



UNIVERSITY OF EMBU

2016/2017 ACADEMIC YEAR

FIRST SEMESTER EXAMINATION

FIRST YEAR, FIRST SEMESTER FOR DEGREE IN BACHELOR OF SCIENCE
(AGRICULTURE EDUCATION AND EXTENSION), BACHELOR OF SCIENCE
(HORTICULTURE) AND BACHELOR OF SCIENCE (AGRICULTURE)

ACS 101: AGRICULTURAL BOTANY

DATE: DECEMBER 5, 2016

TIME: 11:00AM-1:00PM

INSTRUCTIONS:

Answer Question ONE and ANY other TWO Questions

QUESTION ONE (30 MARKS)

- List the features found in the phylum bryophyta that make them different (3 marks)
- What is cell theory (3 marks)
- The plant species *Lantana camara* has two generations, name them and state their roles in development (4 marks)
- During a class group discussion, you have learnt that some plant species avoid self-pollination. List mechanisms you learnt that plants use to avoid self pollination(3 marks)
- Draw a generalized plant leaf showing ONLY the parts of the mesophyll layer (4 marks)
- Name the three tissues that constitute ground tissues in plants (3 marks)
- List the four features that characterize meiosis (4 marks)
- Name three aims of plant taxonomy (3 marks)
- Name the three layers that constitute the fruit pericarp (3 marks)

QUESTION TWO (20 MARKS)

- a) Name the two forms of cells based on complexity (2 marks)
- b) With aid of a clearly labeled diagram discuss the components of a generalized plant cell (18 marks)

QUESTION THREE (20 MARKS)

During one of agricultural botany practical lessons, you are required to observe the processes of mitosis and meiosis under a compound microscope. Discuss in detail and with aid of diagrams what you expect to observe in each of the process.

QUESTION FOUR (20 MARKS)

Discuss tissues in plants.

QUESTION FIVE (20 MARKS)

Discuss the characteristics differentiating the agriculturally important families: malvaceae, brassicaceae, leguminosae and compositae.

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