



(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 801

**COURSE TITLE: CLIMATE CHANGE IMPACTS AND
VULNERABILITY**

DATE: 13/12/2023 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

Here listed are observed impacts of climate change. Write briefly about each of them.

- a) Changing hydrological and biological systems **(4 marks)**
- b) Warming which in turn causes climate change **(4 marks)**
- c) Steady increase in the amount of atmospheric Green House Gases **(4 Marks)**
- d) Deforestation that reduces trees thereby amplifying accumulation of Carbon Dioxide in the atmosphere **(4 marks)**
- e) Damage associated with increase in coastal flooding **(4 marks)**

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

Question TWO

Briefly describe loss of production capacity that result from desertification on the following.

- a) A progressive decline in harvests **(5 marks)**
- b) Deflation of the top layer of humus from the soil and dust storms **(5 marks)**
- c) Less biological diversity through loss of species **(5 marks)**
- d) Failure of traditional systems which previously functioned well both economically and socially **(5 marks)**

Question THREE

- a) Write briefly about “the politics of climate change” **(10 marks)**
- b) Describe the failure of traditional systems which previously functioned well both economically and socially **(10 marks)**

Question FOUR

Historically humans have tilled land for agricultural outputs and economic growth for a long time. The method of preparing land pretty much depends on the technology different countries have acquired. Describe any such method used in Neolithic times in Kenya **(20 marks)**

Question FIVE

Describe role of melting of mountain glaciers, mountain ice caps and ice caps of Greenland and Antarctic lands on the Earth’s climate change **(20 Marks)**