



**MASINDE MULIRO UNIVERSITY OF
SCIENCE AND TECHNOLOGY
(MMUST)**

MAIN CAMPUS

**UNIVERSITY MAIN EXAMINATIONS
2023/2024 ACADEMIC YEAR**

FIRST YEAR FIRST SEMESTER EXAMINATIONS

**FOR THE DEGREE
OF
MASTER OF SCIENCE IN SOIL SCIENCE**

COURSE CODE: AsL 803

COURSE TITLE: SOIL BIOLOGY AND BIOREMEDIATION

DATE: 24.04.2024

TIME: 3-5PM

INSTRUCTIONS TO CANDIDATES

Answer any **FOUR** questions

TIME: 2 Hours

MMUST observes ZERO tolerance to examination cheating

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

1. Discuss factors affecting the bioavailability of soil contaminant prior to entry into plant or micro-organisms systemic circulations

(15 Marks)

2. Using examples where possible, differentiate between biodegradation and bioremediation

(15 Marks)

3. Discuss the types and characteristics of organisms used in bioremediation process

(15 Marks)

4. Explain why the use of Genetically Engineered Microorganisms (GEMs) is highly recommended for the elimination of hazardous unwanted wastes.

(15 Marks)

5. Discuss the mechanisms that may facilitate the bio-sorption process of biomass

(15 Marks)