



MACHAKOS UNIVERSITY

University Examinations for 2016/2017

SCHOOL OF AGRICULTURE AND NATURAL RESOURCES MANAGEMENT

DEPARTMENT OF AGRIBUSINESS MANAGEMENT AND TRADE

THIRD YEAR SECOND SEMESTER EXAMINATION FOR BACHELOR OF

EDUCATION (SCIENCE)

KRM 303: FIELD CROPS

Date: 28/11/2016

Time: 2:00 – 4:00 PM

INSTRUCTIONS:

Answer Question ONE and any other TWO questions

QUESTION ONE (COMPULSORY) (30 MARKS)

- a) Domestication of crops is known to have occurred about 10,000 years ago. Explain any THREE positive and TWO negative impacts of continued development in crop production (5 marks)
- b) Outline any FIVE uses of maize giving relevant examples in each case. (5 marks)
- c) Briefly discuss the agronomic importance of the following practices in field crop production;
- i) Crop rotation (8 marks)
 - ii) Inter cropping a cereal crop with a legume crop (3 marks)
 - iii) Describe briefly any FIVE causes of decline in agricultural productivity in the bread basket areas of Kenya. (5 marks)
 - iv) Explain any FOUR supply related policies to reduce food insecurity in Kenya (4 marks)

QUESTION TWO (20 MARKS)

Describe Sorghum production under the following sub-headings;

- i) Seedbed preparation (5 marks)
- ii) Weed Control (5 marks)
- iii) Pest Control (5 marks)
- iv) Highlight any five uses of the sorghum crop citing relevant examples in each case (5 marks)

QUESTION THREE (20 MARKS)

- a) Assume you are the Director of Agriculture Machakos County. Discuss any five major production constraints you would be expected to tackle in order to counter declining productivity of agriculture in your County? (10 marks)
- b) Propose a solution to each of the production constraints highlighted in a) above. (10 marks)

QUESTION FOUR (20 MARKS)

- a) Wheat is an economically important crop in Kenya. Giving relevant examples in each case, describe FIVE areas where wheat has contributed significantly to the economic prosperity of Kenya. (10 marks)
- b) Primary tillage is an important activity in field crop production. Citing relevant examples in each case explain any five objectives of primary tillage. (10 marks)

QUESTION FIVE (20 MARKS)

- a) Pigeon pea is an important crop in the semi-arid areas of Kenya. State any five uses of the crop. (5 marks)
- b) Explain any five factors a farmer should consider while selecting an appropriate potato crop variety to maximize productivity. (5 marks)
- c) Weeds are detrimental to most crops due to their competition for water and nutrients with crops. Describe any five non – chemical methods of controlling weeds. (10 marks)