



*(Knowledge for Development)*

**KIBABII UNIVERSITY**  
**UNIVERSITY EXAMINATIONS**  
**2020/2021 ACADEMIC YEAR**

**SECOND YEAR**  
**SPECIAL/SUPPLEMENTARY EXAMINATION**

**FOR THE DEGREE OF BACHELOR OF SCIENCE AGRICULTURE  
EDUCATION AND EXTENSION & BACHELOR OF EDUCATION  
SCIENCE**

**COURSE CODE:** ASS 223/SAB 310

**COURSE TITLE:** SOIL MORPHOLOGY AND CLASSIFICATION

**DATE:** 20<sup>TH</sup> JANUARY 2022

**TIME:** 8 – 10 AM

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**INSTRUCTIONS TO CANDIDATES**

Answer Question and any other TWO Questions.

TIME: 2 Hours

This paper consists of 2 printed pages. Please Turn Over



KIBU observes ZERO tolerance to examination cheating

1. a) Differentiate between the following terms
  - i) Ferraltilization and Calcification pedogenic processes. (2 Marks)
  - ii) Petrogenesis and Petrography (2 Marks)
  - iii) Eutric and Mollic Epipedons (2 Marks)
  - iv) Plinthic and Stagnic Level 2 Soil elements (2 Marks)
  - v) Histosols and Gypsisols soil types (2 Marks)
  
- b) Using equations, describe the various Endogenic processes involved in Soil formation. (12 Marks)
  
- c) Describe any four soil temperature regimes. (8 Marks)
  
2. a) How would you define soil to a Farmer? (4 Marks)
- b) Briefly explain the importance of soil mapping. (8 Marks)
- c) Describe the various categories of soil surveys. (8 Marks)
  
3. Hans Jenny Equation is commonly used with regard to soil formation. Briefly explain the Equation. (20 Marks)
  
4. Discuss the igneous rocks based on:
  - (a) Mode of occurrence. (10 Marks)
  - (b) Chemical composition. (10 Marks)
  
5. Describe the various approaches to Soil classification. (20 Marks)