



**NATIONAL OPEN UNIVERSITY OF NIGERIA
FACULTY OF SOCIAL SCIENCES
DEPARTMENT OF ECONOMICS**

COURSE TITLE: APPLIED ECONOMETRICS I

COURSE CODE: ECO 453

UNITS: 2

TIME ALLOWED: 2HOURS

**INSTRUCTION: ANSWER THREE (3) QUESTIONS. ALL QUESTIONS CARRY
EQUAL MARKS. 1 MARK FOR CLARITY AND GOOD PRESENTATION.**

QUESTION ONE

- (a). Explain the concept of Applied Econometrics Research. **(5.5 marks)**
- (b). State and explain the basic stages of an Econometric research. **(10 marks)**
- (c). Write short notes on these three desirable properties of an estimator
 - (i). Unbiasedness. **(2.5marks)**
 - (ii). Efficiency. **(2.5marks)**
 - (iii). Consistency. **(2.5marks)**

TOTAL MARKS = 23

QUESTION TWO

- (a). Discuss clearly the properties of a good econometric model. **(12 marks)**
- (b). Clearly distinguish between economic research and econometric research. **(6marks)**
- (c). Attempt a critique of an econometric research. **(5 marks)**

TOTAL MARKS = 23

QUESTION THREE

- (a) Explain the assumptions of the linear stochastic model based on the random term. **(12 marks)**
- (b) Discuss the assumptions of the linear stochastic model based on the explanatory variables. **(6 marks)**
- (c). What are the consequences of violation of the assumptions in (b)? **(5 marks).**

TOTAL MARKS = 23

QUESTION FOUR

- (a) Distinguished clearly (with examples) between the following pair
 - (i). Type 1 Error and Type II Error. **(4 marks)**
 - (ii). Time series and panel data. **(5 marks)**
 - (iii). Simple linear model and Multiple linear model. **(4 marks)**
- (b). What are the uses of random variable in a model? **(10 marks)**

TOTAL MARKS = 23

QUESTION FIVE

The following table includes income (X) and demand for cloth (Y) measured in arbitrary units of a consumer over 10years period

Period	1	2	3	4	5	6	7	8	9	10
Y	6	7	8	10	8	9	10	9	11	10
X ₁	50	52	55	59	57	58	62	65	68	70

- (a) Estimate the food function $Y = b_0 + b_1X_1 + u$ and interpret the result. **(15 marks)**
(b) Compute the coefficient of determination (R-squared) and find the unexplained variation. **(8 marks)**

TOTAK MARKS = 23