



MERU UNIVERSITY COLLEGE OF SCIENCE & TECHNOLOGY

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University Examinations 2010/2011

SECOND YEAR, FIRST SEMESTER EXAMINATIONS FOR DIPLOMA IN AGRICULTURAL EDUCATION AND EXTENSION

AGR 0222: HORTICULTURAL PRODUCTION

DATE: DECEMBER 2010

TIME: 1½ HOURS

INSTRUCTIONS: Answer Question one which is Compulsory and any other two questions

QUESTION ONE – (30 MARKS)

- (a) State and explain briefly one point in each case showing that fruits and vegetables play an important role:
- (i) In the Kenyan economy (2 Marks)
 - (ii) In human nutrition (2 Marks)
- (b) Discuss two challenges that those who introduced temperate fruit trees to Kenya were faced with. (4 Marks)
- (c) Mention four ecological requirements for mango fruit trees. (4 Marks)
- (d) Name two pest and two diseases of passion fruits. (4 Marks)
- (e) Oil palms have two basic cultivars used to produce hybrids.
- (i) Name the two cultivars. (2 Marks)
 - (ii) State one major difference between the two cultivars. (2 Marks)
- (f) Write down any five horticultural crops and their scientific names. (5 Marks)
- (g) Name and describe one value addition technology used for horticultural crops. (5 Marks)

QUESTION TWO – (15 MARKS)

Fruits and vegetables are important groups of horticultural crops. State and discuss briefly.

- (a) Two properties shared by the two groups making them horticultural crops. (4 Marks)
- (b) Two botanical differences between fruits and vegetables. (4 Marks)
- (c) Two differences from the consumer's point of view. (4 Marks)
- (d) One major differences in their propagation. (3 Marks)

QUESTION THREE – (15 MARKS)

- (a) Describe two propagation methods used for rose flowers. (4 Marks)
- (b) Name four cultivars of rose flowers. (4 Marks)
- (c) Write down:
 - i. Four pests of rose flowers. (4 Marks)
 - ii. Three diseases of rose flowers (3 Marks)

QUESTION FOUR – (15 MARKS)

Sometimes fruit trees do not bear fruits even after abundant flowering. List and explain briefly five factors which may cause this problem. (15 Marks)

QUESTION FIVE – (15 MARKS)

While large scale operations invest in high cost postharvest technologies, often these options are not practical for small-scale handlers. Instead, simple, low cost technologies can be more appropriate for small scale farmers.

- (a) Describe one example of technology appropriate for large scale operations, and discuss two reasons why it is commonly used by small low volume producers. (10 Marks)
- (b) Describe one example of technology appropriate for large scale operations. (5 Marks)