



**JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY**

**SCHOOL OF AGRICULTURAL AND FOOD SCIENCES**

**THIRD YEAR FIRST SEMESTER UNIVERSITY EXAMINATION FOR THE DEGREE  
OF BACHELOR OF SCIENCE AGRICULTURE AND FOOD SECURITY**

**2017/2018 ACADEMIC YEAR**

**REGULAR**

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**COURSE CODE: ALS 3314/AFB 3314**

**COURSE TITLE: LAND USE AND FOOD SECURITY**

**EXAM VENUE: LR 7**

**STREAM: BSc. ( Food security)**

**DATE: 12/12/17**

**EXAM SESSION: 9.00 – 11.00 AM**

**TIME: 2 HOURS**

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**Instructions:**

- 1. Answer ALL questions in section A and ANY other 2 Questions in section B.**
- 2. Candidates are advised not to write on question paper.**
- 3. Candidates must hand in their answer booklets to the invigilator while in the examination room.**

**SECTION A [30 MARKS]**

**Answer ALL questions from this Section**

1. a) What do you understand by the term food security? (1 Mark)  
b) Briefly explain the three dimensions of food security. (3 Marks)
  
2. a) Define population. (1 Mark)  
b) State two ways of entering a population and two ways of exiting. (2Marks)  
c) What is population density (2 Marks)
  
3. Define the following  
a. Life expectancy (2 Marks)  
b. Child mortality (2 Marks)  
c. Death rate (2 Mark)
  
4. Briefly explain the following terms  
a) Agro ecological zoning (2 Marks)  
b) Land evaluation (2 Marks)  
c) Sustainable land use (2 Marks)
  
5. Define the following terms.  
a. Arable land per capita (3 Marks)  
b. Consumption of major crop (3 Marks)  
c. Production of major crop (3 Marks)

**SECTION B [40 MARKS]**

**Answer ANY TWO questions from this Section.**

6. Kenya's population growth is on an upward trajectory. This scenario is alarming to the fragile food security situation in the country and all efforts should be directed towards checking this growth. As a food security student, discuss the effects of the growing population to food security and the steps the government should take to arrest this scenario so as to ensure food security for its citizenry. (20 marks)
  
7. Wetlands play a vital role in the food security status of a community. Discuss their importance and outline the sustainable use of these resources. (20 Marks)
  
8. Kakamega county has approached you as a land use planner to assist in coming up with a plan for the county. Explain in detail how you would go about the process of land use planning ( 20 marks)
  
9. Excluding the effects of climate change and fisheries, discuss the various impacts that human interventions in natural systems can have on the marine environment and subsequently on food security (20 Marks)