



(University of Choice)

MASINDE MULIRO UNIVERSITY OF SCIENCE AND TECHNOLOGY (MMUST)

MAIN CAMPUS

UNIVERSITY SPECIAL/SUPPLEMENTARY EXAMINATIONS

2018/2019 ACADEMIC YEAR

SECOND YEAR SECOND SEMESTER EXAMINATIONS

**FOR
THE DEGREE
OF**

**BACHELOR OF SCIENCE IN DISASTER MITIGATION AND SUSTAINABLE
DEVELOPMENT**

COURSE CODE: DSM 210

COURSE TITLE: APPLIED GEOMORPHOLOGY

DATE: 26/9/2019

TIME: 12 – 2PM

Instructions to Candidates

- This paper contains FOUR (4) questions
- Answer ALL questions in Section A and ANY TWO (2) in Section B

TIME: 2 HOURS

MMUST observes ZERO tolerance to examination cheating

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

Question ONE

- a) State the factors that affect the karst process. (4 Marks)
- b) Briefly describe the main layers of Earth structure. (3 marks)
- c) Explain how humans have modified fluvial landscapes. (3 Marks)
- d) Explain how currents and waves produce landforms. (4 Marks)
- e) Describe the formation of the following rock types:
 - i. Igneous rocks (3 Marks)
 - ii. Sedimentary rocks (3 Marks)
 - iii. Metamorphic rocks (3 Marks)
 - i. Igneous rocks (3 Marks)
- f) Define the following geological terms.
 - i. Mass wasting (1 Mark)
 - ii. Endogenic geomorphic process (1 Mark)
 - iii. Exogenic geomorphic process (1 Mark)
 - iv. Denudation (1 Mark)

Question TWO (20 Marks)

- a) Discuss the hazards associated with the following geologic events and their mitigation measures.
 - i. Earthquakes (8 Marks)
 - ii. Volcanic eruptions (8 Marks)
- b) Explain how Karst landforms are formed (4 Marks)

Question THREE (20 Marks)

- a) Explain the three tectonic plate boundaries and associated tectonic features. (14 marks)
- b) Explain briefly how the following surveying techniques can be used in geological hazard mapping:
 - i. Remote sensing (3 marks)
 - ii. Aerial photography (3 marks)

Question FOUR (20 Marks)

Describe with aid of sketches the formation of two types of:

- i. Coastal landforms (4 Marks)
- ii. Aeolian Landforms (4 Marks)
- iii. Alluvial landforms (4 Marks)
- iv. Glacial Land forms (4 Marks)
- v. Karst processes and land forms (4 Marks)