



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

EXAMINATION: 2022_2 POP EXAMINATION

COURSE CODE: SLM301

COURSE TITLE: INTRODUCTION TO SOIL MINEROLOGY

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. what are the roles of Soil In relation to Soil Mineralogy and Toxicology? (12 Marks)

b. In a Table form list all the metal oxides, oxyhydroxides, and hydroxides found commonly in soils and their chemical formula (18 Marks)

Q.2a. Discuss soil as essentially a solid phase (16.5 Marks)

b. Describe Magnesium hydroxide as one of basic sheet silicates (3.5 Marks)

Q.3a. Mention any 3 Significance of Soil Minerals? (4 Marks)

b. Describe quartz as a framework Silicates (16 Marks)

Q. 4a. Differentiate between Liquid Phase and soils Gas Phase (15 Marks)

b. Briefly explain the term Mineral (5 Marks)