



# MACHAKOS UNIVERSITY COLLEGE

(A Constituent College of Kenyatta University)

University Examinations 2015/2016

SCHOOL OF AGRICULTURE AND NATURAL RESOURCES MANAGEMENT  
DEPARTMENT OF AGRICULTURAL EDUCATION AND EXTENSION

FIRST SEMESTER EXAMINATION FOR DEGREE IN  
BACHELOR OF SCIENCE IN AGRICULTURAL EDUCATION AND EXTENSION,

BACHELOR OF SCIENCE IN AGRIBUSINESS MANAGEMENT

BACHELOR OF SCIENCE IN AGRICULTURAL EDUCATION

**KCU 201: PRINCIPLES OF CROP PRODUCTION**

Date:

Time: 2 hours

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**INSTRUCTION TO CANDIDATES:**

Answer *ALL* questions from Section A and any other *TWO* from Section B:

**SECTION A: COMPULSORY: (30 MARKS)**

1. a) Explain four advantages of asexual over sexual propagation. (4 marks)
- b) With three reasons, explain why a farmer should be advised to use minimum tillage. (3 marks)
- c) i) Explain four reasons why you dry of maize planting is important to a farmer (4 marks)
- ii) Explain four reasons why zoning is important in crop production (4 marks)
- d) A farmer intend to plant beans in a 4 ha of land. If the spacing is 40x15cm estimate the plant population (3 marks)
- e) (i) Calculate the amount of fertilizer to be applied in Kg/ha and in 50-kg bags, using the carrier as Sulphate of Ammonia (21% N), if the recommended rate is 40 kg N/ha. (4 marks)

- (ii) With two examples explain four reasons why a farmer should be advised to use a compound fertilizer. (5 marks)
- f) Explain three conditions that lead to disease development and serves as a guide to disease management in crops (3 marks)

**SECTION B: ANSWER ANY TWO QUESTIONS (40 MARKS)**

**QUESTION TWO**

- a) Explain any four cropping systems that can be adapted by Kenyan farmers and (12 marks)
- b) Explain any two advantages of each system in (a)above. (8 marks)

**QUESTION THREE**

- a) Explain five factors that affect crop production in Kenya. (10 marks)
- b) Explain five ways in which Kenyan farmers can adapt in order to conserve water in their farms (10 marks)

**QUESTION FOUR**

Explain 10 reasons why weeds are better competitors than crop plants for environmental or growth resources (20 marks)

**QUESTION FIVE**

- a) Explain five methods a farmer can successfully employ to manage pests and diseases in crops. (10 marks)
- b) Explain five ways a farmer can reduce post-harvest losses during crop production (10 marks)