



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

SCHOOL OF AGRICULTURAL AND FOOD SCIENCES

**SECOND YEAR SECOND SEMESTER UNIVERSITY EXAMINATION
FOR THE DEGREE OF BACHELOR OF SCIENCE ANIMAL
SCIENCE, FOOD SECURITY AND HORTICULTURE**

2016/2017 ACADEMIC YEAR

REGULAR

COURSE CODE: AFB 3213

COURSE TITLE: CLIMATE CHANGE AND FOOD SECURITY

EXAM VENUE:

STREAM: BSc. ANIMAL SCIENCE

DATE:

EXAM SESSION:

TIME: 2 HOURS

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. Define the following terms with examples:
 - a. The green house effect (2 marks)
 - b. Climate change (2 Marks)
 - c. Global warming (2 Marks)
2. Briefly explain the global indicators of climate change (6 marks)
3. Explain the following terms
 - a. Climate change adaptation vs. mitigation (3 marks)
 - b. Food security system (3 marks)
 - c. The climate system (3 Marks)
4. Discuss the how the following gases contribute to global warming.
 - a. Methane (3 Marks)
 - b. Water vapor (3 marks)
 - c. Carbon dioxide (3 Marks)

SECTION B [40 MARKS]

Answer ANY TWO questions from this Section.

5. Discuss the adaptive responses of food security system to climate change both at the local and national levels. (20 Marks)
6. Discuss the interactions between the climate system components in relation to climate change (20 Marks)
7. Discuss how climate change impacts on food security (20 marks)
8. Climate change is a major threat to food security, discuss ways communities can be strengthened to enhance resilience and manage the effects of climate change. (20 marks)