



MACHAKOS UNIVERSITY

University Examinations for 2016/2017

SCHOOL OF AGRICULTURE AND NATURAL RESOURCES MANAGEMENT

DEPARTMENT OF AGRICULTURAL EDUCATION AND EXTENSION

**FIRST YEAR FIRST SEMESTER EXAMINATION FOR BACHELOR OF EDUCATION
(BIOLOGY AND AGRICULTURE)**

KCU 201: PRINCIPLES OF CROP PRODUCTION

Date: SCHOOLBASED

Time: 2hrs

INSTRUCTIONS:

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

SECTION A: 30 MARKS

QUESTION ONE (COMPULSORY) (30 MARKS)

- a) Agriculture is considered to be the backbone of Kenya's economy. Give any three reasons that support this statement. (6 marks)
- b) State any six environmental factors that affect crop growth and yields. (6 marks)
- c) State any three major conditions required to increase productivity through intercropping. (6 marks)
- d) Describe three methods used in crop propagation. (6 marks)
- e) Describe three different ways farmers can add value to their farm produce. (6 marks)

SECTION B: 40 MARKS

QUESTION TWO (20 MARKS)

- a) Imagine you are an agricultural advisor in Machakos county. Maize farmers have been giving different complaints such as appearance of pale green stunted lower leaves, leaf margins rolling up, and stunted plants with lower leaves that are tinted with purple coloration.
 - i) Give the diagnosis for the above deficiency symptoms. (3 marks)
 - ii) Outline six corrective measures you would advise the affected farmers to take. (6 marks)

- b) State six (6) micro elements required by plants for maximum production. (3 marks)
- c) Describe four factors that determine the type and amount of fertilizer applied. (8 marks)

QUESTION THREE

- a) Discuss four factors a farmer should consider when deciding on the number and types of secondary cultivations. (12 marks)
- b) Describe four characteristics of a good soil structure for crop production. (8 marks)

QUESTION FOUR

- a) Explain five advantages of crop rotation. (15 marks)
- b) Outline five disadvantages of intercropping. (5 marks)

QUESTION FIVE

- a) Describe five methods used for controlling weeds in crop production. (15 marks)
- b) Name two postharvest pests in grain crops, and describe three methods by which you can control them. (5 marks)