



FreeExams.co.ke

**UNIVERSITY EXAMINATIONS
2022/2023 ACADEMIC YEAR**

**FIRST YEAR FIRST SEMESTER
SPECIAL/SUPPLEMENTARY EXAMINATIONS**

FOR THE DEGREE OF BACHELOR OF EDUCATION SCIENCE

COURSE CODE: ACR 111
COURSE TITLE: AGRICULTURAL BOTANY
DATE 4TH AUGUST 2023 TIME: 11 – 1 PM

INSTRUCTIONS TO CANDIDATES

Answer Question ONE and any other TWO Questions.

TIME: 2 Hours

This paper consists of 2 printed pages. Please Turn Over



QUESTION 1

- a) Fruits whether true or false, are broadly classified into three groups. With examples discuss the simple and aggregate types of fruits. (5 marks)
- b) Briefly describe FOUR factors that can influence the rate of photosynthesis in plants (4marks)
- c) Identify the family, genus and species of TEA and POTATO crops (5 marks)
- d) State TWO major functions of leaves (2 marks)
- e) List THREE factors affecting transpiration in plants (3 marks)
- f) Differentiate between a plant and animal cell (2marks)
- g) Explain the functions of a plant cell (2marks)
- h) Explain the importance of plants in an ecosystem—3marks
- i) Outline TWO similarities and TWO differences between mitosis and meiosis in plants (2marks).
- j) Explain the concept of phyllotaxy (2marks)

QUESTION 2

Write brief notes on the following plant families of agricultural significance

- (a) Brassicaceae (5 marks)
- (b) Fabaceae (5 marks)
- (c) Malvaceae (5 marks)
- (d) Solanaceae (5 marks)

QUESTION 3

- a) Describe the general plant cell structure and functions of various parts (10marks)
- b) Leaves of many plants are modified to perform specialized functions. List FIVE leaf modifications and describe the functions of each modification (10 marks)

QUESTION 4

- a) Discuss the economic importance of Fungi (10marks)
- b) Discuss the mechanisms of water and salt absorption by plants (10marks)

QUESTION 5

- a) Describe any FIVE permanent tissues and their functions in a plant (10 marks)
- b) Write an essay on the classification of angiosperms (10 marks)