



MACHAKOS UNIVERSITY

University Examinations for 2017/2018 Academic Year

SCHOOL OF AGRICULTURAL SCIENCES

DEPARTMENT OF AGRICULTURAL EDUCATION AND EXTENSION

THIRD YEAR FIRST SEMESTER EXAMINATION FOR BACHELOR OF SCIENCE IN
AGRICULTURAL EDUCATION AND EXTENSION

KRM 309: PERENNIAL CROPS

DATE: 19/12/2017

TIME: 11.00-1.00 PM

Instructions:

Answer ALL questions in section A and ANY TWO questions in section B

SECTION A: COMPULSORY: (30 MARKS)

QUESTION ONE (30 MARKS)

- a) With a specific crop example, explain four roles of temperature in their production (4 marks)
- b)
 - i. Explain four roles of perennial crops to the farmer (2 marks)
 - ii. Describe two methods of pruning in tea production (4 marks)
 - iii. Describe the differences between *Assam* and *china* tea (2 marks)
- c)
 - i. Describe how you would propagate the following crops
 - i) Sisal (2 marks)
 - ii) Coconut (2 marks)
 - ii. Explain why sisal is an environmental friendly crop (2 marks)
- d) Explain four reasons why you would encourage farmers to plant the following crops
 - i. Tea (2 marks)
 - ii. Sugarcane (2 marks)
 - iii. Cashew nut (2 marks)
- e) With a specific example of crop, explain the management of the following pests/diseases

- i. Bud disease (2 marks)
- ii. Agave weevil (2 marks)
- iii. Lethal bole rot (2 marks)

SECTION B: ANSWER ANY TWO QUESTIONS (40 MARKS)

QUESTION TWO (20 MARKS)

Explain the propagation of macadamia under the following headings

- a) Ecological conditions (5 marks)
- b) Canopy management (5 marks)
- c) Fertilization (5 marks)
- d) Macadamia nut borer symptoms (5 marks)

QUESTION THREE (20 MARKS)

Discuss coffee production under the following headings

- a) Climatic requirements (5 marks)
- b) Pruning (5 marks)
- c) Breeding and selection (5 marks)
- d) Harvesting (5 marks)

QUESTION FOUR (20 MARKS)

- a) Explain production of coconut under the headings
 - i. Propagation (5 marks)
 - ii. Seedbed preparation (5 marks)
 - iii. Harvesting (5 marks)
- b) Discuss five challenges facing sugarcane farmers in Kenya (5 marks)

QUESTION FIVE (20 MARKS)

- a) Describe the production of pyrethrum under the following headings
 - i. Climatic requirements (3 marks)
 - ii. Diseases (3 marks)
 - iii. Cutting back (3 marks)
 - iv. Harvesting (3 marks)
- b) Explain four management practices of sisal farming you would encourage a farmer to apply to enhance production (8 marks)