



**JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE &  
TECHNOLOGY UNIVERSITY EXAMINATIONS 2012/2013**

**2<sup>ND</sup> YEAR 1<sup>ST</sup> SEMESTER EXAMINATION FOR THE DEGREE  
OF BACHELOR OF SCIENCE IN FOOD SECURITY**

**AGRI-BUSINESS MANAGEMENT**

**(REGULAR)**

**COURSE CODE: AFB 3213**

**COURSE TITLE: CLIMATE CHANGE AND FOOD SECURITY**

**DATE: 12/8/13**

**TIME: 2.00 – 4.00 PM**

**DURATION: 2 HOURS**

**INSTRUCTIONS**

- 1. Answer all questions in Section A and ANY other TWO questions in Section B.**
- 2. Write all answer in the booklet provided.**

**SECTION A (30MARKS)**

- 1.Explain the terms climate change mitigation and greenhouse gas emissions. (3 Marks)
2. Explain the adaptive measures for drought and high temperatures in livestock production. (3 Marks)
- 3.Explain the term Carbon trading and its importance to Kenya’s economy. (3 Marks)
- 4.Describe briefly the nature of risks of heat and cold waves in crop ecosystems and their effects on food security. (3Marks)
- 5.Describe briefly the effect of gradual changes in precipitation on food systems. (5 Marks)
6. Explain the roles of the following organizations in climate change and food security: Kenya Meteorological services, WMO, UNEP (5Marks)
- 7.Describe briefly the adaptive measures for flooding in agricultural production with examples. (8Marks)

**SECTION B (40MARKS)**

8. Write NOTES on the following:
  - (a) Climate systems and Food security (10Marks)
  - (b) Policy Frameworks for Climate change Adaptation and mitigation. (10Marks)
9. Describe the concept of food system vulnerability (20Marks)
10. Describe the adaptive responses of food systems to climate change (20 Marks)