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DAG/DAH 052



University of choice

**MASINDE MULIRO UNIVERSITY OF SCIENCE AND
TECHNOLOGY (MMUST)
SCHOOL OF AGRICULTURE, VETERINARY SCIENCES AND
TECHNOLOGY (SAVET)**

MAIN CAMPUS

**UNIVERSITY EXAMINATIONS
2023/2024 ACADEMIC YEAR
MAIN EXAMS FOR
DIPLOMA IN GENERAL AGRICULTURE, HORTICULTURE**

COURSE CODE: DAG/DAH 052

COURSE TITLE: AGRICULTURAL BOTANY

DATE: 13.12.23

TIME: 8-10AM

INSTRUCTIONS TO CANDIDATES

This paper is divided into two sections, A and B. Answer ALL Questions in SECTION A and any Two in SECTION B

SECTION A (40 MARKS) Answer all questions

1. Explain briefly how you have contributed to minimizing climate change. [5 marks]
2. Write the following in full: [2 marks]
 - a. SDGs
 - b. ICBN
3. What is the significance of agricultural botany in the context of global food security? [5 marks]
4. Using dichotomous keys, classify the following fruits.
Kiwi (*Actinidia deliciosa*), Mango (*Mangifera indica*), Tomato (*Solanum lycopersicum*),
Orange (*Citrus sinensis*) [7 marks]
5. State the function of the following tissues found in leaves. [3 marks]
 - a. Epidermis
 - b. Vascular bundles
6. Illustrate a well labelled open stomata. [5 marks]
7. How does man benefit from photosynthesis? [5 marks]
8. Give one example for each of the following: [3 marks]
 - i. Dehiscent fruit
 - ii. Indehiscent fruit
 - iii. Fleshy fruit
9. A gardener's favorite crop died several days after she applied twice the recommended amount of fertilizer. What probably happened in terms of plant-water relations? [5 marks]

SECTION B (30 MARKS) Answer any TWO questions

10. Explain the diverse functions and adaptations of plant roots, highlighting the various types of roots and their modifications. Provide specific examples of plants and root structures that illustrate these adaptations. [15 marks]
11. a. Describe the different floral parts and their roles in the reproductive process. [10 marks]
b. Define transpiration and state why it is vital for plants. [5 marks]
12. a. Explain why it is important to accurately identify plants. [10 marks]
b. Differentiate primary growth and secondary growth. [5 marks]