

## Homework 5

**Due Date: Nov-15/16-2018**

### I. Multiple Choice Questions

1. Imperfect competition prevails in an industry when what condition exists:  
A) individual sellers cannot affect price.  
B) individual sellers can affect price.  
C) price is set by the consumer.  
D) price is set by the government.  
E) none of the above are correct.
  
2. If a firm's demand curve is horizontal, then the firm's marginal revenue is:  
A) less than the price of the product.  
B) equal to the price of the product.  
C) greater than the price of the product.  
D) greater than, equal to, or less than the price of the product, depending on the particular circumstances.  
E) not determinable from the above information.
  
3. In the situation of imperfect competition, the relation between market price  $P$  and marginal revenue  $MR$  for each supplying firm is that:  
A)  $P$  is less than  $MR$  at all or most output levels.  
B)  $P$  is greater than  $MR$  at all or most output levels.  
C)  $P$  is the same as  $MR$  at all output levels.  
D)  $P$  is either less than  $MR$  at particular output levels or the same as  $MR$ .  
E) none of the above, since  $P$  is not related to  $MR$ .
  
4. A monopoly exists when:  
A) a single seller has complete control over the industry.  
B) a single seller has no control over the industry.  
C) many sellers are in control of the industry.  
D) no one controls the industry.  
E) none of the above.
  
5. If a monopoly is attempting to maximize profits, which of the following, if any, should it attempt to do?  
A) Maximize revenues.  
B) Maximize profit per unit.  
C) Select that output at which average total cost is at a minimum.  
D) Select that output at which average fixed cost is at a minimum.  
E) None of the above.

6. A monopoly finds that, at its present level of output and sales, marginal revenue equals \$5 and marginal cost is \$4.10. Which of the following will maximize profits?

- A) Leave price and output unchanged.
- B) Increase price and leave output unchanged.
- C) Increase price and decrease output.
- D) Decrease price and increase output.
- E) Decrease price and leave output unchanged.

7. Which of the following eliminates the possibility of perfect competition in a market?

- A) The industry faces a downward sloping demand curve.
- B) Individual firms face downward sloping demand curves.
- C) Firms face decreasing returns to scale.
- D) Firms display constant returns to scale.
- E) The market lacks product differentiation.

8. A natural monopoly is:

- A) a market in which the industry's output can be efficiently produced only by a single firm.
- B) a market in which the industry's output is produced by a single firm.
- C) a market where many sellers can produce the output.
- D) not a real option.
- E) none of the above.

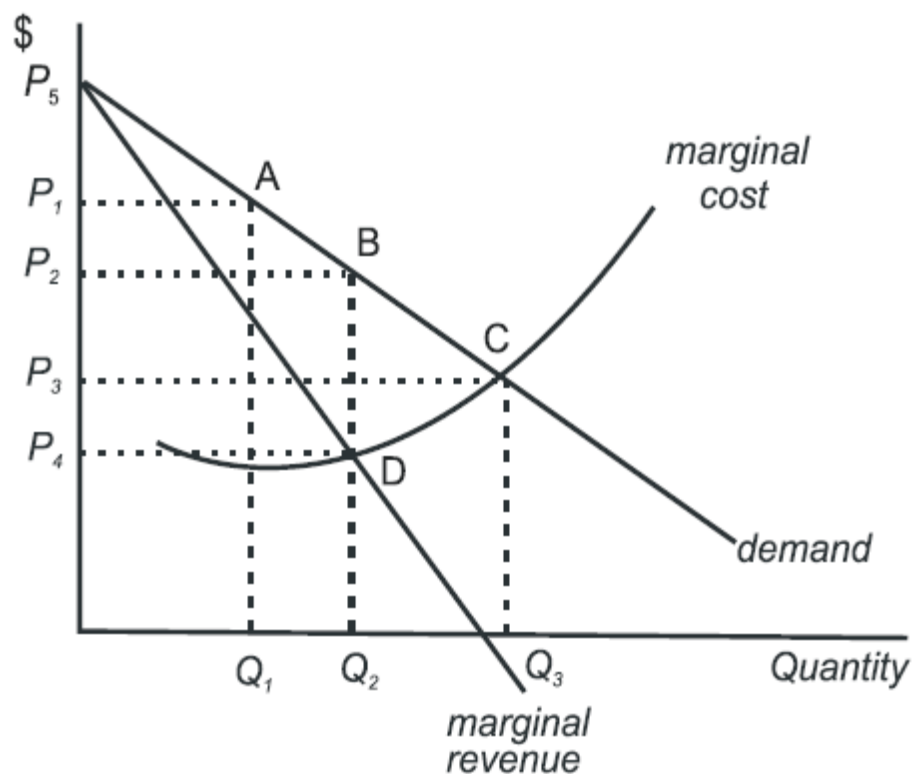
9. Perfect competition differs from imperfect competition in that:

- A) it does not maximize profits at the point where marginal revenue equals marginal cost.
- B) perfect competition's industry demand curve never slopes down.
- C) perfect competition lacks any externalities.
- D) perfectly competitive firms cannot affect prices.
- E) none of the above accurately describe a difference.

10. In perfect competition, how is the market price related to marginal revenue for each supplying firm?

- A) P is the same as MR at all output levels.
- B) P is less than MR at all (or most) output levels.
- C) P is greater than MR at all (or most) output levels.
- D) P is either greater than MR or less than MR at particular output levels, but never the same as MR.
- E) None of the above.

Use the following to answer questions 11-13:



11. Which of the following points in Figure 9-1 can be used to identify a profit maximizing monopolist's production and the price it charges?

- A)  $Q_1, P_1$
- B)  $Q_2, P_2$
- C)  $Q_3, P_3$
- D)  $Q_2, P_4$
- E)  $Q_2, P_3$

12. Which of the following points in Figure 9-1 can be used to identify production and price in a perfectly competitive industry?

- A)  $Q_1, P_1$ .
- B)  $Q_2, P_2$ .
- C)  $Q_3, P_3$ .
- D)  $Q_2, P_4$ .
- E)  $Q_2, P_3$ .

13. The difference in consumer surplus between a monopoly market and a perfectly competitive one illustrated by Figure 9-1 is represented by area:

- A)  $P_5-P_1-A$ .
- B)  $P_2-P_3-C-B$ .
- C)  $P_3-P_4-D-C$ .
- D)  $Q_1-A-B-Q_2$ .
- E) None of the above.

14. When economists urge the federal government to attempt to eliminate monopoly, they do so mainly in order to:

- A) prevent the growth of big business.
- B) expand public utilities.
- C) prevent small firms from decreasing in number.
- D) restrain conglomerates.
- E) ensure competition.

15. The term "strategic interaction" refers to:

- A) the link between consumer welfare and industry cost curves.
- B) tacit agreements between the producers and the consumers of inputs.
- C) the fact that each firm's business strategy depends upon its rival's business behavior.
- D) the realization by oligopolists that higher selling prices imply lower sales.
- E) all of the above.

		Firm B	
		III	IV
Firm A	I	Cell a \$750 \$300	Cell b \$300 -\$300
	II	Cell c -\$150 \$600	Cell d \$350 -\$150

16. Figure 11-4 shows a payoff table for two firms, A and B. Which cell is a Nash equilibrium?

- A) Cell a.
- B) Cell b.
- C) Cell c.
- D) Cell d.
- E) None of the cells is a Nash equilibrium.

## II. True or False Questions

17. Dominant strategy is the situation that arises when one player has a single best strategy no matter what strategy the other player follows.

18. Game theory analyzes the ways in which two or more players choose strategies that jointly affect each other.

19. A dominant equilibrium solution to a game is sometimes not a Nash equilibrium solution to that game.

20. The deadweight loss associated with a monopoly results from the production of an output level at which marginal revenue does not equal marginal cost.

		Firm B	
		III	IV
Firm A	I	Cell a \$40 \$30	Cell b \$15 \$25
	II	Cell c \$25 \$15	Cell d \$20 \$30

21. Figure 11-7 shows a payoff table for two firms, A and B. **Cell a** is a dominant equilibrium for the game.

### III. Short Answers

22. Question 7, “Questions for Discussion”, Chapter 9 of the textbook.

23. Question 8, “Questions for Discussion”, Chapter 9 of the textbook.

24. Question 4, “Questions for Discussion”, Chapter 10 of the textbook.

25. Question 7, “Questions for Discussion”, Chapter 10 of the textbook.

26. Question 9, “Questions for Discussion”, Chapter 10 of the textbook.