



MACHAKOS UNIVERSITY

University Examinations for 2018/2019 Academic Year

SCHOOL OF AGRICULTURAL SCIENCES

DEPARTMENT OF AGRIBUSINESS MANAGEMENT AND TRADE

SECOND YEAR SPECIAL/SUPPLEMENTARY EXAMINATION FOR

BACHELOR OF SCIENCE IN AGRICULTURAL EDUCATION AND EXTENSION

HOR 211: PRINCIPLES OF HORTICULTURAL PRODUCTION

DATE: 22/7/2019

TIME: 11.00-1.00 PM

INSTRUCTIONS:

Answer *ALL* questions from Section A and any other *TWO* from Section B:

SECTION A: COMPULSORY: (30 MARKS)

QUESTION ONE (30 MARKS)

- a) Define the following terms as used in horticultural production
 - i. Floriculture (1 mark)
 - ii. Olericulture (1 mark)
 - iii. Viticulture (1 mark)
- b) Differentiate between chilling injury and freezing injury (4 marks)
- c) Describe FOUR benefits of organic farming (4 marks)
- d) Explain FOUR limitations of using soil as a plant growing media (4 marks)
- e) Describe FOUR sources of CO₂ to the greenhouse crops (4 marks)
- f) Explain to her FOUR benefits he would benefit by adopting fertigation (4 marks)
- g) Describe FOUR benefits of using hydroponics in production of crops (4 marks)
- h) Explain THREE ways in which plant resistance to pests and diseases manifest themselves (3 marks)

SECTION B: Answer any TWO Questions (40 Marks)

QUESTION TWO (20 MARKS)

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) Global GAP (5 marks)
- d) British Retail Consortium (BRC) (5 marks)

QUESTION THREE (20 MARKS)

Discuss ways in which the following factors affect production of horticultural crops

- a) Temperature (10 marks)
- b) Light (10 marks)

QUESTION FOUR (20 MARKS)

Describe FOUR ways of breaking embryonic dormancy

QUESTION FIVE (20 MARKS)

Describe how the following factors affect the post-harvest quality of horticultural crops

- a) Crop rotation (5 marks)
- b) Thinning (5 marks)
- c) Weed control (5 marks)
- d) Crop protection (5 marks)