(University of Choice)

MASINDE MULIRO UNIVERSITY OF

SCIENCE AND TECHNOLOGY

(MMUST)

MAIN CAMPUS

UNIVERSITY EXAMINATIONS

2021/2022 ACADEMIC YEAR

SECOND YEAR FIRST SEMESTER EXAMINATION

SPECIAL/SUPPLEMENTARY EXAMINATION

FOR THE DEGREE OF

BACHELOR OF SCIENCE IN DISASTER PREPAREDNESS AND ENVIRONMENTAL

TECHNOLOGY

COURSE CODE: DPE 200

COURSE TITLE: NATURAL HAZARDS AND DISASTERS

DATE: 27/07/2022   **TIME: 11 – 1 PM**

INSTRUCTIONS TO CANDIDATES

This paper contains **four (4)** questions
Question **one (1) is compulsory {total = 30 Marks}**
Attempt **any other two (2) {total = 40 Marks}** from the remaining questions
Be brief and to the point

MMUST observes ZERO tolerance to examination cheating

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

SECTION I: COMPULSORY {30 MARKS}

Question ONE

a) Name and briefly describe any two (2) biological hazards. (**10 Marks**)
b) How do the following features and situations cause flooding?
   i. Dams (**5 Marks**)
   ii. Forest fires (**5 Marks**)
   iii. Ice jams (**5 Marks**)
c) La Nina phenomenon triggers flooding. Discuss. (**5 Marks**)

SECTION II: ATTEMPT ANY OTHER TWO (2) QUESTIONS {40 MARKS}

Question TWO

a) What is a natural hazard? (**5 Marks**)
b) Your role as a disaster manager is to suggest and implement mitigation measures. What examples of mitigation measures would you suggest for landslides vulnerable residents of Kakamega County? (**10 Marks**)
c) Give a brief description of the response and mitigation measures available for flooding situations triggered by dykes. (**5 Marks**)

Question THREE

a) What is the difference between riverine floods and flash floods? (**5 Marks**)
b) An earthquake disaster is a function of the risk process. Discuss. (**10 Marks**)
c) With the aid of a diagram, explain the causal phenomenon of drought during El Nino conditions. (**5 Marks**)

Question FOUR

a) Explain five (5) preparedness measures that you would suggest for the drought vulnerable residents of Kitui County? (**5 Marks**)
b) Name and describe any three (3) categories of drought hazard. (**9 Marks**)
a) Discuss the following:
   i. Palmer drought index (**3 Marks**)
   ii. Standardized precipitation index (**3 Marks**)