

**UNIVERSITY OF KABIANGA**

**UNIVERSITY EXAMINATIONS**

**2016/2017 ACADEMIC YEAR**

**FIRST YEAR SECOND SEMESTER EXAMINATION**

**FOR THE DEGREE OF BACHELOR OF SCIENCE IN AGROFORESTRY**

**COURSE CODE: FOR 121**

**COURSE TITLE: INTRODUCTION TO SOIL SCIENCE**

**DATE: 26TH JUNE, 2017**

**TIME: 9.00 A.M-12.00 NOON**

**INSTRUCTIONS TO CANDIDATES:**

Answer **ALL** Questions in **section A** and any other **TWO** Questions in **section B**.

Include illustrations where appropriate.

**SECTION A**

1. Explain the following concepts as used in soil science. (6 marks)
2. Soil horizon
3. Parent material
4. Bulk Density
5. Water holding capacity
6. Transformation
7. Chemical weathering
8. Describe three professionals in the discipline of soil science. (3 marks)
9. Giving examples identify and briefly explain five main soil functions. (5 marks)
10. a) Identify and briefly explain five soil chemical properties. (5 marks)

b) describe the process through which soils become alkaline and suggest ways of combating soil alkalinity.

 5. Giving examples, define and differentiate between soil macronutrients and

 micronutrients. (5 marks)

**SECTION B**

1. a) Identify and briefly discuss four main soil chemical weathering processes. (8 marks)

b) Identify and discuss different factors that affect soil formation and development. (12 marks)

 7. Discuss the principles of soil classification as put forward by the World Reference Base for Soil Resources (WRB, 2006). (20 marks)

 8. Discuss the different soil horizons and designations highlighting their major characteristics and composition. (20 marks)