



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

AGR 206: HORTICULTURAL CROPS

DATE: 22/7/2019

TIME: 2.00-4.00 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) Giving an example in each case, define the following terms as used in horticultural production
 - i. Vernilisation (2 marks)
 - ii. Short day plants (2 marks)
 - iii. Quantitative long day plants (2 marks)
- b) Explain FOUR principles of organic farming (4 marks)
- c) Explain FOUR anti-nutritional factors found in vegetables (4 marks)
- d) Giving an examples in each case, describe the FOUR classes of fruits based on the growth pattern (4 marks)
- e) Explain FOUR functions of artificial waxing in horticultural produce (4 marks)
- f) Explain FOUR disadvantages of using resistant varieties in pest and disease control (4 marks)
- g) Differentiate between landscape horticulture and interior scaping (4 marks)

SECTION B: Answer any TWO Questions (40 Marks)

QUESTION TWO (20 MARKS)

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 THREE (20 MARKS)

Describe the following types of fruit orchards

- a) Multi-storied orchard (5 marks)
- b) High density orchard (5 marks)
- c) Mixed orchard (5 marks)
- d) Clonal orchard (5 marks)

QUESTION FOUR (20 MARKS)

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 FIVE (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)