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University Examinations 2013/2014

SECOND YEAR, FIRST SEMESTER EXAMINATION FOR CERTIFICATE/DIPLOMA IN
AGRICULTURE

AGR 0222 – HORTICULTURAL PRODUCTION

DATE: DECEMBER 2013

TIME: 1 $\frac{1}{2}$ HOURS

INSTRUCTIONS: Answer question *one* and any other *two* questions

QUESTION ONE – 30 MARKS

- (a) Horticulture is described as both art and a science. Discuss. (2Marks)
- (b) Discuss aspects considered when classifying horticultural crops. (5Marks)
- (c) Discuss the role of photosynthesis in plant growth and development. (5Marks)
- (d) Discuss the role of plant hormones in plant growth and development. (3Marks)
- (e) Discuss environmental factors that influence seed germination in a nursery bed. (4Marks)
- (f) Distinguish between determinate and indeterminate tomatoes. (2Marks)
- (g) Discuss tomato crop production with reference to following key agronomic practises. (5Marks)
 - (i) Transplanting
 - (ii) Gaping
 - (iii) Pruning
 - (iv) Mulching
 - (v) Weeding
 - (vi) Pest and disease control
 - (vii) Irrigation
- (h) Blossom end rot is a common disease in tomatoes.

- (i) State the two possible causes of this disease. (2Marks)
- (ii) Give two symptoms of the disease. (2Marks)

QUESTION TWO – 15 MARKS

Kenya is a major producer of bananas in East and Central Africa. However, 40% of the commodity is lost due to poor post-harvest management practises and technologies.

- (a) Describe two main methods of banana propagation. (5Marks)
- (b) Discuss five (5) causes of losses due to poor post harvest management practises and technologies in bananas in Kenya. (10Marks)

QUESTION THREE – 15 MARKS

- (a) Differentiate between spray carnations and standard carnations. (2Marks)
- (b) Discuss carnation propagation (10Marks)
- (c) Discuss post harvest management practices necessary to prolong carnations shelf-life. (3Marks)

QUESTION FOUR – 15 MARKS

- (a) Distinguish between supply chain and value chain management. (5Marks)
- (b) Critique the role of middle men in the horticultural value chain management in Kenya. (10Marks)

QUESTION FIVE – 15 MARKS

- (a) Describe five (5) career opportunities in horticulture. (5Marks)
- (b) Discuss the contribution of horticulture in the Kenyan economy. (10Marks)