



**NATIONAL OPEN UNIVERSITY OF NIGERIA  
FACULTY OF SOCIAL SCIENCES  
DEPARTMENT OF ECONOMICS  
2022\_2 EXAMINATION**

**COURSE TITLE: APPLIED ECONOMETRICS I**

**COURSE CODE: ECO 453**

**UNITS: 2**

**TIME ALLOWED: 2 HOURS**

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

**QUESTION ONE**

(a). Explain the Stages of Applied Econometric Research. **(10marks)**

(b). Given the following multiple regression model below:

$$GDP = -4.188432 + 0.877231INF - 0.417598EXR + 7.744215INT$$

and t calculated for  $INF = 1.999216$ ,  $EXR = 2.217642$  and  $INT = 1.783294$

where GDP= Gross Domestic Product (Proxy for Economic growth), INF= Inflationary rate, EXR= Exchange rate, INT= Interest rate.

You are required to:

(i) Interpret the results above. **(12marks)**

(ii) Test for the level of significance of t statistics at 5% level of significance. **(8marks)**

**QUESTION TWO**

(a). Briefly explain the History of Time Series Data Analysis. **(5marks)**

(b). Explain the need to carry out unit root test on times series data. **(10marks)**

(c). Explain the need for the use of nonlinear models? **(5marks)**

**QUESTION THREE**

(a). What is the 'Jarque-Bera' test ? **(5marks)**

(b). In what situation is the use of co-integration analysis appropriate in econometrics? **(7marks)**

(c). What are trend-stationary variables. **(8marks)**

**QUESTION FOUR**

(a). Differentiate between Engle Granger two-step co-integration method and Johansen test co-integration. **(10marks)**

(b). Explain with examples the term 'error correction model' **(10marks)**