



**NATIONAL OPEN UNIVERSITY OF NIGERIA
14/16 AHMADU BELLO WAY, VICTORIA ISLAND, LAGOS
SCHOOL OF MANAGEMENT SCIENCES
OCTOBER 2013 EXAMINATION**

COURSE CODE: BHM 711

CREDIT UNIT: 2

COURSE TITLE: BASIC MATHS AND STATISTICS FOR MANAGERS

TIME ALLOWED: 2^{1/2} Hours

Instructions: 1. Attempt question Number one (1) and any other two (2) questions.

2. Question number 1 carries 30 marks, while the other questions carry 20 marks each.

3. Present all your points in coherent and orderly manner.

1 (a) Solve for X in $30X + 10 + 2X = 15X + X + 42$

(b) List and discuss in detail the various techniques of statistical sampling, and data collection.

(c) The demand function for bread in markets x and y is given by $3x - 4y = 19$ and $x -$

$2y = 5$ respectively, what are the values for markets x and y?

(30 marks)

2 (a) A company pays the salespersons either N6.50, N7.50 or N8.50 with the

corresponding weights given as 14 10 and 2 respectively what is the weighted mean?

(b) The ages of a sample of 5 patients in a clinic are recorded as: 38yrs 26yrs 13yrs

41yrs and 22yrs. What is the standard deviation of ages of the patients?

(20 marks)

3(a) In a market survey it was discovered that within Bello City Way, 6 exercise books

(x) and 12 biros (y) cost N144. In another city it was discovered that 8 exercise

books and 10 biros cost N132. Determine the quantities of exercise books, x,

and biros, y, in the market survey.

(b) Six years ago Edeh was 3 times as old as Onyii. Their combined age is 24 years.

Determine the ages of Edeh and Onyii.

(20 marks)

4 (a) The length of a one-room apartment is 8 metres more than width. If the area of

the apartment is 48 square metres what are the dimensions?

(b) Joe and Nick are to share N54 such that Joe has N8 less than Nick. What are the shares of Joe and Nick?

(20 Marks)

5(a) What is the value of the 8th term in a geometric progression with first term 20 and

common ratio $\frac{1}{3}$?

(b) The sum of the first 10 terms of an arithmetic progression is -145 and the

common difference is 4.5. What is the value of the 6th term?

(20 marks)