

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

**EXAMINATION FOR THE AWARD OF
CERTIFICATE IN ANIMAL HEALTH AND PRODUCTION**

SOIL 00100: SOIL SCIENCE

STREAMS: CERT (ANHE)

TIME: 2 HOURS

DAY/DATE: THURSDAY 17/12/2020

2.30 PM – 4.30 PM

INSTRUCTIONS:

Answer ALL Questions in Section A (40 Marks) and any Two in Section B (30 Marks)

SECTION A

1. (a) Define soil according to the Soil Science Society of America. [2 marks]
(b) Differentiate between soil profile and soil horizon. [2 marks]
2. (a) Describe any two (2) types of Sedimentary rocks. [4 marks]
(b) Describe the B horizons of a typical profile of a mature soil. [4 marks]
3. (a) Briefly describe how would you carry out moist ball tests and ribbon soil textural tests in the field. [4 marks]
(b) Briefly describe any five (5) importance of weathering. [5 marks]
4. (a) Describe carbonation reaction as a principle of chemical weathering. [5 marks]
(b) Explain any four (4) indicators of a damaged soil structure. [4 marks]
5. (a) Briefly describe the composition of a well-managed soil. [5 marks]
(b) Discuss any five (5) important functions of soil. [5 marks]

SECTION B: ANSWER ANY TWO QUESTIONS (30 MARKS)

6. (a) Describe hydrolysis as a principle of chemical weathering. [6 marks]
- (b) Discuss the advantages and disadvantages of using manure fertilizers. [9 marks]
7. (a) Describe climate as a factor influencing soil formation process. [9 marks]
- (b) Discuss the functions of water in relation to plant growth and development. [6 marks]
8. (a) Discuss topography as a factor influencing the soil formation process. [9 marks]
- (b) Discuss the four basic processes that determine how the five soil forming factors affect soil development (soil genesis). [6 marks]
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