



SOUTH EASTERN KENYA UNIVERSITY

UNIVERSITY EXAMINATIONS 2014/2015

FIRST YEAR FIRST SEMESTER EXAMINATION FOR THE BACHELOR OF SCIENCE (HYDROLOGY AND WATER RESOURCE MANAGEMENT)

WRM 103: FUNDAMENTALS OF GEOLOGY

DATE: 21ST APRIL 2015 TIME: 2 HOURS

Instructions:

Answer question ONE and any other TWO questions. Illustrate your answers by means of carefully drawn sketches or diagrams

Question One:

- a) What is the difference between a mineral and a rock? Give two examples in each
4 Marks
- b) What is the mode of formation of an igneous rock?
4 Marks
- c) Describe some of the factors that determine the texture in igneous rocks?
8 Marks
- d) Highlight three basic characteristics of plutonic rocks?
3 Marks
- e) Explain some of the physical properties used in the identification of minerals
5 Marks
- f) Describe three processes involved in the lithification of sediments
6 Marks

Question Two

- a) Why are volcanoes associated with subduction zones? 8 Marks
- b) Describe the seismic waves responsible for earthquake occurrence 12 Marks

Question Three

- a) What is the difference between euhedral and anhedral crystals as used in metamorphic rocks? 4 Marks
- b) What is the meaning of the terms paleontology and fossils? 4 Marks
- c) Discuss the importance and uses of fossils 12 Marks

Question Four

Discuss the role of a river in the sediment erosion and formation of rocks 20 Marks