

Use the following information to answer **questions 1-4**. A DVD making monopolist incurs \$12 in fixed costs. The marginal cost is \$4 per DVD produced.

P	Q	TR	MR	TC	Profit
\$10	0				
9	1				
8	2				
7	3				
6	4				
5	5				
4	6				

1. What is the profit maximizing quantity for this DVD monopolist in the **short run**?
 - A) 0 (since closed in short run)
 - B) 5
 - C) 2
 - D) 3
 - E) 4
2. What is the profit maximizing quantity for this DVD monopolist in the **long run**?
 - A) 0 (since closed in long run)
 - B) 5
 - C) 2
 - D) 3
 - E) 4
3. How much profit (or loss) does this monopolist incur in the **short run**?
 - A) \$0
 - B) \$12
 - C) -\$4
 - D) \$9
 - E) -\$3
4. How much profit (or loss) does this monopolist incur in the **long run**?
 - A) \$0
 - B) \$12
 - C) -\$4
 - D) \$9
 - E) -\$3
5. In the long-run, how does a perfectly competitive firm determine whether to be open or closed?
 - A. Close if cannot cover all fixed costs
 - B. Close if price exceeds marginal costs
 - C. Close if earning zero economic profit
 - D. Close if losing money
 - E. Close if price exceeds average variable costs
6. At a price of \$24, the monopolist is current producing: $Q = 10$, the $ATC = \$12$, $AVC = \$8$, $MR = \$10$ & $MC = \$16$. How can this monopolist increase profits?
 - A. Increase quantity.
 - B. Reduce quantity.
 - C. Keep quantity the same since already maximizing profits.
 - D. Shut down since losing money.

7. The U.S. wheat market is characterized as a perfectly competitive market and a constant cost industry. The current **long-run** equilibrium price of wheat is \$1 per bushel. Due to an increase in demand for “Made in the U.S.A” wheat there is an increase in demand. After a new **long-run** equilibrium is reached, what will be the new **long-run** equilibrium price of wheat?

- A. above \$1.
- B. \$1.
- C. below \$1.

8. Suppose two firms (A and B) supply the entire market. The supply curve for firm A is: $MC = 4 + 2Q_A$. The supply curve for firm B is: $MC = 4 + 3Q_B$. Find the market supply curve:

- A. $P = 8 + 5Q_{mkt}$
- B. $P = 4 + 5Q_{mkt}$
- C. $P = 4 + (6/5)Q_{mkt}$
- D. $P = 8/5 + (5/6)Q_{mkt}$
- E. $P = 4 + (5/6)Q_{mkt}$

9. What is the term “dead weight loss” mean?

- A. the loss attributed to paying fixed costs after a firm has closed (in the short run)
- B. financial losses incurred by the firm due to pension/health care costs.
- C. the reduction in tax revenue to the government following a firm’s closure.
- D. the reduction in marginal revenue following a price increase.
- E. the reduction in total surplus when a monopoly operates rather than a perfectly competitive firm.

10. Which of the following firms use 2nd degree price discrimination?

- A. eBay
- B. Carmike12
- C. Sam’s Club

11. What prevents a perfectly competitive firm from making profits in the long-run?

- A. advertising.
- B. government restrictions.
- C. taxes.
- D. entry.
- E. mergers.

Use the following information to answer questions 12-14: a perfectly competitive firm has cost curves: $MC = 2 + 4Q$, $AVC = 2 + 2Q$, $TC = 2 + 2Q + 2Q^2$, and price is \$18.

12. How many units of output (if any) in the short-run will the firm produce?

- A) 0 (closed)
- B) 4
- C) 3
- D) 9
- E) 8

13. How much profit (or loss) will this firm incur in the short-run?

- A) \$0
- B) -\$2
- C) \$28
- D) -\$20
- E) \$30

14. Find the producer surplus (Hint, a graph may help you answer this question)

- A) \$24
- B) \$50
- C) \$64
- D) \$72
- E) \$32

15. Wal-Mart is determining at what time each night that they should close. Your advice is close if the

- A. total cost of staying open exceed the total revenue due to staying open.
- B. total cost of staying open are less than the total revenue from staying open.
- C. variable cost of staying open are greater than the total revenue due to staying open.
- D. variable cost of staying open are less than the total revenue due to staying open.

16. Charging different prices for slightly different goods (ex. Coke and Pepsi) is known as:

- A. product differentiation
- B. mark-up pricing
- C. price leadership
- D. price discrimination
- E. price differentiation

17. Find the equilibrium strategy of the following game:

		Column		
		X	Y	Z
Row	A	4,2	8,2	2,3
	B	3,5	6,7	1,4
	C	0,4	-1,3	5,5

- A. (C, Z)
- B. (B, Y) & (A, X)
- C. (A, Y)
- D. (B, Y), (A, X), & (C, Z)
- E. (A, Z)

18. In the above game (see question #17), identify the strongest equilibrium concept it satisfies.

- A. Nash Equilibrium
- B. Dominant Strategy Equilibrium
- C. Iterative Dominance Equilibrium
- D. Strong Equilibrium
- E. Weak Equilibrium

19. Find the equilibrium strategy of the following game:

		Column	
		Left	Right
Row	Up	4,0	6,6
	Down	2,3	3,4

- A. (Up, Left)
- B. (Down, Left)
- C. (Up, Right)
- D. (Down, Right)
- E. (Down, Left) & (Up, Right)

20. In the above game (see question #19), identify the strongest equilibrium concept it satisfies.

- A. Nash Equilibrium
- B. Dominant Strategy Equilibrium
- C. Iterative Dominance Equilibrium
- D. Strong Equilibrium
- E. Weak Equilibrium

II. Discussion Questions (12.5 points per discussion question)

1. Suzie Q operates a small hair salon business in Springfield. She receives \$20 for each hair cut (q), where q is the number of hair cuts performed by Suzie each week. Suzie finds that her marginal cost per hair cut is: $MC = 0.1q + 2$. In addition to her marginal cost, Suzie also has \$200 each week in fixed costs. Hence her total costs are: $TC = 200 + 2q + 0.05q^2$

a. How many hair cuts should Suzie perform each week (if any)?

b. On a graph, show Suzie's profit maximizing output (if any). Label all curves, axes, and intercepts.

c. Calculate Suzie's weekly short-run profit.

d. Is Suzie open or close in the long-run?

2. There are 10 identical firms in the textbook industry. Each has the same short-run marginal cost of: $SMC = 4 + 2Q$. The demand curve for textbooks is: $P = 22 - Q$

A. Find the market supply curve.

B. Graph the market supply curve and market demand curve on one graph below. *Label all axes & curves!*

C. On the graph above, pin stripe the consumer surplus region & lightly shade the producer surplus.

D. How much is the consumer surplus? How much is the producer surplus?

3. A monopoly has a demand curve of: $P = 120 - Q$ and total cost: $TC = 20Q$ and marginal cost: $MC = 20$.

A. Graph the demand curve below.

P



B. Find the profit maximizing quantity.

C. Find the profit maximizing price.

- D. On the above graph (from A), pin stripe the producer surplus.
- E. On the same above graph, heavily shade the consumer surplus.
- F. On the same above graph, lightly shade the deadweight loss.

4. A perfectly price discriminating monopolist has demand: $P = 100 - 9Q$ and marginal cost: $MC = Q$.

A. How much output does the perfectly price discriminating monopolist produce?

B. If fixed costs are zero, show the profit on a graph for the perfectly price discriminating monopolist.

P

Q

C. How much profit does the perfectly price discriminating monopolist earn?