



**NATIONAL OPEN UNIVERSITY OF NIGERIA  
FACULTY OF SOCIAL SCIENCES  
DEPARTMENT OF ECONOMICS  
SEPTEMBER 2020\_1 EXAMINATION**

**COURSE TITLE: APPLIED ECONOMETRICS II  
COURSE CODE: ECO454  
UNITS: 2  
TIME ALLOWED: 3 HOURS**

**INSTRUCTION: ANSWER ANY THREE (3) QUESTIONS. ALL QUESTIONS  
CARRY EQUAL MARKS. ONE MARK FOR CLARITY**

**QUESTION 1**

- i) Outline the importance of Identification? **11 Marks**
- ii) Outline how identification determines the choice of econometrics technique. **12 Marks**

**QUESTION 2**

Given a sample size of  $n=20$ , the consumption model was estimated to be:

$$\hat{C} = 100 + 0.89Y$$

$(75.5) \quad (0.21) \quad R^2 = 0.78$

- i) Test the reliability of the estimates of MPC( $s(b_1)$ ) given a 5% level of significance **11 Marks**
- (ii) Provide economic interpretation of the consumption model in terms of  $R^2$  and the signs of the regression coefficients. **12 Marks**

Note: the standard error is given in parentheses below the coefficients

**QUESTION 3**

Discuss the properties of ordinary least square estimators. **23 Marks**

**QUESTION 4**

Using the necessary algebra, discuss the properties of two stage least squares. **23 Marks**

**QUESTION 5**

Outline the properties of the instrumental variable. **23 Marks**