



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

**2ND YEAR 1ST SEMESTER EXAMINATION FOR THE
DEGREE OF BACHELOR OF SCIENCE IN FOOD
SECURITY
AGRI-BUSINESS MANAGEMENT
(REGULAR)**

COURSE CODE: ALS 3211

**COURSE TITLE: AGRICULTURE AND ENVIRONMENTAL
QUALITY**

DATE: 19 /8/13

TIME: 9.00 – 11.00 AM

DURATION: 2 HOURS

INSTRUCTIONS

- 1. This paper contains five (5) questions.**
- 2. Answer question 1 (compulsory) and ANY other TWO questions.**
- 3. Write all answer in the booklet provided.**

Section A: 30 marks

Question 1

- a) Briefly comment on biological pollution of water. 2 marks
- b) Explain how settled agriculture has contributed to decline in environmental quality. 5 marks
- c) Briefly explain why maintenance of high and medium potential agro-ecological zones is important for sustained food security in Kenya. 5 marks
- d) Explain the role of conservation agriculture on biodiversity resources. 4 marks
- e) Elaborate how agricultural intensification has contributed to climate change. 5 marks
- f) Information and globalization revolution have a direct influence on environmental quality. Discuss. 3 marks
- g) Giving clear reasons, explain which type of AEZs are prone to adverse environmental degradation. 4 marks
- h) Differentiate between biofertilizer and vermi-compost. 2 marks

Section B: 40 marks (Answer any TWO questions)

Question 2

- a) Explain how atmospheric pollution impacts on environmental quality. 10 marks
- b) Describe how agricultural practices have contributed to soil degradation for food productivity. 10 marks

Question 3

- a) Soil moisture accounts for only 0.005% of water on earth surface yet it's expected to produce enough food for the whole human population. Describe the consequences of this scenario on water quality 10 marks
- b) Discuss the basic principles of organic agriculture and their role in quality food production. 10 marks

Question 4

- a) Discuss how management of municipal wastes can play a role in improved urban and peri urban food security and environmental quality using Kisumu City as a case study. 15 marks
- b) Describe what you understand by point source and non-point source pollution highlighting examples in each case. 5 marks