



**NATIONAL OPEN UNIVERSITY OF NIGERIA**  
**FACULTY OF SOCIAL SCIENCES**  
**DEPARTMENT OF ECONOMICS**  
**2023\_2 EXAMINATIONS**

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**COURSE TITLE: ADVANCED MICROECONOMIC THEORY**

**COURSE CODE: ECO 431**

**UNITS: 2**

**TIME ALLOWED: 2 HOURS**

**INSTRUCTION: ANSWER QUESTION ONE AND ANY OTHER TWO QUESTIONS**

**QUESTION ONE**

(a) The demand and supply functions of a commodity are given as follows:

$$Q_d = 500 - 30P$$

$$Q_s = 240 + 70P$$

Required:

- (i) Determine the equilibrium price and quantity bought and sold **(12marks)**
  - (ii) If the price of the commodity is fixed at N10, what is the magnitude of excess supply **(4 marks)**
  - (iii) If the price of the commodity is fixed at N5, what is the magnitude of excess demand **(4 marks)**
- (b) Every economic system has goals such as financial security and freedom to carry out economic choices. What are the goals of every economic system? **(10 marks)**

**QUESTION TWO**

Differentiate between the following:

- (a) Increasing returns to scale and decreasing returns to scale **(5 marks)**
- (b) Implicit and Explicit Costs **(5 marks)**
- (c) Accounting and Economic profit **(5 marks)**
- (d) Cost and Outlay **(5 marks)**

**QUESTION THREE**

a) Assume the short-run cost function of a particular firm is given as:

$$C = 0.1q^3 - 2q^2 + 15q + 10$$

**Required:**

- i. Obtain the Marginal Cost **(3 marks)**
- ii. Get the Average cost of production **(3 marks)**
- iii. Derive the Average Variable Cost of production **(3 marks)**

**iv.** Show that the Marginal Cost is equal to the Average Variable Cost at the minimum point of the AVC **(6 marks)**

b) What is the effect of external economies of scale? **(5 marks)**

#### **QUESTION FOUR**

A Discriminating monopolist whose demand and cost functions are given below separated his consumers into two markets:

$$P_1 = 160 - q_1 \text{ and } P_2 = 360 - q_2, \quad C = 50 + 20(q_1 + q_2).$$

You are required to determine:

(a) output level where profit is maximized. **(7marks)**

(b) price charged in each market **(3marks)**

(c) profit maximizing level **(4marks)**

(d) Distinguish between a perfect competitive firm and monopolistic competition **(6marks)**