



NATIONAL OPEN UNIVERSITY OF NIGERIA
FACULTY OF SOCIAL SCIENCES
DEPARTMENT OF ECONOMICS
2023_2 EXAMINATIONS

COURSE TITLE: APPLIED STATISTICS

COURSE CODE: ECO 452

UNITS: 2 UNITS

TIME ALLOWED: 2 HOURS

INSTRUCTION: ANSWER ANY THREE (3) QUESTIONS. ALL QUESTIONS CARRY EQUAL MARKS

1. Write short notes on the following statistic. Concepts
 - i. Long Term Movement (5 marks)
 - ii. Seasonal Variation (4 marks)
 - iii. Cyclical Variation (4 marks)
 - iv. Irregular or residual Variation (4 marks)
 - v. One-Way and Two-Ways Analysis of Variance (6 marks)
- 2a. Define Probability Distribution. (3 marks)
- 2b. Resolve the following completely.
 - i. $\frac{10!}{4!6!}$ ii. $5P_4$ (4marks each)
- 2c. Briefly discuss the following method of Time-Series Evaluation
 - i. Free Hand Fitting
 - ii. Least Square Method
 - iii. Semi-Average Movement (4marks each)
3. Given the demand for stationary of National Open University of Nigeria as (Y) and the Prices as (X_1), and the budgetary allocation to the University (Income) as (X_2).
 - i. Regress stationary demand against other factors (18 marks)
 - ii. Interpret your results (5marks)

Y	100	75	80	70	50	65	90	100	110	60
X_1	5	7	6	6	8	7	5	4	3	9
X_2	100	600	1200	500	300	400	1300	1100	1300	300
Years	1	2	3	4	5	6	7	8	9	10

4.
 - a. Define hypothesis with a good example (7marks)
 - b. what is time series? (6marks)
 - c. List and explain Components of Time Series (10 marks)