



**NATIONAL OPEN UNIVERSITY OF NIGERIA**  
**FACULTY OF AGRICULTURAL SCIENCES**  
**DEPARTMENT OF AGRICULTURAL ECONOMICS AND EXTENSION**  
**KM. 4 KADUNA-ZARIA EXPRESS WAY**  
**2020\_2 EXAMINATION**

**Course Code:** AEA 505  
**Course Title:** Econometrics  
**Credit Unit:** 3  
**Total Score:** 70 Marks  
**Time Allowed:** 2 ½ Hours.  
**Instruction:** Answer compulsory question 1 (30 marks) and any other 4 questions (10 marks each).

1a. Copy and complete the table below for variables X and Y (15 marks).

X	Y	X <sup>2</sup>	Y <sup>2</sup>	XY
4	20	i.	vi.	xi.
7	31	ii.	vii.	xii.
9	28	iii.	viii.	xiii.
12	42	iv.	ix.	xiv.
15	23	v.	x.	xv.

- b. Justify any five usefulness of ANOVA (5 marks).  
c. State any five causative factors of autocorrelation (5 marks).  
d. Differentiate clearly between theoretical and applied econometrics (5 marks).
- 2a. Briefly describe the three basic components of econometrics (6 marks).  
b. Enumerate any four types of data for regression analysis (4 marks).
- 3a. Outline the five special features associated with OLS method (5 marks).  
b. Mention any five sources of primary data (5 marks).
- 4a. Distinguish clearly between null and alternative hypothesis (6 marks).  
b. Identify the four limitations of linear correlation (4 marks).
- 5a. Explain any six sources of multicollinearity (6 marks).  
b. State the two basic differences between regression and correlation analyses (4 marks).
- 6a. Describe the four major causes of heteroscedasticity (6 marks).  
b. Define and give three examples of continuous variables (4 marks).

7a. Explain the four terminologies used in ANOVA (6 marks).

b. State  $Q_d = f(P, Y)$  in explicit form and describe the parameters (4 marks).