



(Knowledge for Development)

KIBABII UNIVERSITY

UNIVERSITY EXAMINATIONS

2021/2022 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: 27TH JULY 2022

TIME: 11AM – 1 PM

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) Solonchaps and Salinization pedogenic processes. (2 Marks)
 - ii) Gravimetric and Volumetric Soil Moisture (2 Marks)
 - iii) Ochric and Argillic Pedons (2 Marks)
 - iv) Ferralic and Ferric Level 2 Soil elements (2 Marks)
 - v) Leptosols and Plinthosols soil types (2 Marks)

- b) Using equations, describe the various Endogenic processes involved in Soil formation. (12 Marks)

- c) Describe any four soil water regimes. (8 Marks)

2. a) How would you define soil to a Hydrologist? (4 Marks)
- b) Briefly explain the importance of soil evaluation. (8 Marks)
- c) Describe the components of the Munsell soil color system. (8 Marks)

3. Discuss the Atterberg Constants and Limits. (20 Marks)

4. a) Discuss the igneous rocks based on mode of occurrence. (10 Marks)
- b) Describe the processes involved in the formation of sedimentary rocks. (10 Marks)

5. Discuss any Ten (10) Orders of the USDA soil taxonomy. (20 Marks)