



TECHNICAL UNIVERSITY OF MOMBASA  
**Faculty of Engineering &  
Technology**

DEPARTMENT OF BUILDING & CIVIL ENGINEERING

DIPLOMA IN ARCHITECTURE

EAR 2104: GEOLOGY & CLIMATOLOGY

SPECIAL/SUPPLEMENTARY EXAMINATION

**SERIES: MARCH 2014**

**TIME ALLOWED: 2 HOURS**

**Instructions to Candidates:**

You should have the following for this examination

- *Answer Booklet*
- *Scientific Calculator*

This paper consists of **FIVE** questions.

Answer any **THREE** questions

Maximum marks for each part of a question are as shown

This paper consists of **TWO** printed pages

### **Question One**

- a) Briefly explain the significance of geology in selection of a site for building construction **(8 marks)**
- b) Outline the influence of hardness of a mineral on physical properties of rocks in which the minerals occur **(6 marks)**
- c) Distinguish a basalt from a granite if the two rock types are encountered on a construction site. **(6 marks)**

### **Question Two**

- a) Distinguish a dyke from a sill with the aid of sketches **(6 marks)**
- b) Outline **THREE** characteristics of a volcanic rock **(6 marks)**
- c) Outline **THREE** main characteristics of:
  - (i) Limestone
  - (ii) Granite**(8 marks)**

### **Question Three**

- a) Explain the term “cement” as applied to sedimentary rocks. **(2 marks)**
- b) Briefly explain the formation of a quartzite **(6 marks)**
- c) Briefly describe contact metamorphism of Argillaceous sediments **(8 marks)**

### **Question Four**

- a) Outline the geology of Nyanzian and Kavirondian region of Western part of Kenya. **(10 marks)**
- b) Summarize the succession of sedimentary rocks in coast region of Kenya **(10 marks)**

### **Question Five**

- a) Explain the following:
  - (i) Climatology
  - (ii) Precipitation as a meteorological parameter
  - (iii) Modification of climate by man**(10 marks)**
- b) Briefly explain the influence of climate elements on Architecture **(10 marks)**

