



**MASINDEMULIROUNIVERSITY OF
SCIENCE AND TECHNOLOGY
(MMUST)**

MAIN CAMPUS

**UNIVERSITY EXAMINATIONS
2021/2022 ACADEMIC YEAR**

FIRST YEAR SECOND SEMESTER EXAMINATIONS

**FOR THE DEGREE
OF
MASTER OF SCIENCE IN PLANT HEALTH MANAGEMENT**

COURSE CODE: APH 824

COURSE TITLE: PLANT NUTRITION AND ABIOTIC ENVIRONMENT

DATE: 25th APRIL, 2022

TIME: 2-5 PM

INSTRUCTIONS TO CANDIDATES

Answer **ALL QUESTIONS:**

TIME: 2 Hours

MMUST observes ZERO tolerance to examination cheating

This Paper Consists of 2 Printed Pages. Please Turn Over.

QUESTION ONE**(15 MARKS)**

Giving examples, explain Liebig's principles of plant nutrition. Comprehensively discuss the importance of knowledge or study plant nutrition

QUESTION TWO**(15 MARKS)**

Giving examples, explain the roles of named plant nutrients and how they interact with enzymes in plant growth and productivity

QUESTION THREE**(15 MARKS)**

Giving an example in each case, discuss the uptake and roles of N, P, Ca and Mg in germination process of a named seed

QUESTION FOUR**(15 MARKS)**

Explain clearly how the physiological processes are affected by temperature and light for the growth of

- (a) Cool season (temperate) plants
- (b) Tropical plants

QUESTION FIVE**(10 MARKS)**

Explain the roles of bacteria and fungi in plant nutrition