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70



*(Knowledge for Development)*

**KIBABII UNIVERSITY**  
**UNIVERSITY EXAMINATIONS**  
**2022/2023 ACADEMIC YEAR**

**FIRST YEAR FIRST SEMESTER**  
**MAIN EXAMINATION**

**FOR THE DEGREE OF BACHELOR OF EDUCATION SCIENCE**

**COURSE CODE:           ACR 111**  
**COURSE TITLE:         AGRICULTURAL BOTANY**  
**DATE                       21<sup>ST</sup> DECEMBER 2022                       TIME: 2 – 4 PM**

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**INSTRUCTIONS TO CANDIDATES**

**Answer Question ONE and any other TWO Questions.**

**TIME: 2 Hours**

**This paper consists of 2 printed pages. Please Turn Over**



**KIBU observes ZERO tolerance to examination cheating**

### QUESTION 1

- a) Define agricultural botany and its scope. (2mks)
- b) Differentiate between dicot and monocot plants(2marks)
- c) Explain TWO advantages and disadvantages of cross pollination in plants (4mks)
- d) Identify and explain three divisions of cryptogams (3mks)
- e) What do you understand by "alternation of generations"(2mks)
- f) Identify the class, order, family, genus and species of Maize and common Beans (5mks)
- g) Explain the role of water in plants (3marks)
- h) Give TWO major functions of roots in plants (2 marks)
- i) State ONE similarity and one difference of gymnosperms and angiosperms (2 marks)
- j) Explain the terms Osmosis and Transpiration in plant physiology (2 marks)
- k) Highlight the significance of the process of meiosis in plants (3marks)

### QUESTION 2

- a) The grass family (Gramineae or Poaceae) is widely distributed and of greater importance than any other plant family. Discuss(20 marks)

### QUESTION 3

- a) Plants are an important part of the World's Ecosystem. Discuss (10mks)
- b) Discuss the importance of transpiration in plants (10 marks)

### QUESTION 4

- a) Describe the process of photosynthesis in green plants (10mks)
- b) Describe the process of fertilization in flowering plants (10mks)

### QUESTION 5

Exhaustively discuss root and stem modification in angiosperms giving examples  
(20 marks)