



UNIVERSITY OF EMBU

2019/ 2020 ACADEMIC YEAR

SPECIAL/SUPPLEMENTARY EXAMINATIONS

FIRST YEAR EXAMINATION IN BACHELOR OF SCIENCE IN AGRICULTURAL
EDUCATION AND EXTENSION

ASS 102: PRINCIPLES OF SOIL SCIENCE

DATE: OCTOBER 27, 2020

TIME: 11.00 – 1.00PM

INSTRUCTIONS:

Answer Question ONE and ANY Other TWO Questions.

QUESTION ONE (30 MARKS)

- a) List the factors that determine the amount of N present in the soil (6 Marks)
- b) What do you understand by the following terms? (8 marks)
- i) Soil ii) Cation exchange Capacity iii) Soil organic matter iv) Soil organisms
- c) Using examples where applicable, differentiate the following terms
- i) Soil texture and Soil structure ii) Anion and Cation iii) Organic and Inorganic fertilizers (6 marks)
- d) Describe the functions of soil organic matter (10 marks)

QUESTION TWO (20 MARKS)

Discuss the soil forming factors (20 Marks)



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Knowledge Transforms

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QUESTION THREE (20 MARKS)

Discuss the physical weathering processes (20 marks)

QUESTION FOUR (20 MARKS)

Discuss soil pH as one of the most important soil chemical property (20 Marks)

QUESTION FIVE (20 MARKS)

- a) Discuss the factors that determine availability of potassium to plants (10 marks)
- b) Explain the importance of nitrification and its disadvantage in nitrogen transformation process (10 marks)

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