



NATIONAL OPEN UNIVERSITY OF NIGERIA
91, CADASTRAL ZONE, UNIVERSITY VILLAGE, JABI, ABUJA
FACULTY OF MANAGEMENT SCIENCES
JUNE/JULY 2017 EXAMINATION

COURSE CODE: MGS 303

CREDIT UNIT: 3

COURSE TITLE: Managerial Economics

TIME ALLOWED: 2^{1/2} Hours

Instructions: 1. Attempt question Number one (1) and any other three (3).

**2. Question number 1 is Compulsory and carries 25 marks,
while the other questions carry equal marks each.**

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

1a. Suppose that the unit price of a commodity is defined by:

$$P=100 - 2Q$$

$$\text{Then, } TR= PQ = (100 - 2Q) Q$$

$$100Q - 2Q^2$$

Suppose also that the total cost of producing this commodity is defined

$$\text{by the cost function } TC = 100 + 0.5Q^2$$

- a. You are required to apply the first- order condition for profit maximization.
- b. Determine the profit- maximizing level of output.

1b. State and Describe the 2 Scope of Managerial Economics.

2. List and Explain the important features of Decision Making in Business.
3. Explain the Marginal conditions of Profit Maximization.
4. List and Describe the 4 types of Demand encountered in Business.
5. State and Discuss the 5 Theories of Profit.

6. Let the profit of an hypothetical firm be given as:

$$\Pi = f(X, Y) = 100X - 2X^2 - XY + 180Y - 4Y^2$$

Where X and Y represent to products, $X + Y = 30$

Hint:

- a. Express one of the variables (X or Y in this case) in terms of the other and solve the constraint equation for one of them (X or Y).
- b. Substitute the solution obtained into the objective function (that is, the function to be maximized or the profit function) and solve the outcome for the other variable.