



(University of Choice)

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

MAIN CAMPUS

MAIN EXAMINATIONS

2023/2024 ACADEMIC YEAR

FIRST YEAR FIRST SEMESTER EXAMINATIONS

**FOR THE DEGREE
OF
MSc IN CLIMATE CHANGE ADAPTATION FOR SUSTAINABLE
DEVELOPMENT**

COURSE CODE: DPM 802

**COURSE TITLE: POLICY ADAPTATION FOR CLIMATE CHANGE &
ENVIRONMENTAL SUSTAINABILITY**

DATE: 11/12/2023

TIME: 8-11 AM

INSTRUCTIONS TO CANDIDATES

- This paper contains **five (5) questions**
- Question **one (1) is compulsory** {total = 20 Marks}
- Attempt **any other three (3)** {total = 60 Marks} from the remaining questions

TIME: 3 Hours

MMUST observes ZERO tolerance to examination cheating

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



SECTION 1: COMPULSORY {20 MARKS}

Question ONE

- (a) Describe the following phrases as used in climate change.
- i). Emission scenarios (3 Marks)
 - ii). Climate scenarios (3 Marks)
 - iii). Global circulation model (3 Marks)
 - iv). Climate change scenarios (3 Marks)
- (b) Using relevant examples, distinguish between climate change and global warming (8 Marks)

SECTION II: ATTEMPT ANY OTHER THREE (3) QUESTIONS {60 MARKS}

Question TWO

- (a) Examine the energy transitions that are essential for adaptation to a warmer world at 1.5 °C (10 Marks).
- (b) Discuss in detail the role of indigenous knowledge in climate adaption in Africa (10 Marks)

Question THREE

- (a) Explain the term “climate change adaptation”? (3 Marks)
- (b) Discuss the role of Nature Based Solutions to Adaptation among coastal communities in Kenya (10 Marks)
- (c) Explain the role of the local communities and Civil Society Organizations in nature-based solutions at community level (7 Marks)

Question FOUR

Kenya’s National Adaptation Plan 2015-2030 is supporting adaptation measures geared towards enhancing climate resilience towards attainment of Vision 2030 and even beyond.

- a) Outline the objectives of Kenya’s National Adaptation Plan (4 Marks)
- b) What are the major priorities of the National Adaptation Plan? (8 Marks)
- c) What are the major shortcomings of Kenya’s National Adaptation Plan to strengthen climate resilience and how would you address them? (8 Marks)

Question FIVE

With global temperatures likely to increase by more than 1.5 °C, above pre-industrial levels, Ecosystem-Based adaptation to climate change is arguably of the greatest opportunities to the climate crisis.

- a) Define ecosystem-based adaptation and explain the significance of the ecosystem services it may offer (10 Marks)
- b) Briefly describe the procedure for conducting vulnerability and risk assessment for ecosystem-based adaptation and the role of the various stakeholders during the process (10 Marks).