

**COURSE TITLE: APPLIED ECONOMETRICS II**

**UNITS: 2**

**COURSE CODE: ECO454**

**TIME ALLOWED: 2 HOURS**

**INSTRUCTIONS: ANSWER QUESTION ONE AND ANY OTHER TWO.**

- i. Explain what is meant by Granger Causality test (6marks)  
ii. Interpret the following Unit root result specimen

Null Hypothesis: D(INFR) has a unit root

Exogenous: Constant

Lag Length: 1 (Automatic - based on SIC, maxlag=8)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-3.509442	0.0438
Test critical values: 1% level	-3.661661	
5% level	-2.960411	
10% level	-2.619160	

\*MacKinnon (1996) one-sided p-values.

**(12Marks)**

- i. What is co-integration? (6 marks)  
ii. Why is it important? (6 marks)

2a. Given the following Rank test for co-integration, establish whether or not there is existence of co-integration among the variables in the model that produces this result.

Unrestricted Cointegration Rank Test (Trace)

Hypothesized	Eigenvalue	Trace	0.05	
No. of CE(s)		Statistic	Critical Value	Prob.**
None *	0.479957	20.34890	15.49471	0.0086
At most 1	0.002569	0.079751	3.841466	0.7776

**(10 marks)**

b. Discuss the properties of the Ordinary Least Squares (OLS) estimators. (10 marks)

- 3a) What is the difference between econometric model and economic model? (10 marks)  
b) What are the advantages of parameter estimation procedure in econometrics? (10 marks)

4a. Discuss similarities and the dissimilarities between economics and econometrics models. Discuss (10 marks)

4b. What is unit root, and why is stationarity test important? (10 marks)