



NATIONAL OPEN UNIVERSITY OF NIGERIA  
FACULTY OF SOCIAL SCIENCES  
DEPARTMENT OF ECONOMICS  
2024 1 EXAMINATION

COURSE TITLE: INTRODUCTION TO ECONOMETRICS I  
COURSE CODE: ECO 355  
CREDIT UNITS: 3 UNITS  
TIME ALLOWED: 3 HOURS  
INSTRUCTION: ANSWER FOUR QUESTIONS. ALL QUESTIONS CARRY  
EQUAL MARKS

**QUESTION 1**

- a) Explain the term econometrics **1.5 marks**
- b) Enumerate the process of traditional econometrics methodology. **8 marks**
- c) Why should econometrics be a separate discipline **8 marks**

**QUESTION 2**

A research consultant conducted a study to relate test grade (Y) to productivity of workers (X) after a period of training that took place in NOUN. Below are the results of 6 randomly selected workers and their level of productivity.

Workers	1	2	3	4	5	6
Test Grade (Y)	6	8	7	5	3	9
Productivity (X)	12	15	15	10	7	17

- i. Find the equation of the regression line of X on Y. **14.5marks**
- ii. What is the expected productivity of a worker who has a test grade of 10? **2mark**
- iii. What is the expected score of a worker whose productivity is 16? **1mark**

**QUESTION 3**

- a) Discuss the implication of violating the assumption of multicollinearity in an estimated econometric model. **4 marks**
- b) Discuss methods of detecting multicollinearity in a model. **3.5 marks**
- c) Highlight Methods of solving the problem of multicollinearity in a model. **10marks**