**MERU UNIVERSITY OF SCIENCE AND TECHNOLOGY**

**P.O. Box 972-60200 – Meru-Kenya.**

**Tel: 020-2069349, 061-2309217. 064-30320 Cell phone: +254 712524293, +254 789151411**

**Fax: 064-30321**

**Website:** [**www.must.ac.ke**](http://www.must.ac.ke) **Email:** **info@must.ac.ke**

**University Examinations 2015/2016**

FIRST YEAR, SECOND SEMESTER EXAMINATION FOR CERTIFICATE IN AGRICULTURE

**AGR 0120: PRINCIPLES OF CROP PRODUCTION**

**DATE: AUGUST, 2016 TIME: 1 ½ HOURS**

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

**QUESTION ONE – (30 MARKS)**

1. Define the following terms:
2. Crop production system (2 Marks)
3. Relay cropping (2 Marks)
4. Crop pest (2 Marks)
5. Wind is an environmental factor which influences crop production. Briefly explain any five effects of wind on crop production. (5 Marks)
6. Land clearing is the initial operation undertaken during crop production. Explain the reasons as to why use of fire is discouraged for land clearing. (4 Marks)
7. Differentiate the following;
8. Seed viability and seed longevity (4 Marks)
9. Fallow cropping and bush fallowing (4 Marks)
10. Outline any three advantages of asexual reproduction. (3 Marks)
11. Briefly explain any three factors which determine the quality of farm yard manure

(3 Marks)

1. What is maturity indexing? (1 Mark)

**QUESTION TWO (15 MARKS)**

1. Environmental and social factors influence crop production in the world. Briefly explain how the following affects crop production;
2. Temperature (4 Marks)
3. Human diseases (4 Marks)
4. Altitude (3 Marks)
5. (i) What is an agro-ecological zone? (2 Marks)

(ii) Briefly explain any two plant factors determining the rooting of stem-section cuttings. (2 Marks)

**QUESTION THREE (15 MARKS)**

1. Burning is a methods employed by some farmers for clearing their land. State any five disadvantages of using this method. (5 Marks)
2. Outline any five reasons for undertaking primary cultivation in the farm. (5 Marks)
3. (i) What is spacing? (2 Marks)

(ii) State any three factors which determine the spacing the farmer uses. (3 Marks)

**QUESTION FOUR (15 MARKS)**

1. Seed dormancy is common in some plant seeds.
2. What is seed dormancy? (2 Marks)
3. Explain the two types of seed dormancy (3 Marks)
4. Briefly explain the common methods which farmers need to apply inorder to break seed dormancy. (6 Marks)
5. Determine the number of maize plants which a farmer can establish in his 0.45Ha of land when using a spacing of 90cm x 30 cm (4 Marks)