



(University of Choice)

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

**UNIVERSITY MAIN EXAMINATION
2022/2023 ACADEMIC YEAR
MAIN CAMPUS**

FIRST YEAR SECOND SEMESTER EXAMINATIONS

**FOR THE DEGREE
OF
BACHELOR OF SCIENCE IN DISASTER MITIGATION AND
SUSTAINABLE DEVELOPMENT**

COURSE CODE: DSM 105

COURSE TITLE: BIODIVERSITY AND ECOLOGY

DATE: 11/4/2023

TIME: 3-5 PM

INSTRUCTIONS TO CANDIDATES

Question **ONE (1)** is compulsory

Answer **ANY TWO (2)** OTHER questions

MMUST observes ZERO tolerance to examination cheating

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

QUESTION ONE (COMPULSORY)

(a) Define the following terms;

- (i) Biodiversity (2 marks)
- (ii) Ecology (2 marks)
- (iii) Species (2 marks)
- (iv) Ecosystem (2 marks)
- (v) Biome (2 marks)
- (vi) Key stone species (2 marks)

(b) Using relevant examples, distinguish between;

- (i) Species richness and species abundance (4 marks)
- (ii) Biotic and abiotic factors (4 marks)

(c) Outline five challenges that biodiversity is facing in Kenya. (10 marks)

QUESTION TWO

(a) Human beings derive many resources and services from the environment. Discuss with examples. (10 marks)

(b) Using examples, discuss how climate change has impacted on biodiversity. (10 marks)

QUESTION THREE

(a) Explain how the loss of biodiversity alters the integrity of ecosystems. (10 marks)

(b) "Ecologists have classified ecology into various types". With examples discuss this statement. (10 marks)

QUESTION FOUR

(a) Explain the classification of biodiversity. (10 marks)

(b) Discuss any three (3) techniques that ecologists use to collect data. (10 marks)