



# MACHAKOS UNIVERSITY

University Examinations for 2018/2019 Academic Year

SCHOOL OF AGRICULTURAL SCIENCES

DEPARTMENT OF AGRICULTURAL EDUCATION AND EXTENSION

SECOND YEAR SPECIAL/SUPPLEMENTARY EXAMINATION FOR

BACHELOR OF SCIENCE IN AGRICULTURAL EDUCATION AND EXTENSION

SOL 201: SOIL FERTILITY AND PLANT NUTRITION

DATE:

TIME:

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**INSTRUCTIONS:**

Answer question one and two other questions

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**SECTION A: COMPULSORY: (30 MARKS)**

**QUESTION ONE**

- a) Describe FOUR roles played by horticulture in Kenya (4 marks)
- b) Explain FOUR benefits of home gardening (4 marks)
- c) Describe FOUR ways in which light affects production of horticultural crops (4 marks)
- d) Explain FOUR anti-nutrient factors found in vegetables (4 marks)
- e) Differentiate between multistoried orchard and high density orchard (4 marks)
- f) Explain the limitations of using resistant varieties in crop protection (4 marks)
- g) Differentiate between landscape horticulture and interior scaping (4 marks)
- h) Explain TWO ways in which fertilization affects post harvest life of horticultural produce (2 marks)

**SECTION B: Answer any TWO Questions (40 Marks)**

**QUESTION TWO**

Discuss how the following factors affect post harvest life of cut-flowers

- a) Temperature (5 marks)
- b) Light (5 marks)
- c) Ethylene (5 marks)
- d) Relative humidity (5 marks)

**QUESTION THREE**

Describe the following management practices in vegetable production

- a) Irrigation (5 marks)
- b) Staking (5 marks)
- c) De-suckering (5 marks)
- d) Ridging (5 marks)

**QUESTION FOUR**

Discuss FOUR strategies used in biological control of pests and diseases in horticultural crops

(20 marks)

**QUESTION FIVE**

Discuss the following regulations and market standards applicable to horticultural produce from Kenya to the European and USA markets

- a) EU directive on quarantine pests (5 marks)
- b) USDA sanitation protocol for Geraniums (5 marks)
- c) GlobalGAP (5 marks)
- d) British Retail Consortium (BRC) (5 marks)