



# MERU UNIVERSITY OF SCIENCE AND TECHNOLOGY

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## UNIVERSITY EXAMINATIONS 2022/2023

FIRST YEAR, FIRST SEMESTER EXAMINATION FOR THE DEGREE OF MASTER OF  
SCIENCE IN HORTICULTURE

### AAH 5152: ADVANCED HORTICULTURAL CROP PRODUCTION

DATE: AUGUST 2023

TIME: 3 HOURS

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**INSTRUCTIONS: Answer Question ONE and any other TWO questions.**

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#### QUESTION ONE (30 MARKS)

- State the conditions under which vegetative propagation materials for horticultural crops should be raised. (6 Marks)
- Outline the environmental and health risks of inappropriate use of manures in horticultural production. (6 Marks)
- Discuss the research need for horticultural crops production in Kenya. (6 Marks)
- Explain why it is necessary to accurately predict the harvest time for horticultural crops. (6 Marks)
- Give the measures required to enhanced seed germination for horticultural crops. (6 Marks)



## QUESTION TWO (15 MARKS)

You are required to carry out a study on irrigation of various horticultural crops in Arid and Semi-arid Lands (ASALs)

- a) State possible objectives of such a study. (3 Marks)
- b) Provide a clear materials and methods of the study. (12 Marks)

## QUESTION THREE (15 MARKS)

Outline the key research areas for the following crops:

- a) Mangoes (5 Marks)
- b) Ornamental pot plants (5 Marks)
- c) Flower crops (5 Marks)

## QUESTION FOUR (15 MARKS)

- a) Explain the meaning of climate smart production technologies in relation to horticulture. (3 Marks)
- b) List three possible climate smart production technologies applicable to horticultural crops. (3 Marks)
- c) Provide a critical assessment of the suitability of the above listed technologies in horticultural production. (9 Marks)

