NATIONAL OPEN UNIVERSITY OF NIGERIA
91, Cadastral Zone, Nnamdi Azikiwe Express Way, Jabi-Abuja
FACULTY OF MANAGEMENT SCIENCES
JULY 2017 EXAMINATION

Course Code: **MBA816**
Course Title: **QUANTITATIVE METHODS FOR MANAGEMENT**
Credit Unit: **3**
Instructions: **1. Attempt Question 1 and any other three (3) questions**
            2. Question 1 is compulsory and carries 25marks while the
            other 3 questions carry 15marks each
            3. Present all your points in coherent and orderly manner
Time Allowed: **3 Hours**

1. A cyclist made a journey of 152km in a total time of $3\frac{1}{2}$ hours. He covered a part of the journey at an average speed of 40km/h. The rest of the journey took the cyclist an average of 48km/hr. How many kilometers did the cyclist cover at 40km/h and 48km/h.   (25marks)

2. a. Kay Pumping Nig. Ltd. Water wants to increase its water rate of 56k in the ratio 10:7. Determine the new water rate   (8marks)
    b. KayKad bread wants to reduce the time taken for baking of 2 hours in the ratio 5:6. What is the new time for baking?
            (7marks)

3. a. If 5 people dug the foundation of a house in 14 days, how long will 7 people take to
       dig the foundation.   (8marks)
    b. In a market $2\frac{1}{4}$kg of coffee cost N1.17, what quantity of coffee can be bought for N1.95 in the market?   (7marks)

4. The volume of a given mass of gas varies directly as the absolute temperature and inversely as the pressure. At absolute temperature of $360°$ and at pressure 736mm, the volume is 450cm^3. Find a general formula and find the volume at absolute temperature $312°$ and pressure 960mm.   (15marks)

5. Solve the equation $\dfrac{6x + 14}{X} = \dfrac{4x}{X - 8}$ (15marks)

6. Omowunmi drove for 3 hours at a certain speed and then double that speed for another 3 hours; if Omowunmi drove the car covering 63km

altogether, find the speed for the first 3 hours.

(15marks)