



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

MAIN CAMPUS

**UNIVERSITY EXAMINATIONS
2022/2023 ACADEMIC YEAR**

FIRST YEAR SECOND SEMESTER EXAMINATIONS

**FOR THE DEGREE
OF
MASTER OF SCIENCE IN CLIMATE CHANGE ADAPTATION AND
SUSTAINABLE DEVELOPMENT**

COURSE CODE: DPM 805

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

DATE: 20/4/2023

TIME: 8-11 PM

INSTRUCTIONS TO CANDIDATES

This paper contains **five (5)** questions

Question **one (1)** is compulsory {total = 30 Marks}

Attempt **any other three (3)** {total = 60 Marks} from the remaining questions

Be brief and to the point

TIME: 3 Hours

MMUST observes ZERO tolerance to examination cheating

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

SECTION 1: COMPULSORY {30 MARKS}

Question ONE

- (a) Define the following terminologies as used in climate change.
- i). Emission scenarios (2 Marks)
 - ii). Climate scenarios (2 Marks)
 - iii). Global circulation model (2 Marks)
 - iv). Climate change scenarios (2 Marks)
 - v). Maladaptation (2 Marks)
 - vi). Green-Blue Economy (2 Marks)
- (b) Using relevant examples, distinguish between climate change and global warming (4 Marks)
- (c) Identify and explain the major components of climate forcing (4 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) What is climate change policy coherency? (5 Marks)
- (c) Discuss how you can achieve climate change policy and programming coherence in Africa (12 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) Describe briefly the procedure for conducting vulnerability and risk assessment for ecosystem-based adaptation and the role of the various stakeholders during the process (10 Marks).