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

COURSE TITLE: INTRODUCTION TO ECONOMETRICS II
COURSE CODE: ECO 356
UNITS: 3
TIME ALLOWED: 3 HOURS

INSTRUCTION: ANSWER ANY FOUR QUESTIONS

QUESTION ONE

1(a) Distinguish between probability sampling technique and Non- probability sampling technique **(7 Marks)**.

1(b) Explain the following concepts **(10.5 Marks, 3.5 Mark each)**

   i.   Random variable

   ii.   Element

   iii.   Population

QUESTION TWO

Using the following table;

Obs.	1	2	3	4	5	6	7	8	9	10
X	7	5	7	6	6	9	5	8	6	7
Y	6	6	5	8	4	9	3	7	7	8

(a) Find the correlation coefficient of X and Y using the table above **(15 Marks)**

(b) Interpret your result in (a). **(2.5 Marks)**

QUESTION THREE

3(a) Define the concept, Estimator in regression analysis? **(2.5 Marks)**

3(b) Precise predictions about the unknown model parameters can also be make through satisfactory assumptions. Therefore, state the 10 assumptions in CLRM. **(15 Marks)**

QUESTION FOUR

The broad understanding of the concepts of Covariance, Variance and Basic Covariance rules are vital because they are widely used in simple and multiple regression analyses. Explain these concepts briefly. **(17.5 Marks).**

QUESTION FIVE

Use the following income (X) and consumption (Y) schedule below to estimate the consumption function.; $Y = \beta_0 + \beta_1 X$ and interpret your result **(17.5 Marks)**

X	Y	XY	X^2
10	30		
25	35		
30	55		
40	65		
45	70		
$(\sum X)=$	$\sum Y=$	$(\sum XY) =$	$((\sum X^2) =$