



Monmouth
COLLEGE

• Name: _____

• Date: _____

• Section: _____

ECON 300: Intermediate Price Theory

Quiz #6

Fall 2024

INSTRUCTIONS:

- Please read all questions carefully before you begin answering.
- Answer all questions in the spaces provided on the question sheet.
- This quiz consists of 5 pages, including this one. There are a total of 4 problems with a total of 16 subquestions.
- This is a closed-book quiz. Please remove all materials from the top of the desk and take any necessary items from your bags before the exam begins.

Problem 1. Definitions

(5 Points Each)

Select FOUR items on the list of items below, and provide a definition of the items that you chose.

- Monopsony
- Deadweight Loss
- Price Ceiling
- Economy of Scale
- Market Power
- Consumer's Burden (from Taxation)

1.A. Item #1: _____

1.B. Item #2: _____

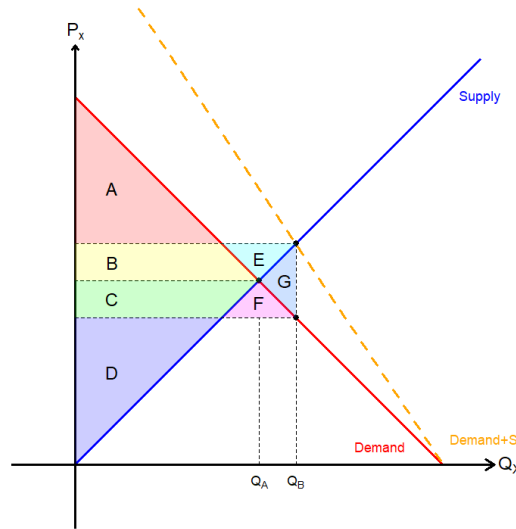
1.C. Item #3: _____

1.D. Item #4: _____

Problem 2. True / False

(5 Points Each)

Determine whether the following statements are TRUE or FALSE. If you conclude that a statement is TRUE, no justification is required. However, if you conclude that a statement is FALSE, you MUST provide an explanation to justify your answer. All four questions are based on the graph below, which depicts a government subsidy proportional to the price of a good.



2.A. The area A represents consumer surplus.

2.B. The area $B + C + E + F + G$ represents government's expenses in subsidizing the market.

2.C. The area $E + F + G$ represents the deadweight loss

2.D. The quantity traded in the market before the subsidy is Q_A .

Problem 3. Taxation**(7.5 Points Each)**

Consider the market for good x . Assume that the output market for good x is perfectly competitive. The demand (Q_x^D) and supply (Q_x^S) functions for good x are given as follows:

$$Q_x^D = 120 - 4P_x$$

$$Q_x^S = 20 + 6P_x$$

3.A. What are the equilibrium market price (P_x^*) and quantity (Q_x^*) as determined by the market?

• $P_x^* =$

• $Q_x^* =$

For the remaining questions in Problem 3, assume that the social planner has concluded that good x is over-traded in the economy and implements a per-unit tax of \$5 for each unit produced or consumed.

3.B. Formalize the “price differential” between the price paid by the demand side (P_x^D) and the price received by the supply side (P_x^S).

3.C. What is the quantity of good x traded (Q_x^T) in the market?

3.D. What information is needed to determine whether consumers or producers bear a greater burden of taxation?

Problem 4. Monopolies**(7.5 Points Each)**

Consider a profit-maximizing monopoly producer of good x . The market demand for good x is given by the following inverse demand function:

$$P_x = 800 - Q_x$$

The producer's total cost function is given by:

$$TC(Q) = 814 + 5Q^2$$

4.A. Derive the producer's total revenue function, $TR(Q)$.

- $TR(Q) =$

4.B. Derive the producer's marginal revenue function, $MR(Q)$.

- $MR(Q) =$

4.C. Derive the producer's marginal cost function, $MC(Q)$.

- $MC(Q) =$

4.D. Find the profit-maximizing quantity and price for the producer.

- Original Score: _____

- Recovered Score: _____

- Original Date: _____

- Recovered Date: _____