



**NATIONAL OPEN UNIVERSITY OF NIGERIA  
DEPARTMENT OF CROP AND SOIL SCIENCE  
FACULTY OF AGRICULTURAL SCIENCES  
EXAMINATION QUESTIONS, APRIL 2019**

**Course Code: SOS301**

**Course Title: INTRODUCTION TO PEDOLOGY AND SOIL CLASSIFICATION**

**Credit Units: 2**

**Time Allowed: 2 hours**

**Instruction: Answer 4 questions in all; No. 1 is compulsory and carries 25 marks and any other three (3) questions carrying 15 marks each,**

1. a. Define Soil as relates to atmosphere, lithosphere, hydrosphere and biosphere (5 marks)  
b. Mention five (5) soil forming factors (5 marks)  
c. Explain how each of the five (5) factors mentioned above aids soil formation (10 marks)  
d. Discuss the morphological properties of soil (5 marks)
2. a. What do you understand by the term “Weathering”? (3 marks)  
b. Explain the following types of weathering with at least 3 examples in each case:
  - i. Physical Weathering (1mark), 3 Examples (3 mark) (4 mark)
  - ii. Chemical Weathering (1mark), 3 Examples (3 mark) (4 mark)
  - iii. Biological Weathering (1mark), 3 Examples (3 mark) (4 mark)
3. a. Define soil survey (3 marks)  
b. Define Soil profile (2 marks)  
c. Mention and briefly explain at least five (5) types of soil horizons (10 marks)
4. a. Discuss the concept of soil classification (5 marks)  
b. Mention and briefly explain any five (5) orders in the USDA Soil Taxonomy (10 marks)
5. a. Outline at least eight (8) properties of Nigerian Soil (8 marks)  
b. Mention seven (7) major division of ecological regions in Nigeria (7 marks)
6. Briefly explain how the fertility of Nigerian soils could be effectively maintained using the following:
  - a. Crop rotation,
  - b. Green manuring,
  - c. Compost manure
  - d. Farmyard manure
  - e. Proper land use

(Each one correctly explained carries 3 marks) = 15 marks