

UGANDA MARTYRS' UNIVERSITY

Faculty of Education

B.A.EDUC. YEAR THREE: SEMESTER TWO EXAMS, 2022/2023

PAPER: GEO 3204: ELEMENTS OF SOIL GEOGRAPHY

DATE: 24th /5/2023 DURATION: 3 HOURS TIME: 9:30 AM to 12:30 PM

Instruction:

- *Attempt any four questions in total*
 - *Maps, diagrams and illustrations should be used wherever appropriate*
Do not write anything on the question paper
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1. "Soil is a product of nature resulting from both destructive and synthetic forces". Discuss. (25 Marks)
2. A soil forming process may be defined as a complex or sequence of events including both complicated reactions and simple rearrangement of matter which intimately affect the soil. Elucidate. (25 Marks)
3. "The physical properties of a soil such as the amount, size, shape, arrangement and mineral composition of its particles. play an important role in determining its suitability for crop production." Justify the statement. (25 Marks)
4. "The genesis of soil structure into structural units or aggregates is a function of climate, tillage and other variable". Discuss. (25 Marks)
5. Colloids consist of clay minerals and organic matter, and play critical roles in soil chemical, physical, and biological properties. The organic matter fraction of colloids is important for the development of soil structure, or as food sources for soil organisms. Identify and explain the soil components controlling soil colloids. (25 Marks)
6. Soil pH controls the solubility, mobility, and bioavailability of trace elements, which determine their translocation in plants. Justify the validity of this statement. (25 Marks)

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