



**NATIONAL OPEN UNIVERSITY OF NIGERIA**  
**14/16, AHMADU BELLO WAY, VICTORIA ISLAND, LAGOS**  
**SCHOOL OF MANAGEMENT SCIENCES**  
**MARCH/APRIL 2014 EXAMINATIONS**

**Course Code: BHM711**

**Credit Unit: 2**

**Course Title: BASIC MATHS AND STATISTICS FOR MANAGERS**

**Time Allowed: 2 Hours**

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

**2. Question number 1 is compulsory and carries 30 marks, while the other**

**questions carry equal marks each**

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

1 (a) List and discuss in detail the various techniques of statistical sampling, and data

collection.

(b) 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?

(c) 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?

**(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 annual income of a bank clerk is N240,000. His income tax is charged at 10 percent, and

the employer deducts 5 percent for the Pension fund. Calculate the clerk's net monthly

income.

**marks)**

**(20**

3 (a) If it can take 10 days for five workers to complete a job, how long will it take 8 workers to

complete the same job?

(b) Discuss in detail the various techniques of statistical sampling. What are the various

techniques used in data collection?

**(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)**