



MASENO UNIVERSITY

UNIVERSITY EXAMINATIONS 2015/2016

**FIRST YEAR FIRST SEMESTER EXAMINATION FOR THE DEGREE OF
BACHELOR OF ARTS IN DISASTER MANAGEMENT WITH
INFORMATION TECHNOLOGY**

CITY CAMPUS - REGULAR

NGA 101: INTRODUCTION TO EARTH SCIENCES

Date: 30th November, 2015

Time: 9.00 - 11.00 am

INSTRUCTIONS:

- Answer question ONE and any other TWO questions.



NGA101: INTRODUCTION TO EARTH SCIENCES

INSTRUCTIONS: Answer question ONE and any other TWO questions

1.a) Write short notes on the following

- i. Earth Science
- ii. Geology
- iii. Oceanography
- iv. Meteorology
- v. Earthquake **10 marks**

b) State the four major components of soil. **4 marks**

c) State four factors that commonly trigger mass movements **4 marks**

d) Explain the following terms: Glacier, Ice age, Snow line and Runoff. **4 marks**

e) Differentiate between deflation and abrasion. **4 marks**

f) Distinguish between P Waves and S Waves **4 marks**

2.a) Most researchers conclude that Earth and the other planets formed at essentially the same time. Discuss the Nebular Hypothesis. **10 marks**

b) With aid of a diagram, highlight the chemical composition and the physical properties of the earth **6 marks**

a) Explain the theory of plate tectonics **4 marks**

3.a) Explain the four major processes by which Minerals form. **8 marks**

a) Using relevant examples, discuss the properties of minerals. **12 marks**

4.a) Explain the terms:

- i. Weathering
- ii. Deposition
- iii. Regional metamorphism
- iv. Compaction
- v. Fossils

10 marks

b) Under what conditions can one rock change into another?

6 marks

c) The texture of metamorphic rocks can be foliated or non-foliated. Explain

4 marks

5.a) Geoscientists who explore for oil and gas need to understand how these hydrocarbons are formed and trapped and how to find the buried reserves. For oil and gas to be trapped underground, discuss the five things that must happen. **10 marks**

b) Scientists have been investigating earthquake prediction for many years and have shown that, while it is impossible to predict earthquakes (the exact time and place where they will occur) it may be possible to forecast earthquakes. Discuss the methods used for these forecast. **10 marks**

6. Geologic time is divided into units based on fossil evidence. Discuss the 4 major divisions of the Geologic time scale explaining the Earth's history. **20 marks**