



# MACHAKOS UNIVERSITY

University Examinations for 2020/2021 Academic Year

SCHOOL OF AGRICULTURAL SCIENCES

DEPARTMENT OF AGRICULTURAL EDUCATION AND EXTENSION

SECOND THIRD YEAR SPECIAL/ SUPPLEMENTARY EXAMINATION FOR  
BACHELOR OF SCIENCE IN AGRICULTURAL EDUCATION AND EXTENSION

AGR 201: PRINCIPLES OF CROP PRODUCTION

DATE: 26/3/2021

TIME: 2.00-4.00 PM

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## INSTRUCTIONS:

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

### SECTION A: COMPULSORY: (40 MARKS)

#### QUESTION ONE

- a) Explain six reasons why farmers carry out land preparation before planting (6 marks)
- b) Explain four reasons why knowledge of crop agro-ecological zones is important to an agricultural extension officer (4 marks)
- c) Explain four importance of weeds in crop production (4 marks)
- d)
  - i) Explain four reasons why a farmer would prefer to use compound fertilizers compared to straight fertilizers (4 marks)
  - ii) Describe four characteristics of Carbamide fertilizer that makes farmers prefer in utilizing than Chilean Nitrate (4 marks)
- e) Explain four factors that affect plant spacing in crop production (4 marks)
- f) Explain three special classification in legume production (3 marks)
- g) Explain four reasons why miscellaneous operations are necessary in subsistence farming (4 marks)
- h) Describe disease triangle concept used in management of disease (3 marks)

**SECTION B: Answer any THREE Questions (40 Marks)**

**QUESTION TWO**

- a) Describe SIX methods a farmer can successfully employ to manage pests and diseases in crops (12 marks)
- b) Explain FOUR ways farmers can adopt to manage post-harvest losses in Kenya (8 marks)

**QUESTION THREE**

- a) Describe FIVE methods that of fertilizer application in crops (10 marks)
- b) Explain FIVE methods that farmers can apply in an effort to control soil erosion in their farms (10 marks)

**QUESTION FOUR**

- a) Explain SIX ecological factors that affect crop production in Kenya (12 marks)
- b) Explain FOUR ways in which Kenyan farmers can adopt in order to enhance production in drylands (8 marks)

**QUESTION FIVE**

- a) Discuss preparation of THREE organic fertilizers (12 marks)
- b) Explain FOUR methods planting in crop production (8 marks)