



TECHNICAL UNIVERSITY OF MOMBASA

FACULTY OF ENGINEERING AND TECHNOLOGY
DEPARTMENT OF BUILDING & CIVIL ENGINEERING
UNIVERSITY EXAMINATION FOR:
DIPLOMA IN ARCHITECTURE

EAR 2104: GEOLOGY AND CLIMATOLOGY

END OF SEMESTER EXAMINATION

SERIES: DECEMBER 2016

TIME: 2 HOURS

DATE: 22 Dec 2016

Instructions to Candidates

You should have the following for this examination

-Answer Booklet, examination pass and student ID

-Drawing instruments.

-Scientific calculator

This paper consists of five questions.

Attempt any THREE questions.

Do not write on the question paper.

QUESTION ONE

(a) Briefly explain the following:

- (i) Causes of colour variation in rock forming minerals
- (ii) 'Streak' as applied to mineralogy and its significance (10 marks)

(b) Outline characteristics of a basaltic rock stating **TWO** uses (10 marks)

QUESTION TWO

(a) Compare response of a limestone to properties of a granite if the rocks are subjected to loading. (4 marks)

(b) Outline **FOUR** characteristics for a basaltic rock. (8 marks)

c) Distinguish a dyke from a sill. (8 marks)

QUESTION THREE

(a) Briefly the following: (i) the term 'Cement' as applied to rocks.
(ii) **FOUR** factors influencing contact metamorphism (12 marks)

(b) Outline main diagenetic changes that transform loose material into a bedrock while considering one example. (8 marks)

QUESTION FOUR

Explain **FOUR** elements of weather showing how each can be catered for in building construction. (20 marks)

QUESTION FIVE

Describe considerations for orientation of buildings in a hot desert region. (20 marks)