



MASENO UNIVERSITY
UNIVERSITY EXAMINATIONS 2016/2017

**FOURTH YEAR FIRST SEMESTER EXAMINATIONS FOR
THE DEGREE OF BACHELOR OF SCIENCE IN AGRONOMY
WITH INFORMATION TECHNOLOGY**

MAIN CAMPUS

AAG 403: HORTICULTURAL CROPS II

Date: 1st December, 2016

Time: 12.00 - 3.00 pm

INSTRUCTIONS:

- Answer ALL questions in SECTION A and any THREE questions in SECTION B.



AAG 403: HORTICULTURAL CROPS II

Instructions:

- The paper has two sections (A & B)
- Attempt ALL questions in section A and any three (3) in section B
- Number of candidates 30

Section A (40 marks)

Q1.

- a) Cole crops have specific requirements for environmental conditions. Highlight the effects of environmental temperatures on the following crops:
- i) Cauliflower. (2 marks)
 - ii) Brussel sprouts. (2 marks)
- b)
- i) Define blanching of cauliflower heads. (2 marks)
 - ii) Justify tying of leaves over the head of self-blanching cultivars of cauliflower. (2 marks)
- c) Outline:
- i) The hot water treatment of seeds of cauliflower. (2 marks)
 - ii) The benefits of topping the Brussel sprout plants. (2 marks)
- d) Explain:
- i) The buttoning physiological disorder of cauliflower and broccoli. (3 marks)
 - ii) Using the case of vegetables, any five (5) cultural methods of controlling weeds. (5 marks)

Q2.

- a) Once ready the banana fruits need to be harvested.
- i) Why should the fruits be harvested at optimum maturity? (2 marks)
 - ii) Outline the practice of harvesting banana fruits. (2 marks)

- iii) Explain the use of an appropriate maturity index to determine the harvesting time of banana fruits. **(3 marks)**
- b) Explain the cultural practice of removing dead hanging banana leaves. **(3 marks)**

Q3.

- a) Explain cause and management of ‘blossom drop’ physiological disorder of tomatoes. **(4 marks)**
- b) Outline any four (4) current breeding goals for cut rose. **(2 marks)**
- c) How is high temperature used to accelerate bud break in cut rose crops? **(4 marks)**

Section B (30 marks)

Attempt any three (3) questions from this section

Q4. In Kenya, the preferred method of propagating cut rose (*Rosa hybrida*) is grafting.

- a) Describe the stenting technique of grafting. **(3 marks)**
- b) Discuss the process of forming the crop’s framework from first bending of grafted cut rose soon after planting to the production of second order laterals. **(7 marks)**

Q5.

- a) Using the example of tomatoes, what are parthenocarpic fruits? **(2 marks)**
- b) Discuss the cultural practice of establishing windbreaks in tomato crop fields. **(8 marks)**

Q6. Banana suckers develop into next generation crop making the crop a perennial one. Discuss the management of the suckers for sustained production of the crop. **(10 marks)**

Q7. A major postharvest physiological disorder of tomato (*Lycopersicon esculentum*) is blossom-end-rot. Discuss the causes and management of this disorder. **(10 marks)**

%%%