



NATIONAL OPEN UNIVERSITY OF NIGERIA
Plot 91, Cadastral Zone, Nnamdi Azikiwe Express Way, Jabi - Abuja
FACULTY OF MANAGEMENT SCIENCES
DEPARTMENT OF BUSINESS ADMINISTRATION
2024_2 EXAMINATION

Course Code: MBA816

Course Title: QUANTITATIVE METHOD FOR MANAGEMENT

Credit Unit 3 Credits

Instruction: 1. Indicate your Matriculation Number Clearly

2. Attempt Question 1 and any other three (3) questions

3. Question 1 is compulsory and carries 25 marks while the other 3 questions carry 15 marks each.

4. Present your points in coherent and orderly manner.

Time Allowed: 2 Hours 30Mins

1a. An employer of labour in a quarry company wants to find out the relationship between the labour input employed and the total output using the following hypothetical data.

Labour input	Output (tonnes)
0.8	28
1.1	31
1.6	29
2.3	20
2.2	37
3.1	35
3.0	40
4.6	56

- i. Establish the least square regression for the above data. **15 marks**
- ii. Assuming the personnel management team decides to employ 80 workers, estimate the output for the company. **10 marks**

2a. A man starts work in factory with an annual salary of N8,400, 000 and received annual increase of N68,000 a year. How much did he receive for the first four years? **10 marks**

2b. From (A) above, how much will he receive in the tenth year of employment? **5 marks**

3a. If the following equation $5x^2 = 9x - 6$ represent the number of maize seeds that can be planted per spacing. Find out the number. **10 marks**

3b. Identify and explain three basic types of fractions in mathematical analysis. **5 marks**

4a. Kufe drove for 3 hours at a certain speed to attend a business meeting in Keffi and then doubled that speed for the next 2 hours to avoid being late due to traffic. If Kufe drove the car covering 63kms altogether, find the speed for the first 3 hours. **10 marks**

4b. Briefly explain the presentation of statistical data using table and highlights its importance. **5 marks**

5a. Data collection can be difficult and may even be inaccurate to meet user driven demand. The absence and non-availability of accurate statistical data may however be due to some reasons, identify and discuss these reasons. **10 marks**

5b. Simplify $3\sqrt{50} - 5\sqrt{32} + 4\sqrt{8}$. **5 marks**