



MACHAKOS UNIVERSITY

University Examinations for 2017/2018 Academic Year

SCHOOL OF AGRICULTURE AND NATURAL RESOURCES MANAGEMENT

DEPARTMENT OF AGRICULTURAL EDUCATION AND EXTENSION

**FIRST YEAR FIRST SEMESTER EXAMINATION FOR BACHELOR OF EDUCATION
(SCIENCE)**

KRM 102 FARMING SYSTEMS

DATE: 6/12/2017

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)
 - i) Define farming systems (2 marks)
 - ii) Farming systems are very important in the production of field crops. Using a diagrammatic illustration, briefly describe how farming systems function (8 marks)
 - iii) Explain the classification of farming systems (6 marks)
- b) Describe the Bio-resource concept as used in integrated farming systems (4 marks)
- c)
 - i) Give a case scenario of resource allocation in an integrated farming systems (2 marks)
 - ii) Describe the potential benefits of the scenario mentioned above (2 marks)
- d) You are an extension officer in your sub-county agricultural office. Local farmers come seeking for your assistance on crop selection in order to improve productivity. Describe any **THREE** factors that guide them to select suitable crops (6 marks)

SECTION B: ANSWER ANY TWO QUESTIONS (40 MARKS)

QUESTION TWO (20 MARKS)

- a) Giving relevant examples, explain the major criteria of classifying important crops in Kenya (10 marks)
- b) Discuss the key roles played by crop production in the economic development in Kenya (10 marks)

QUESTION THREE (20 MARKS)

- a) Define integrated farming systems (2 marks)
- b) Explain how the principles of farming systems are achieved through the integrated farming systems approach (8 marks)
- c) Using a diagrammatic illustration, discuss the crop-livestock-fish integrated farming system (10 marks)

QUESTION FOUR (20 MARKS)

- a) Describe the principles of organic farming (10 marks)
- b) 'Organic farming is the future for sustainable Agriculture'. Discuss. (10 marks)

QUESTION FIVE (20 MARKS)

Giving relevant examples discuss the crop production systems mainly used in Kenya (20 marks)