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DAG 075

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 OF DIPLOMA IN GENERAL AGRICULTURE/HORTICULTURE

COURSE CODE: DAG/DAH 075

COURSE TITLE: SOIL FERTILITY AND PLANT NUTRITION

DATE: 17.04.2024 **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

MMUST observes ZERO tolerance to examination cheating

This Paper Consists of 2 Printed Pages. Please Turn Over

SECTION A: ANSWER ALL QUESTIONS (40 MARKS)

Q1. Differentiate between the following terms **(4marks)**

i) organic and inorganic fertilizers
ii) leaching and Runoff in terms of nutrients loss in the soil

Q2. Discuss the three types of green manure and give its advantages over the inorganic fertilizers **(10marks)**

Q3. Discuss the different fertilizer placement methods that are used today in agriculture systems **(10marks)**

Q4. State four factors to consider when choosing a soil amendment **(4marks)**

Q5. Outline the four important steps of phosphorous cycle **(4marks)**

Q6. State and explain what happens in 4 important steps in nitrogen cycle **(8marks)**

SECTION B (30 MARKS)

Q8. State and explain factors affecting nutrient availability in soils **(15marks)**

Q9.a) Outline the three criteria that regard or qualifies an element as an essential element in plant growth and development **(3marks)**

b) Differentiate between primary and secondary nutrients and give an example in each case **(2marks)**

c) Discuss the factors that a farmer should assess before applying fertilizer to the farm **(10marks)**

Q10. Discuss the different ways through which soil fertility is lost and state how the loss can be curbed **(15marks)**