



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 properties of quartz to properties of a calcite mineral. (8 marks)

(b) Outline **THREE** metamorphic changes that can affect sediments. (12 marks)

QUESTION THREE

(a) Briefly explain unsuitability of marbles material for road works. (8 marks)

(b) Briefly describe diagenetic changes that can transform silts to bedrock. (12 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 cold region (20 marks)