



MACHAKOS UNIVERSITY

University Examinations 2018/2019

SCHOOL OF AGRICULTURAL SCIENCES

DEPARTMENT OF AGRICULTURAL EDUCATION AND EXTENSION

THIRD YEAR SECOND SEMESTER EXAMINATION FOR

BACHELOR OF SCIENCE IN AGRICULTURAL EDUCATION AND EXTENSION

HOR 441: VEGETABLE PRODUCTION

DATE: 16/4/2019

TIME: 2:00 – 4:00 PM

INSTRUCTION TO CANDIDATES:

Answer Question One and Any Other Two Questions

QUESTION ONE (COMPULSORY) (30 MARKS)

- Differentiate between exotic and traditional vegetables (4 marks)
- Describe any FOUR anti-nutritional factors found in vegetables (4 marks)
- Explain TWO classifications of vegetables based on temperature adaptation (4 marks)
- Describe the FOUR classification of cabbage varieties based on the shape of head and give an exam of each class (4 marks)
- Outline FOUR ways in which amaranth can be utilised (4 marks)
- Describe THREE factors affecting onion production in Kenya. (3 marks)
- Describe the symptoms and control measures of late blight in potatoes (4 marks)
- Name THREE major pests infesting French bean and explain the damage caused on the plant by each pest. (3 marks)
- Outline two differences in production of tomatoes in outdoor environment compared to growing in the greenhouse. (2 marks)

QUESTION TWO (20 MARKS)

Production of tomato in greenhouses has become popular among farmers in Kenya. Discuss the way you would conduct the following operations in producing tomatoes under greenhouse conditions.

- Land preparation and planting (5 marks)
- Staking and pruning (5 marks)
- Irrigation (5 marks)
- Fertilizer application (5 marks)

QUESTION THREE (20 MARKS)

There are numerous agronomic and nutritional benefits of growing African indigenous vegetables such as African nightshades. Discuss how you would advise a farmer to carry out the following operations in her African nightshades farm

- a) Crop establishment (5 marks)
- b) Fertilizers and manure application (5 marks)
- c) Pest management (5 marks)
- d) Harvesting and storage (5 marks)

QUESTION FOUR (20 MARKS)

Beetroot is emerging as an important vegetable among the nutritionally conscious Kenyans. Discuss production of beetroots under the following sub-headings.

- a) Cultivars grown in Kenya (5 marks)
- b) Land preparation and planting (5 marks)
- c) Fertilizers and weed control (5 marks)
- d) Harvesting and utilization (5 marks)

QUESTION FIVE (20 MARKS)

Water melon has become a very popular fruit vegetable in Kenya. Discuss how you would advice your uncle who intends to start water melon production on the following aspects

- a) Environmental requirements (5 marks)
- b) Crop establishment (5 marks)
- c) Fertilizers and manures (5 marks)
- d) Pruning and mulching (5 marks)