



MACHAKOS UNIVERSITY

University Examinations for 2016/2017

SCHOOL OF AGRICULTURE AND NATURAL RESOURCES MANAGEMENT

DEPARTMENT OF ENVIRONMENTAL STUDIES

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

KRM 309: PERENNIAL CROPS

Date: 6/12/2016

Time: 2:00 – 4:00 pm

INSTRUCTIONS:

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

SECTION A: COMPULSORY: (30 MARKS)

1. a) Explain four importance of a perennial crop to a farmer in his/her farming system (4 marks)
- b) With two examples, explain four reasons why shade should be included in some perennial crop plantations. (5 marks)
- c) Explain how a farmer can propagate the following crops
 - i) Sugarcane (2 marks)
 - ii) Pyrethrum (2 marks)
 - iii) Tea (2 marks)
- d)
 - i) Explain why farmers practice tipping in tea production and when should it be done. (2 marks)
 - ii) Distinguish between fine and coarse plucking in tea production. (2 marks)

- e) Explain four reasons why you would encourage farmers to plant the following crops
 - i) Macadamia (2 marks)
 - ii) Coffee (2 marks)
 - iii) Coconut (2 marks)
- f) Explain four differences between Arabica and robusta coffee (2 marks)
- h) Explain three reasons why regular manuring from the first year of planting is essential in coconut production (3 marks)

SECTION B: ANSWER ANY TWO QUESTIONS (40 MARKS)

- 2. Explain the propagation of coffee under the following headings
 - a) Planting (5 marks)
 - b) Pruning (5 marks)
 - c) i) Coffee berry disease and its management
 - ii) Coffee wilt disease and its management (5 marks)
 - d) Harvesting (5 marks)
- 3. Explain sugarcane production under the following headings
 - i) Climatic requirements (5 marks)
 - ii) Uses (5 marks)
 - iii) Fertilizer application (5 marks)
 - iv) Planting (5 marks)
- 4. a) With relevant examples, explain how a farmer can management pests and diseases in a sisal farm (10 marks)
- b) Explain 10 challenges facing tea production in Kenya (10 marks)
- 5. a) Describe the following practices in relation to cashew nut production (12 marks)
 - i) Topworking
 - ii) Training and pruning
 - iii) Mulching
 - iv) Planting
- b) Explain four management practices you would advice the farmer to carry out for maximum production of pyrethrum (8 marks)