



# **MERU UNIVERSITY OF SCIENCE AND TECHNOLOGY**

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## **University Examinations 2013/2014**

SECOND YEAR, FIRST SEMESTER EXAMINATIONS FOR DIPLOMA IN  
AGRICULTURE

### **AGR 0222: HORTICULTURE PRODUCTION**

**DATE: APRIL 2014**

**TIME: 1 ½ HOURS**

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

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#### **QUESTION ONE – (30 MARKS)**

- (a) Horticulture is described as both an art and a science. Discuss. (2 Marks)
- (b) Discuss five aspects considered when classifying horticultural crops. (5 Marks)
- (c) Distinguish between annual, biennial and perennial crops. (3 Marks)
- (d) State three causes of losses due to poor post-harvest management practices and technologies in bananas in Kenya. (3 Marks)
- (e) State three environmental factors vital for seed germination. (3 Marks)
- (f) Differentiate between grafting and budding. (4 Marks)
- (g) Give five ways through which horticulture subsector contributes to the Kenyan economy. (5 Marks)
- (h) Describe five career opportunities in horticulture. (5 Marks)

#### **QUESTION TWO – (15 MARKS)**

- (a) Discuss advantages of drip irrigation over sprinkler irrigation. (10 Marks)
- (b) Describe the term fertigation and state its advantages in horticultural production. (5 Marks)

### **QUESTION THREE – (15 MARKS)**

Discuss the following plant cell organelles, stating their functions and role in plant growth and development.

- (a) Nucleus (5 Marks)
- (b) Mitochondria (5 Marks)
- (c) Chloroplast (5 Marks)

### **QUESTION FOUR – (15 MARKS)**

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

- (a) Give five banana cultivars grown in Kenya. (5 Marks)
- (b) Describe five ways of reducing losses due to poor post-harvest management practices and technologies in bananas in Kenya. (10 Marks)

### **QUESTION FIVE – (15 MARKS)**

- (a) Discuss five management practices in carnation production. (10 Marks)
- (b) State five postharvest management practices necessary for prolonging shelf life in carnations. (5 Marks)