30

(University of Choice)

MASINDE MULIRO UNIVERSITY OF SCIENCE AND TECHNOLOGY (MMUST)

MAIN CAMPUS

MAIN EXAMINATIONS

2021/2022 ACADEMIC YEAR

FIRST YEAR SECOND SEMESTER EXAMINATIONS

FOR THE DEGREE OF DOCTOR OF PHILOSOPHY IN DISASTER MANAGEMENT AND SUSTAINABLE DEVELOPMENT

COURSE CODE: **DSM 905**

COURSE TITLE: **WEATHER AND CLIMATE IN DISASTER MANAGEMENT**

DATE: 25/04/2022 **TIME:** 2 – 5PM

INSTRUCTIONS

This Paper Contains **FIVE** Questions

Answer any **FOUR** Out of **FIVE**

MMUST observes ZERO tolerance to examination cheating

QUESTION ONE

(a) Distinguish between elements of weather and the parameters of climate. **(8 marks)**

(b) Describe space and time variability of the following:

i. Rainfall in the Lake Victoria basin **(6 marks)**

ii. Temperature in some parts of ASAL areas of Kenya **(6 marks)**

QUESTION TWO

(a) Name four meteorological measuring instruments and their parameters. **(10 marks)**

(b) Discuss how you can use the instruments in (a) to give data on the weather. **(10 marks)**

QUESTION THREE

Society responds to different livelihoods through their (a) sensitivity (b) adaptability (c) vulnerability. Explain the relationship among the three phenomena. **(20 marks)**

Question FOUR

Explain global climate change that can bring changes in each of the following:

(a) Climate variability **(8 marks)**

(b) Extreme weather events **(6 marks)**

(c) Mean climate conditions **(6 marks)**

QUESTION FIVE

Describe and explain the periodic generation of El Nino southern oscillation. **(20 marks)**