



**NATIONAL OPEN UNIVERSITY OF NIGERIA
FACULTY OF AGRICULTURAL SCIENCES
DEPARTMENT OF CROP AND SOIL SCIENCE
2023_1 EXAMINATIONS.**

COURSE TITLE: ANALYTICAL TECHNIQUES IN AGRICULTURE (3 CU)

COURSE CODE: AGR 503

TOTAL SCORE: 70 MARKS

INSTRUCTION: Answer 4 questions in all

Question 1 is compulsory (25 marks) and any other THREE questions (15 marks each)

TIME ALLOWED: 2 ½ Hours

1. a. There are important safety guidelines to be noted in any Agricultural laboratory, briefly discuss these guidelines (10 marks)
b. Outline 10 aspects that safety is absolutely necessary in Agric laboratory (10 marks)
c. In an analytical laboratory, there are many sources of contamination, list at least five (5) of these sources (5 marks)
2. a. Explain “Quality” as a key factor in laboratory practice (10 marks)
b. Briefly discuss “Good Laboratory Practice (GLP)” (5 marks)
3. a. Precision and accuracy are important terms in the laboratory, Discuss (10 marks)
b. Explain precision and accuracy diagrammatically (5 marks)
4. a. What is “error” as it relates to analytical laboratory (10 marks)
b. Outline at least five (5) sources errors may come from in the laboratories (5 marks)
5. a. Briefly discuss calibration graph (10 marks)
b. Discuss two (2) ways of achieving calibration graph in the labs (5 marks)