



KENYATTA UNIVERSITY
UNIVERSITY EXAMINATIONS 2020/2021
FIRST SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF
SCIENCE (ENVIRONMENTAL SCIENCE)
ENS 233: SOIL HABITAT

DATE: THURSDAY 17TH JUNE 2021

TIME: 11.00 A.M. – 1.00 P.M.

INSTRUCTIONS

Answer Question One and any other THREE Questions

1. a) Sand and silt are not very important in soil chemical activity compared to clay, explain. (5 marks)
- b) Differentiate between the following terms:
 - i) Soil structure and soil texture (2 marks)
 - ii) Immobilization and mineralization (2 marks)
 - iii) commensalism and parasitism (2 marks)
 - iv) Particle and bulk density (2 marks)
 - v) Facultative and Obligate anaerobes (2 marks)
 - vi) Oxisols and Vertisols (2 marks)
- c) Discuss four important functions of organisms in the soil (8 marks)
2. Describe ways in which soil formation process manifest themselves (15 marks)
3. a) With illustrations describe the basic building blocks of clay minerals (5 marks)
- b) Explain the difference between the Kaolinite and vermiculite clay minerals (10 marks)
4. Describe how you would assist the local community to identify the different soil textures in their farms (15 marks)
5. Discuss the effect of soil contamination in the environment and how this can be mitigated (15 marks)