



**NATIONAL OPEN UNIVERSITY OF NIGERIA
FACULTY OF AGRICULTURAL SCIENCES
DEPARTMENT OF CROP AND SOIL SCIENCE**

EXAMINATION: 2021_1 POP EXAMINATION

COURSE CODE: SLM 516

COURSE TITLE: ADVANCE SOIL SCIENCE (2 UNITS)

TOTAL SCORE: 70 MARKS

INSTRUCTION: Answer *THREE* Question in all

Question 1 is compulsory (30 marks) and any TWO Questions (20 marks)

TIME ALLOWED: 2 hours

Q.1a. Discuss the largest and the most complicated class of minerals than any other minerals (16 Marks)

b. Differentiate between igneous rocks and sedimentary rocks. (10 Marks)

c. A soil profile may have soil horizons that are easy or difficult to distinguish what is the function of the A horizon in relation to crop production. (4 Marks)

Q.2a. The processes of soil formation have four major processes list and explain these processes (13 Marks)

b. What are the impact of Water-filled pore space and porosity? (7 Marks)

Q.3a. Parent materials are the initial mineral substances that form a soil. Discuss in detail the term Isomorphous substitution (20 Marks)

Q.4. Soil formations as a function of five different factors, discuss (20 Marks)