



**NATIONAL OPEN UNIVERSITY OF NIGERIA**  
**FACULTY OF SOCIAL SCIENCES**  
**DEPARTMENT OF ECONOMICS**  
**SEPTEMBER, 2020\_1**

**COURSE TITLE: ADVANCED MICROECONOMICS**

**COURSE CODE: ECO 431**

**UNITS: 3**

**TIME ALLOWED: TWO (2) HOURS**

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

1a. Use the following Production and Market table to answer the questions i-iv:

Output (units)	Total Revenue (\$)	Total Cost (\$)
0	0	100
5	50	150
10	200	200
15	375	250
20	600	480
30	660	600

- i. What kind of cost is indicated at zero output? **(3 marks)**
  - ii. How many equilibrium point(s) is achievable? At what output? **(4 marks each)**
  - iii. Calculate both marginal cost and marginal revenue at each output level. **(10 marks)**
  - iv. What is (are) profit(s) at equilibrium point(s)? **(4 marks each)**
  - bi. Explain the term 'market equilibrium' **(3 marks)**
  - ii. Distinguish between market and firm equilibrium **(6 marks)**
- 2a. Explain the term "Cobweb Model" **(5 marks)**
- b. Differentiate between convergence and divergence situations as regard Cobweb Model. **(10 marks)**
- c. If the percentage change in quantity demanded is a dozen and a half and percentage change in price is a score. What is the unit of elasticity and type? **(5 marks)**
3. Given the duopoly demand function and the cost function for individual firm as follows;
- $P = 800 - 4Q$ ; Where  $Q = Q_1 + Q_2$ ; and  $C_1 = 20Q_1$ ;  $C_2 = 2.5Q_2^2$ . Calculate the level of output that maximizes duopolist's profit. **(20 marks)**
4. Given that the utility function of Dr. Bee is  $U = 10X^{\frac{2}{3}}Y^{\frac{1}{3}}$  and he is constraint by his income level of N100. Also, if the prices of commodities X and Y are given as N3 and N5 respectively, maximize his utility subject to the constraint function  $100 = 3X + 5Y$ . **(20 marks)**

5. Explain the following economic terms
- i. "Substitution effect"
  - ii. "Income effect"
  - iii. "Price consumption curve"
    - v. "Income consumption curve"
    - vi. "Deadweight loss" **(20 marks)**