



(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: 20TH JANUARY 2022

TIME: 8 – 10 AM

INSTRUCTIONS TO CANDIDATES

Answer Question and any other TWO Questions.

TIME: 2 Hours

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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)