



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

SCHOOL OF AGRICULTURAL AND FOOD SCIENCES

**FIRST YEAR SECOND SEMESTER UNIVERSITY EXAMINATION FOR
THE DEGREE OF BACHELOR OF SCIENCE IN HORTICULTURE,
BACHELOR OF SCIENCE IN SOIL SCIENCE, BACHELOR OF SCIENCE
IN FOOD SECURITY, BACHELOR OF SCIENCE IN AGRIBUSINESS
MANAGEMENT AND BACHELOR OF SCIENCE IN AGRICULTURAL
AND EXTENSION EDUCATION**

2017/2018 ACADEMIC YEAR

REGULAR

COURSE CODE: APT 3125

COURSE TITLE: PRINCIPLE OF CROP PRODUCTION

EXAM VENUE:

**STREAMS: BSc. Horticulture, BSc. Food Security,
BSc. Soil Science, BSc. Agribusiness Management
and BSc. Agricultural and Extension Education.**

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. Differentiate between;
 - a) Catch and trap crops. (2 Marks)
 - b) Soiling and silage crops. (2 Marks)
2. Explain the role of temperature in plant growth. (4 Marks)
3. Light intensity is the primary factor in photosynthesis. Outline THREE ways through which light intensity can be increased within the plant canopy. (3 Marks)
4. A maize-soybean intercrop has a land equivalent ratio (LER) of 1.25. Explain this statement. (3 Marks)
5. Discuss the factors that determine cropping sequence and special arrangement in crop rotation? (4 Marks)
6. Explain the main advantages of using vegetative materials in crop propagation? (4 Marks)
7. Discuss FOUR major roles of soil microorganisms in crop production. (8 Marks)

SECTION B [40 MARKS]

Answer ANY TWO questions from this Section.

8.
 - a) Define the term tillage. (2 Marks)
 - b) Discuss the objectives of tillage. (8 Marks)
 - b) Discuss the factors that determine the time of sowing in crop production. (10 Marks)
9.
 - a) Briefly explain ways in which weeds cause direct losses to farmers. (5 Marks)
 - b) Discuss the various damages caused by crop pests based on chewing and biting pattern of feeding. (5 Marks)
 - c) Discuss the various adaptive characteristics of weeds that make them more successful than domesticated crops. (10 Marks)
10.
 - a) Outline FIVE symptoms of plant diseases. (10 Marks)
 - b) Discuss FIVE cultural measures of disease control in plants. (10 Marks)