



**MURANG'A UNIVERSITY OF TECHNOLOGY**  
**SCHOOL OF AGRICULTURE AND ENVIRONMENTAL**  
**SCIENCES**

DEPARTMENT OF AGRICULTURE

UNIVERSITY ORDINARY EXAMINATION

2023/2024 ACADEMIC YEAR

**SECOND YEAR FIRST SEMESTER EXAMINATION**

GAC 211 - ANNUAL CROPS

DURATION: 2 HOURS

**INSTRUCTIONS TO CANDIDATES:**

1. Answer question one and any other two questions.
2. Mobile phones are not allowed in the examination room.
3. You are not allowed to write on this examination question paper.

**SECTION A – ANSWER ALL QUESTIONS IN THIS SECTION**

**QUESTION ONE (30 MARKS)**

- a. With two examples in each case, describe the:
- I. Difference between warm season and cool season annual crops. (6 marks)
  - II. Difference between oil crop and tuber crops. (8 marks)
- b. Discuss the management of the fall army worm in maize production. (6 marks)
- c. Answer the following aspect of growth and development of cereals
- I. Importance of a growth key state. (4 marks)
  - II. Describe the Zadok's cereals growth stages. (6 marks)

**SECTION B – ANSWER ANY TWO QUESTIONS IN THIS SECTION**

**QUESTION TWO (20 MARKS)**

Describe characteristics of the following categories of annual crops:

- a. Cereal crops. (10 marks)
- b. Legume crops. (10 marks)

**QUESTION THREE (20 MARKS)**

Describe the by-product of rice. (20 marks)

**QUESTION FOUR (20 MARKS)**

Discuss the benefits of sunflower production. (20 marks)