

**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, FIRST SEMESTER EXAMINATION FOR CERTIFICATE IN AGRICULTURE

**BIO 0110: AGRICULTURAL BOTANY**

**DATE: NOVEMBER, 2015 TIME:** $1½ $**HOURS**

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

**QUESTION ONE – (30 MARKS)**

1. Explain the importance of water in plants. (10 Marks)
2. Outline two types of seed germination. (4 Marks)
3. Explain the term plant morphology. (3 Marks)
4. Give the functions of each of the following cell organelles. (6 Marks)
5. Chloropasts
6. Lysosomes
7. Rough endoplasmic reticulum
8. Give the differences between monocotyledonous root and dichotyledonous root(5 Marks)
9. Give two types of Tissues found in Dicot stem and not monocot stem. (2 Marks)

**QUESTION TWO (15 MARKS)**

1. What is seed dormancy? (3 Marks)
2. Outline the causes of seed dormancy. (6 Marks)
3. Explain the methods of breaking the seed dormancy (6 Marks)

**QUESTION THREE (15 MARKS)**

1. Discuss the features of wind pollinated flower. (5 Marks)
2. Distinguish between growth and development. (4 Marks)
3. Outline types of meristems. (4 Marks)
4. Explain the following types of plants; (2 Marks)
5. Stress escapers
6. Water stress avoiders

**QUESTION FOUR (15 MARKS)**

1. Describe briefly the following types of water in the soil,
2. Capillary water (3 Marks)
3. Adsorbed water (3 Marks)
4. Differentiate between macronutrient and micronutrients. (4 Marks)
5. State the role of nitrogen in plants. (5 Marks)

**QUESTION FIVE (15 MARKS)**

1. Give the differences between monocotyledonous plants and dicotyledonous plant.

(10 Marks)

1. Outline the properties of water both physical and chemicals. (5 Marks)