NATIONAL OPENUNIVERSITY OF NIGERIA
PLOT 91, CADASTRAL ZONE, NNAMDI AZIKIWE EXPRESS WAY, JABI – ABUJA
FACULTY OF MANAGEMENT SCIENCES
DEPARTMENT OF BUSINESS ADMINISTRATION
2019_1 EXAMINATION

COURSE CODE: MBA816 **CREDIT UNIT: 3**
COURSE TITLE: QUANTITATIVE METHODS FOR MANAGEMENT
TIME ALLOWED: $2^{1/2}$HRS
INSTRUCTIONS:
1. Attempt Question One (1) and any other three (3) questions
2. Question 1 carries 25 marks, while the other questions carry 15 marks each.
3. Present all points in coherent and orderly manner

1a. Discuss the following:

i. Natural numbers. (**3 marks)**

ii. Whole numbers **(3 marks)**

iii. Integers (**3 marks)**

iv. Rational numbers (**3 marks)**

v. Irrational numbers (**3 marks)**

b. Change 86 to base 2. **(6 marks)**

c. Evaluate the following:

(i) – 20 – (- 24) (**2 marks)**

(ii) – 13 – 16 (**2 marks)**

2a. List and discuss three basic types of fraction in mathematical analysis. **(10 marks)**

b. Simplify the following: $\frac{5y}{6} - \frac{y}{3}$ **(5 marks)**

3a. Solve the equation

i. $X^4 \times X^7$ **(3 marks)**

ii. $4^3 \times 4^2$ **(3 marks)**

iii. $3c^3e^2 \div 2c^2e^2$ **(3 marks)**

b. Discuss inverse variation **(6 marks)**

4a. Discuss geometric progression **(5 marks)**

b. Find the solution to simultaneous equation by substitution:
The demand for bread in market x and y is given as follows

$3x - 4y = 19$ ……..(1) **(5 marks)**

$x - 2y = 5$ …….(2) **(5 marks)**

5a. Explain the basic concept of descriptive and inferential statistics. **(5 marks)**

b. Discuss inductive, deductive and correlation statistics. **(10 marks)**

6. Given the income distribution of a sample of 50 customers as follows:

Income (₦'000s)	Number of Subscriber
20 – 30	20
31 – 41	15
42 – 52	10
53 – 63	5

(i) Compute the arithmetic mean of the incomes **(6 marks)**

(ii) Compute the Median income **(9 marks)**