



MACHAKOS UNIVERSITY COLLEGE

(A Constituent College of Kenyatta University)
University Examinations for 2015/2016 Academic Year

SCHOOL OF AGRICULTURE & NATURAL RESOURCES

DEPARTMENT OF AGRICULTURE

FIRST SEMESTER EXAMINATION FOR DIPLOMA IN AGRICULTURAL
EDUCATION & EXTENSION

KCU 0102: PRINCIPLES OF CROP PRODUCTION

Date: 4/12/2015

Time: 8:30 – 10:30 AM

INSTRUCTIONS:

Answer Question One and Two Other Two Questions.

1.
 - a) Define three ecological requirements of a crop species (3 marks)
 - b) Give reasons for land preparations of a tomato crop (7 marks)
 - c) Explain the orderly establishment of a mango nursery (8 marks)
 - d) Differentiate between organic and mineral fertilizers (4 marks)
 - e) List the four main elements of fertilizer compounds (8 marks)
2. Explain the procedure followed in establishing field crops of the following specific crop types; (i) sorghum, (ii) sisal, (iii) tomato, (iv) cabbages and (v) passion fruit (20 marks)
3. Explain five constraints of crop productions. (20 marks)
4.
 - a) Explain the role of synthetic chemical products in post-harvest handling (6 marks)
 - b) List types of control mechanisms of pests and diseases at field level (8 marks)
 - c) Explain three ways in which weeds lower crop yield (6 marks)

5. a) Give the deficiency symptoms of the following macro nutrients in crop production
- i. Nitrogen (2marks)
 - ii. Phosphorus (2 marks)
 - iii. Calcium (2 marks)
 - iv. Potassium (2 marks)
- b) Explain the process of crop nutrient uptake (7 marks)
- c) List five constraints of crop production in the marginal lands of Kenya (5 marks)