



KENYATTA UNIVERSITY
UNIVERSITY EXAMINATIONS 2015/2016

**THIRD SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE
IN REAL ESTATE, BACHELOR OF SCIENCE IN ARCHITECTURE AND INTERIOR
DESIGN**

ABE 101: ELEMENTS OF THE GEOPHYSICAL ENVIRONMENT

DATE: WEDNESDAY 3RD AUGUST 2016

TIME: 8.00 A.M. - 10.00 A.M.

INSTRUCTIONS:

Section A is Compulsory. Answer any two questions in Section B.

Section A

Question 1: Mandatory (30 marks)

- a) Explain the term Geomorphology and state its interaction with the different spheres. (6 marks)
- b) With an aid of a diagram, describe the structure of the earth's interior giving characteristics of each:
 - i. Crust (5 marks)
 - ii. Mantle (5 marks)
 - iii. Core (5 marks)
- c) Define the term isostasy. (2 marks)
- d) Differentiate between the P wave and S wave (2 marks)
- e) Explain the importance of geology in five different application areas. (5 marks)

Section B:

Answer any TWO questions from this section. All questions carry equal marks.

Question 2 (20 marks)

- a) Define the term soil. (3 marks)
- b) Describe the three phase system of soil. (4 marks)

- c) Name five soils common in Kenya and state their characteristics. (10 marks)
- d) Discuss how human activities contribute to soil genesis. (3 marks)

Question 3 (20 marks)

- a) State three metamorphic rocks and their original rocks. (4 marks)
- b) Differentiate the following giving an example of each:
- i. Intrusive vs Extrusive rocks. (4 marks)
 - ii. Clastic rocks vs Chemical rocks. (4 marks)
 - iii. Contact metamorphism vs Cataclastic metamorphism (4 marks)
- c) From the geological time scale state in age order the Eons. (4 marks)

Question 4 (20 marks)

- a) With an aid of a diagram, describe three types of volcanic cones. (12 marks)
- b) State the main locations that earthquakes occur. (3 marks)
- c) Describe the influence of volcanic emissions on climate. (2 marks)
- d) Briefly describe any three anthropogenic factors that influence climate change. (3 marks)

Question 5 (20 marks)

- a) Using diagrams, explain the four main drainage patterns. (12 marks)
- b) Explain the four processes through which a river erodes materials. (8 marks)
