

**NATIONAL OPEN UNIVERSITY OF NIGERIA**  
**FACULTY OF SOCIAL SCIENCES**  
**DEPARTMENT OF ECONOMICS**  
**2017\_2 EXAMINATION JANUARY/FEBRUARY 2018**

**COURSE TITLE: APPLIED ECONOMETRICS II**

**COURSE CODE: ECO 453**

**UNITS: 2**

**TIME ALLOWED: 2 HOURS**

**INSTRUCTION: ANSWER ANY THREE (3) QUESTIONS. ALL QUESTIONS CARRY EQUAL MARKS**

**QUESTION 1**

- (a) What do you understand by the phrase “econometric research”? 7 marks  
(b) Discuss the properties of a good econometric model 16 marks

**QUESTION 2**

- (a) Given the following data on the demand of commodity (Yam) and the given prices.

NO	1	2	3	4	5	6	7	8
Yam ( $Y_i$ )	64	68	44	48	50	65	45	52
Price ( $X_i$ )	8	10	6	9	6	10	7	8

Find the demand function of  $\beta_0$  and  $\beta_1$  13 marks

- (a) Explain the Stochastic Process 10 marks

**QUESTION 3**

- (a) What is nonlinear regression? 5 marks  
(b) List and explain examples of nonlinear regression models 18 marks

**QUESTION 4**

- (a) Discuss the importance of panel data 15 marks  
(b) Distinguish between fixed and random effect 8 marks

**QUESTION 5**

- (a) State the criteria can be used to select the optimum lag of the above ARDL modeling:  
**6 marks**

(b) Given the output result of E-View of Real Growth Domestic Product (RGDP) and other macroeconomic variables using two stage least squares. Use the knowledge of Applied Econometrics to interpret the result and the economics implication of the result. **17 marks**

Dependent Variable: Y

Method: Two-Stage Least Squares

Date: 11/15/17 Time: 02:44

Sample: 1 31

Included observations: 31

Instrument specification: Y C GC I

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	10.27119	0.059970	171.2734	0.0000
GC	-0.082685	0.027774	-2.977069	0.0059
I	0.172839	0.031999	5.401455	0.0000
R-squared	0.829625	Mean dependent var	10.92919	
Adjusted R-squared	0.817455	S.D. dependent var	0.154102	
S.E. of regression	0.065840	Sum squared resid	0.121379	
F-statistic	68.17144	Durbin-Watson stat	0.762855	
Prob(F-statistic)	0.000000	Second-Stage SSR	0.121379	
J-statistic	28.00000	Instrument rank	4	
Prob(J-statistic)	0.000000			

Best Wishes!