



(University of Choice)

MASINDE MULIRO UNIVERSITY OF SCIENCE AND TECHNOLOGY (MMUST)

(Main Campus)

UNIVERSITY EXAMINATIONS

2019/2020 ACADEMIC YEAR

EXAMINATION

SECOND YEAR SECOND SEMESTER EXAMINATIONS

FOR THE DEGREE OF

BACHELOR OF SCIENCE IN CIVIL AND STRUCTURAL ENGINEERING

COURSE CODE: CSE 226

COURSE TITLE: ENGINEERING GEOLOGY

DATE: WEDNESDAY 4TH NOVEMBER 2020 TIME: 9.00 – 11.00 AM

Instructions to Candidates

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

MMUST observes ZERO tolerance to examination cheating

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

SECTION A: Answer ALL questions [30 Marks]**Question ONE**

- a) Describe how volcanoes are formed [3 Marks]
- b) Briefly describe the following:
- i) Plate tectonics [3 Marks]
 - ii) Importance of igneous rocks [4 Marks]
 - iii) Earth quake Engineering [3 Marks]
- c) State the importance of engineering Geology to a civil engineer [5 Marks]
- d) List and describe the evidences supporting the theory of continental drift [4 Marks]
- e) Describe the effects of seismic loading on engineering projects [5 Marks]
- f) Explain the geological factors that affect the design of a building [3 Marks]

SECTION B: Answer ANY THREE questions [40 Marks]**Question TWO**

- a) State and describe categories of volcanoes in relation to their formation [10 Marks]
- b) Describe different magma flow types based on temperature, viscosity and gas content [10 marks]

Question THREE

- c) Explain the effects of groundwater on civil engineering projects [10 marks]
- b) With an aid of a sketch, describe how Divergent plate boundary beneath a continent lead to occurrence of an earthquakes, ocean basins, landslides and rift valley formation [10 Marks]

Question FOUR

- a) Discuss the effects of earthquakes on structures [10 Marks]
- b) Describe evidences supporting the theory of plate tectonics in relation to engineering Geology [10 Marks]

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