NATIONAL OPEN UNIVERSITY OF NIGERIA
FACULTY OF SOCIAL SCIENCES
DEPARTMENT OF ECONOMICS
2025_2 EXAMINATIONS

SUBJECT TITLE: INTRODUCTION TO ECONOMETRICS II
SUBJECT CODE: ECO 355
TIME ALLOWED: 3 HOURS
INSTRUCTIONS: ANSWER QUESTIONS ONE AND ANY OTHER THREE QUESTIONS.

QUESTION 1
(a) Provide a detailed explanation of the significance of econometrics in the field of economics. **(10marks)**
(b) Clearly distinguish between theoretical and applied economics, providing examples for each. **(5marks)**
(c) Consider the following multiple regression model:
GDP = 0.3412 + 0.8673INFL – 0.2821UNEM – 0.4317FDI, with the probability values INFL = 0.001, UNEM = 0.451, and FDI = 0.587.
(i) Offer a comprehensive interpretation of the multiple regression model and evaluate the significance of the inflation rate, unemployment rate, and foreign direct investment parameters using their probability values. **(10marks)**
(25marks)

QUESTION 2
(i). Outline the key properties of the Ordinary Least Squares (OLS) method. **(5 marks)**
(ii). Identify and explain five assumptions underlying the Classical Linear Regression Model. **(10 marks)**

QUESTION 3
(i). Define the concept of a normality test. (5 marks)
(ii). Explain the importance of the normality assumption in statistical analysis. (10 marks)
QUESTION 4
(i). Compare simple regression and multiple regression in the context of the ordinary least squares method. (5 marks)
(ii). Explain what is meant by a confidence interval. (5 marks)
(iii). Differentiate between Type I error and Type II error in hypothesis testing. (5 marks)

QUESTION 5
Briefly write short note on the following:
(i). Explain the concept of level of significance. (5 marks)
(ii). Describe the Jarque-Bera test for normality. (5 marks)
(iii). Define an economic model. (5 marks)