

**MERU UNIVERSITY OF SCIENCE AND TECHNOLOGY**

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**University Examinations 2015/2016**

FIRST YEAR FIRST SEMESTER EXAMINATION FOR CERTIFICATE

IN

AGRICULTURE

**BIO 0110: AGRICULTURAL BOTANY**

**DATE: AUGUST 2016 TIME: 1 ½ HOURS**

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

**QUESTION ONE – (30 MARKS)**

1. Describe briefly the following major simple tissues as found in plants. (3 marks)
2. Collenchyma
3. Parenchyma
4. Sclerenchyma
5. Discuss the features of subdivision of gymnospermae. (5 marks)
6. A part from photosynthesis give other three functions of water in plants. (5 marks)
7. Outline the five major kingdoms under which organisms are classified. (2 marks)
8. Describe the functions of the following organelles. (5 marks)
9. Nucleus
10. Rough endoplasmic reticulum
11. Protoplasm
12. Lysosome
13. Plastids
14. Differentiate the following terms
15. Actinomorphic and zygomorphic plants. (4 marks)
16. Apopetalous and sympetalous flowers
17. Androecium and gynoecium
18. Monoecious and dioecious plants
19. Using suitable examples describe the following specialized roots. (4 marks)
20. Adventitious
21. Aerating
22. Haustorial
23. Tuberous
24. Outline the roles played by hormone gibberellins in plants. (4 marks)

**QUESTION TWO (15 MARKS)**

1. Describe the five major strategies that favour cross pollination in plants (5 marks)
2. Outline the process of fertilization in flowering plants. (10 marks)

**QUESTION THREE (15 MARKS)**

1. State five beneficial effects of transpiration in plants (5 marks)
2. Describe the main structural factors affecting the rate of transpiration (10 marks)

**QUESTION FOUR (15 MARKS)**

Describe how water and mineral salts move from soil until they reach the leaves in a tall plant.

(15 marks)