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(University of Choice)

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

MAIN CAMPUS

**UNIVERSITY EXAMINATIONS
2023/2024 ACADEMIC YEAR**

THIRD YEAR FIRST SEMESTER EXAMINATION

MAIN EXAMINATION

**FOR THE DEGREE OF BACHELOR OF SCIENCE IN DISASTER
PREPAREDNESS AND ENVIRONMENTAL TECHNOLOGY**

COURSE CODE: DPE 302

**COURSE TITLE: ICT APPLICATIONS IN DISASTER
PREPAREDNESS**

DATE: 14/12/2023

TIME: 3-5PM

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

TIME: 2 Hours

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) Describe any five (5) ICT tools that are used in disaster preparedness functions (10 Marks)
- b) Name and discuss the various ICT related measures that are administered at pre-disaster phase (10 Marks)
- c) Using illustrations, describe the phases of an early warning system developed for catastrophic event forecasting (10 Marks)

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

Question TWO

- a) The traditional framework of early warning systems is achieved using ICTs in four phases. Discuss (10 Marks)
- b) You have been employed by the Kakamega County government as an Emergency ICT Expert. Your first task is to address issues related to ICTs for disaster information management. What examples of ICTs would you make reference to for this task? (10 Marks)

Question THREE

- a) Describe the role of remote sensing and geospatial information in disaster preparedness (10 Marks)
- b) Using the case of the Flood Early Warning System for Butaleja District in Eastern Uganda, describe the role of ICTs in disaster early warning (10 Marks)

Question FOUR

Using examples, explain the role played by the following communication tools in disaster risk management.

- a) Amateur and Community Radio (5 Marks)
- b) Telephone (Fixed and Mobile) (5 Marks)
- c) Cell Broadcasting (5 Marks)
- d) Short Message Service (SMS) (5 Marks)

GOOD LUCK !