



*(University of Choice)*

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

**UNIVERSITY EXAMINATIONS  
2021/2022 ACADEMIC YEAR**

**FIRST YEAR FIRST SEMESTER EXAMINATIONS**

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

**CODE: DSM 906**

**COURSE TITLE: DISASTER THEORY AND APPLICATIONS**

**DATE: 26/04/2022**

**TIME: 9 – 12 NOON**

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**INSTRUCTIONS TO CANDIDATES**

1. This paper consists of **FIVE (5)** questions
2. Answer any **FOUR (4)** Questions
3. Each question carries **20** marks

**TIME: 3 Hours**

**MMUST observes ZERO tolerance in examination cheating  
This Paper consists of 2 printed pages, Please Turn Over**



### QUESTION ONE

- (a) Discuss briefly the main reasons why disaster models are beneficial in Disaster Management. **(5 Marks)**
- (b) Analyze the strengths and limitations of each of the three models indicated below:
- (i) The Disaster Crunch Model
  - ii) Expand-contract model
  - (iii) Disaster Management Cycle **(15 Marks)**

### QUESTION TWO

With the help of illustrations, discuss briefly the nexus between 'Disasters and Development'. Give relevant examples **(20 marks)**

### QUESTON THREE

- a) Explain what is meant by the term 'Mitigation'. **(2 Marks)**
- b) Discuss briefly the various methods used in
- (i) Non-structural mitigation. **(10 Marks)**
  - (ii) Structural Mitigation Methods **(8 Marks)**

### QUESTION FOUR

Discuss briefly any **FIVE (5)** guiding principles necessary for the achievement of the goals of the Sendai Framework for DRR 2015-2030. **(20 Marks)**

### QUESTION FIVE

Discuss briefly the differences between "Traditional Approach" and "Modern Approach" to Disaster Management. **(20 Marks)**