



MURANG'A UNIVERSITY OF TECHNOLOGY
SCHOOL OF AGRICULTURE AND ENVIRONMENTAL
SCIENCE

DEPARTMENT OF AGRICULTURAL SCIENCE

UNIVERSITY ORDINARY EXAMINATION

2023/2024 ACADEMIC YEAR

----- YEAR **SECOND** SEMESTER EXAMINATION FOR MATER OF
SCIENCE IN AGRICULTURE

ACC 603 - SUSTAINABLE AGRIFOOD SYSTEMS IN A CHANGING
CLIMATE

DURATION: 2 HOURS

INSTRUCTIONS TO CANDIDATES:

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

QUESTION ONE (25 MARKS)

Explain the principles of sustainable agriculture and provide examples of how they can be applied in practice. (25 marks)

QUESTION TWO (25 MARKS)

Discuss the relationship between climate change and agricultural productivity food security and nutrition. (25 marks)

QUESTION THREE (25 MARKS)

Discuss the role of agricultural waste management in reducing greenhouse gas emissions and improving soil health. (25 marks)

QUESTION FOUR (25 MARKS)

Critically evaluate the role of approaches such as agro ecology and climate smart agriculture in promoting sustainability. (25 marks)

QUESTION FIVE (25 MARKS)

Climate information services play a critical role in understanding agrifood systems dynamics. Evaluate the dynamics of agrifood systems, including changes in demand, diet patterns, food waste and crop yield gaps. (25 marks)