JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY

UNIVERSITY EXAMINATIONS **2013/2014 ACADEMIC YEAR**

FIRST YEAR, SECOND SEMESTER EXAMINATION FOR DIPLOMA IN BUILDING AND CIVIL ENGINEERING

TBC- 2123 ENGINEERING GEOLOGY
August 2013 **TIME: 1.5 HOURS**

INSTRUCTIONS TO CANDIDATES
This paper consists of 5 questions
Answer Question ONE and any other TWO Questions

QUESTION ONE

a) In reference to profession of Building and Civil Engineering, discuss the relevance of knowledge of geology.

(8 Marks)

b) Explain the areas of focus of the following aspects of geological studies

i. Geotechnics
ii. Petrology
iii. Palaeontology

(6 Marks)

c) State the hierarchy of geologic time scale

(4 Marks)

d) State nature of the THREE layers of Earth's interior

(6 Marks)

e) State any THREE reasons for carrying out site investigation

(6Marks)

QUESTION TWO

a) Distinguish between intrusive and extrusive rocks

(4 Marks)

b) Compare and contrast TWO physical features of Igneous and Sedimentary rocks

(5 Marks)

c) Giving TWO examples explain the formation process of metamorphic rocks.

(6 Marks)

QUESTION THREE

a) Distinguish between mineral and a rock and list TWO types of each.

(7 marks)

b) Distinguish between the following physical properties of minerals.

i. Colour and streak
ii. Cleavage and hardness

(8 Marks)

QUESTION FOUR

(a) Define the following terms as applied in structural geology

i. Bedding
ii. Outcrop

(5 Marks)

(b) List TWO types of folds

(2 Marks)

(c) State any FOUR features that may help you recognize a fault in the field.

(8 Marks)

QUESTION FIVE

Discuss any TWO surface and any TWO subsurface methods for carrying out site investigation (15 Marks)