



**NATIONAL OPEN UNIVERSITY OF NIGERIA
FACULTY OF AGRICULTURAL SCIENCES
DEPARTMENT OF CROP AND SOIL SCIENCE
2024_2 EXAMINATION**

COURSE TITLE: AGRICULTURAL STATISTICS AND DATA PROCESSING (2CU)

COURSE CODE: AGR 302

TOTAL SCORE: 70 MARKS

INSTRUCTION: Answer 3 questions in all

Question 1 is compulsory (30 marks) and any other TWO questions (20 marks each)
TIME ALLOWED: 1 ½ Hours

1 Below are the vine lengths of 75 sweet potato plants in a field experiment..

17, 8, 23, 24, 26, 13, 31, 16, 14, 35, 6, 11, 12, 11, 15, 21, 10, 4, 3, 19, 35,

36, 19, 40, 28, 17, 12, 2, 27, 31, 11, 21, 16, 34, 39, 1, 7, 12, 13, 10, 6, 21, 24, 22,

26, 28, 17, 6, 5, 15, 11, 16, 28, 4, 3, 19, 27, 35, 37, 14, 2, 9, 8, 16, 13, 22, 8, 26, 13, 12, 16,

14, 27, 31, 6.

Prepare a frequency table showing the class, tally and frequency. (Assume the number of groups is 10)(21 marks)

1b. Describe the following sampling methods: i. Random sampling ii. Stratified sampling (6 marks). c. State three (3) assumptions of Analysis of Variance (ANOVA) (3 marks)

2 .a .Define correlation.(3 marks)

b. Simply differentiate between Correlation and regression (4 marks)

c. Briefly describe Scatter Diagram/Plot.(8 marks).d Describe a factorial experiment (5 marks)

3.i. Define the following terms: i. Type 1 error ii. Type 11 error iii. Sampling error iv. experimental error.(8 marks)

b. Explain chi square and its uses.(12 marks) (15 marks)

4 What is ANCOVA (5 marks).b. When is ANCOVA used? (7 marks)

b. State the possible null hypothesis for a factorial experiment. (13 marks)