



**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 AGRICULTURAL EXTENSION
EDUCATION, BACHELOR OF SCIENCE IN AGRIBUSINESS MANAGEMENT,
BACHELOR OF SCIENCE IN FOOD SECURITY, BACHELOR OF SCIENCE IN
HORTICULTURE AND BACHELOR OF SCIENCE IN ANIMAL SCIENCE**

2024/2025 ACADEMIC YEAR

SIAYA

COURSE CODE: ATP 3226

COURSE TITLE: Principles of Crop Production

EXAM VENUE: Siaya campus

STREAM:

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. State TRUE or FALSE **[5 MARKS]**
 - (a) Crop production if nurtured well can lead to rural development through improvement of infrastructure.
 - (b) Fresh manure on a nursery bed can have scotching effect on emerging seedlings.
 - (c) Straight fertilizers supply two or three of the major plant nutrients (N, P, K) to growing crops.
 - (d) Effective soil and water management practices do not enhance improved soil fertility and increased yields.
 - (e) Continued research in crop production has led to advancement of new technologies to aid in improved crop production.

2. Define the following terms. **[10 MARKS]**
 - (a) Multiple cropping.
 - (b) Seed rate.
 - (c) Relay cropping.
 - (d) Crop rotation.
 - (e) Vertical resistance (VR).

3. Articulate five economic importance of the following; **[15 MARKS]**
 - (a) Sequential cropping system.
 - (b) Placement as a fertilizer application method.
 - (c) Mixed cropping.

SECTION B (40 MARKS)

Answer ANY TWO questions in this section

4(a). Demonstrate the key steps in seedbed preparation.

[10 MARKS]

(b). Discuss Described the hazardous environmental effects accrued from excessive and/or improper use of inorganic fertilizers.

[10 MARKS]

5 (a). Briefly described different types of localized fertilizer placement techniques in crop fields.

[10 MARKS]

(b). Describe weed management option which can be adopted to control weeds in crop fields.

[10 MARKS]

6(a). Argue the importance of agroforestry as an indicator of sustainable farming practice in agriculture.

[10 MARKS]

(b). Demonstrate the environmental factors affecting crop performance in agricultural fields.

[10 MARKS]