



**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)