



**MERU UNIVERSITY COLLEGE
OF SCIENCE & TECHNOLOGY**

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University Examinations 2010/2011

FIRST YEAR, FIRST SEMESTER EXAMINATIONS FOR CERTIFICATE IN
AGRICULTURE/DIPLOMA IN AGRICULTURAL EDUCATION AND EXTENSION

AGR 0120: PRINCIPLES OF CROP PRODUCTION

DATE: APRIL 2011

TIME: 1½ HOURS

INSTRUCTIONS: Answer question *one* and any other *two* questions

QUESTION TWO – (30 MARKS)

- (a) Discuss the factors that influence crop production in our economy. (10 Marks)
- (b) Describe the purpose of tillage in crop production. (5 Marks)
- (c) Highlight the importance of grafting as a method of crop improvement. (5 Marks)
- (d) Discuss the economic importance of weeds in crop production. (5 Marks)
- (e) In order to improve soil fertility for high crop productivity highlight five types of chemical and organic fertilizers that are commercially available. (5 Marks)

QUESTION TWO – (15 MARKS)

- (a) Describe the factors that a farmer may consider to determine the planting time. (6 Marks)
- (b) Describe the precision seed planting method. (5 Marks)
- (c) Explain the factors that determine the number of plants in one hectare piece of land. (4 Marks)

QUESTION THREE – (15 MARKS)

- (a) Describe the tissue culture as a biotechnology technique of producing new plants for planting. (5 Marks)
- (b) Explain the importance of tissue culture in crop propagation. (5 Marks)
- (c) What are the limitations of the above technique? (3 Marks)
- (d) State the conditions necessary for a successful tissue culture. (2 Marks)

QUESTION FOUR – (15 MARKS)

- (a) What are the factors that enable weeds to be so competitive against crop plants. (4 Marks)
- (b) Describe the heat treatment method to control pests in the soil. (3 Marks)
- (c) State the benefits of the above method. (3 Marks)
- (d) Discuss the harmful effective of crop pests. (5 Marks)

QUESTION FIVE – (15 MARKS)

- (a) Describe the ecological requirements of growing beans. (4 Marks)
- (b) What are the importance of growing beans? (3 Marks)
- (c) State two varieties of cultivated beans in Kenya. (2 Marks)
- (d) Outline the procedure followed in nursery establishment in tomato growing. (6 Marks)