



**NATIONAL OPEN UNIVERSITY OF NIGERIA
FACULTY OF AGRICULTURAL SCIENCES
DEPARTMENT OF CROP AND SOIL SCIENCE
EXAMINATION: 2020_1 POP EXAMINATION**

COURSE CODE: SOS301
CREDIT UNITS: 2
TIME ALLOWED: 2 HOURS
COURSE TITLE: INTRODUCTION TO PEDOLOGY AND SOIL CLASSIFICATION 2CU

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

QUESTION

1. a. Define the term Soil (5 marks)
b. Soil formation hypothesis states that soil is formed as a result of the interaction of five major variables. What are the five variables? (5 marks)
c. Explain the five variables mentioned in 1b above (15 marks)
2. a. Discuss the concept of soil survey (7 marks)
b. Outline the components of soil survey (8 marks)
3. a. Mention 3 types of rock and briefly explain how they are formed (6 marks)
b. - Discuss the following soil characteristics; (9 marks)
 - Organic and Inorganic materials
 - Soil minerals
 - Parent materials
4. Discuss how the fertility of Nigerian soils could be effectively maintained using the following:
 - i. Crop rotation,
 - ii. Green manuring,
 - iii. Compost manure
 - iv. Farmyard manure
 - v. Proper land use (each one correctly explained carries 3 marks = 15 marks)
5. a. What do you understand by “soil parent material” (5 marks)
b. Difference between minerals and rocks, give 3 examples each (10 marks)
6. a. What is Physical Weathering Processes (5 marks)
b. Explain four (4) major causes of physical weathering (10 marks)