



MERU UNIVERSITY OF SCIENCE AND TECHNOLOGY

P.O. Box 972-60200 – Meru-Kenya

Tel: +254(0) 799 529 958, +254(0) 799 529 959, + 254 (0) 712 524 293,

Website: info@must.ac.ke Email: info@must.ac.ke

University Examinations 2024/2025

SECOND YEAR FIRST SEMESTER EXAMINATION FOR THE CERTIFICATE IN AGRICULTURE

AAC 1403: SOIL FERTILITY AND FERTILIZERS

DATE: DECEMBER 2024

TIME: 1½ HOURS

INSTRUCTIONS: Answer question *one* and any other *two* questions

QUESTION ONE (30 MARKS)

a) Define the following terms

- i) Soil fertility (2 marks)
- ii) Plant nutrition (1 mark)
- iii) Mineral (2 marks)
- iv) Nutrients

b) Give three criteria for identifying essential nutrient (3 marks)

c) Distinguish between passive and active uptake of nutrients (4 marks)

d) Define liming and give two liming material (3 marks)

e) State four characteristics of plants that should be used for green manure (4 marks)

f) Give any two types of organic manure (2 marks)

QUESTION TWO (15 MARKS)

a) Outline characteristics of organic manure (6 marks)

b) Discuss limitations of using visual symptoms as a diagnostic tool for plant nutrition

(9 marks)

QUESTION THREE (15 MARKS)

- a) Discuss four stages that takes place in compost processing (8 marks)
- b) Mention any four factors determining the amount of lime to apply (4 marks)
- c) State any factors that determine quality of Farm Yard manure (3 marks)

QUESTION FOUR (15 MARKS)

- a) Describe factors influencing type and amount of fertilizer to apply (9marks)
- b) Describe how nutrients are lost in the soil (6 marks)