



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

EXAMINATION: 2021_2 POP EXAMINATION

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

Q1

- a. Explain Error in laboratory analysis? (7 marks)
- b. Mention and briefly explain any four (4) sources of Error (8 marks)
- c. Briefly explain Blanks and its importance in laboratory analysis (10 marks)

Q2

- a. Discuss what Soil Sampling means (10 marks)
- b. Outline five (5) factors to be borne in mind while considering sampling methods (5 marks)

Q3

- a. Discuss briefly five (5) Sampling Techniques you studied (10 marks)
- b. Explain any two (2) methods of Sub-Sampling soils (5 marks)

Q4

- a. Briefly explain High Performance Liquid Chromatography (HPLC) (7 marks)
- b. Outline eight (8) areas of application of HPLC (8 marks)

Q5

- a. What is Cryopreservation? (5 marks)
- b. Mention ten (10) Areas in which Cryopreservation is possible (10 marks)