



**NATIONAL OPEN UNIVERSITY OF NIGERIA  
FACULTY OF AGRICULTURAL SCIENCES  
DEPARTMENT OF AGRICULTURAL ECONOMICS AND EXTENSION  
KM. 4 KADUNA-ZARIA EXPRESS WAY  
POP EXAMINATION 2021 ACADEMIC SESSION**

**Course Code:** AEA 505  
**Course Title:** Econometrics  
**Credit Unit:** 3  
**Exam Question:** POP 2021  
**Total Score:** 70 Marks  
**Instruction:** Answer any 4 questions only.  
**Time Allowed:** Two and half hours.

1a. Given the correlation coefficient existing between variables X and Y, calculate the mean of the two variables X and Y (7.5 marks).

X (input)	1	2	3	4	5
Y (output)	12	19	35	23	36

- b. Econometrics deserves to be studied on its own. Discuss (5 marks)  
c. Differentiate clearly between cross-sectional and time-series data (5 marks).

- 2a. State any five limitations associated with correlation analysis (7.5 marks).  
b. Outline any five special features associated with Ordinary Least Squares (OLS) method (5 marks).  
c. Enumerate any five sources of multicollinearity (5 marks).

- 3a. Describe the usefulness of Analysis of Variance (ANOVA) as an analytical tool (7 marks).  
b. With the aid of a diagram, describe how two variables can be negatively and linearly correlated (5.5 marks).  
c. Mention any five uses of gross margin analysis (5 marks).

- 4a. Define econometrics in any five different ways (7.5 marks).  
b. Mention any five steps involved in hypothesis testing (5 marks).  
c. Outline any five procedures for computing correlation coefficient (5 marks).

- 5a. State and describe the detection of multicollinearity (7.5 marks).
- b. State the procedures to follow in the interpretation of Analysis of Variance (ANOVA) results (6 marks).
- c. List any four causes of autocorrelation (4 marks).