



**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 FOOD SECURITY
2016/2017 ACADEMIC YEAR**

REGULAR

COURSE CODE: ALS 3211

COURSE TITLE: AGRICULTURAL AND ENVIRONMENTAL QUALITY

EXAM VENUE:

STREAM: BSc. FOOD SECURITY

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 environment (2 Marks)
 - b. Agriculture pollution (2Marks)
 - c. composting (2Marks)
2. Briefly discuss anaerobic digestion as a biological treatment of liquid animal waste (6 marks)
3. Discuss the effect of agriculture on the key natural resources (6 marks)
4. Discuss the following terms in relation to sustainable food production
 - a. Sustainable production (3 Marks)
 - b. Sustainable food system (3 Marks)
 - a. Sustainable Agriculture (3 Marks)

SECTION B: [40 MARKS]

Answer ANY TWO questions from this Section.

5. State and discuss the positive and negative effects of Agriculture on the environment (20 Marks)
6. Discuss the specific points livestock producers need to address in order to achieve environmental quality. (20 marks)
7. A wide diversity of strategies and approaches are necessary in order to create a more sustainable food system. Discuss. (20 Marks).
8. Agriculture is a key source of environmental pollutants. Discuss how agricultural pollution can be minimized (20 marks)