- (ii) Forests (5 Marks)
- (iii) Livestock (5 Marks)
- (iv) Fisheries (5 Marks)
- 3.(a) Explain four ways through which agriculture contributes to air pollution and climate change. (4 Marks)
- (b) Explain eight factors that influence climate change impacts in agriculture. (16 Marks)
- 4.(a) Define Fog harvesting (2 Marks)
- (b) Explain the following about fog harvesting technology
- (i) It's contribution to climate change adaptation (10 Marks)
- (ii) It's advantages (2Marks)
- (ii) it's disadvantages (2 Marks)
- (ii) Barriers to it's implementation (2 Marks)
- (v) Opportunities for it's implementation (2 Marks)
- 5.(a) Explain four management practices that can be used to reduce emissions of greenhouse gases from livestock manure. (10 Marks)
- (b) Explain four management practices that can be used to reclaim productivity and restore storage of carbon in degraded lands. (10 Marks)
- 6.(a) Explain three categories of opportunities for mitigation of Greenhouse Gases in agriculture. (5 Marks)
- (b) Explain how grazing land management and pasture improvement practices contribute to mitigation of Greenhouse Gases in agriculture. (15 Marks)