

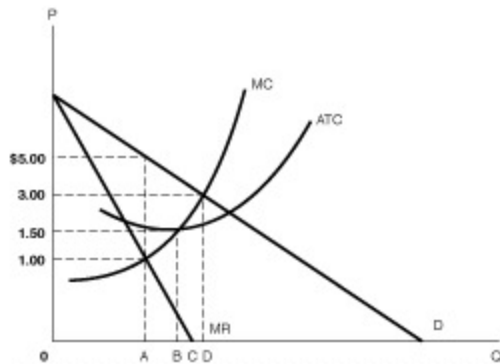
## Assignment 5

### Part I. Multiple-choice questions

1. The term *oligopoly* refers to:
  - a. general rubric for imperfect competition.
  - b. a situation in which the number of competing firms is large but the products differ slightly.
  - c. a situation in which the number of competing firms is small but greater than one.
  - d. the form of imperfect competition in which firms act like a monopoly, regardless of the number of firms or type of product.
  
2. Under which of the following conditions could a firm successfully price discriminate?
  - a. the good is in high demand.
  - b. consumers have especially high income.
  - c. the industry is perfectly competitive
  - d. no possibility of resale.
  
3. Monopoly exists whenever:
  - a. there is only one seller of a particular product.
  - b. a seller has some degree of control over the price he or she can charge.
  - c. the profit earned by the seller exceeds the amount that should properly be earned as interest on money invested, plus an allowance for the risk undertaken.
  - d. a seller manages to maintain his or her position through successful advertising.
  
4. If a firm's marginal revenue exceeds its marginal cost, maximum-profit rules require that the firm:
  - a. increase its output in both perfect and imperfect competition.
  - b. increase its output in perfect but not necessarily in imperfect competition.
  - c. increase its output in imperfect but not necessarily in perfect competition.
  - d. decrease its output in both perfect and imperfect competition.
  - e. increase price, not output, in both perfect and imperfect competition.
  
5. Marginal revenue could equal price for a profit-maximizing firm:
  - a. only when an industry is an oligopoly.
  - b. only when an industry is a monopoly.
  - c. if increased sales are associated with higher prices along a demand curve.
  - d. whenever firms are able to differentiate their products and gain some control over price.
  - e. only when an industry is perfectly competitive.

6. Monopoly power results in:
- a lower quantity than if the industry was perfectly competitive.
  - a higher price than if the industry was perfectly competitive.
  - a lower price than if the industry was perfectly competitive.
  - both a and b.
7. A concentration ratio describes the:
- percentage of total industry sales accounted for by the largest four to eight firms.
  - percentage of total industry sales accounted for by the smallest four to eight firms.
  - degree of regulatory power that government policy-makers have over an industry.
  - degree of decision-making power that the owners of a firm have.
  - significance of antitrust policy in a particular industry.

Use the figure below, which shows the current cost and demand information for a monopolist selling widgets, to answer questions 8 through 10.



8. The profit-maximizing output level for this monopolist is:
- OA.
  - OB.
  - OC.
  - OD.
9. The profit-maximizing price for the monopolist to charge is:
- \$1.00 per widget.
  - \$1.50 per widget.
  - \$3.00 per widget.
  - \$5.00 per widget.

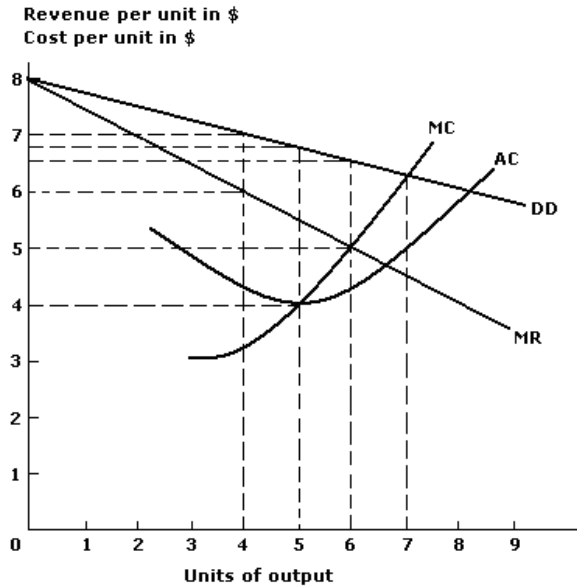
10. At the optimal level of output and price, the firm will:
- earn economic profits.
  - break even, in an economic sense.
  - make losses, but continue producing in the short run.
  - be right at the shutdown point.
  - shut down in the short run.
11. Which of the following are possible sources of imperfectly competitive markets?
- Legal barriers to entry.
  - Perceived product differentiation.
  - Tariff protection from foreign competition.
  - All of the above.
12. OPEC represents a market structure most accurately represented by:
- the pure monopoly model.
  - a collusive oligopoly model with incomplete market coverage.
  - the duopoly model.
  - perfect competition.
13. If a profit-maximizing monopoly has reached its equilibrium position, then price:
- must be less than marginal cost.
  - must be equal to marginal cost.
  - must be greater than marginal cost.
  - may be equal to or below marginal cost, but not above it.
14. Price discrimination is a technique used by firms who want to:
- capture the deadweight loss to monopoly.
  - capture additional consumer surplus by charging different prices to different consumers.
  - relinquish producer surplus by charging different prices to different consumers.
  - increase producer surplus by buying their inputs from the lowest-price provider.
15. Collusive oligopoly produces prices and quantities very similar to those produced by:
- perfect monopoly.
  - monopolistic competition.
  - perfect competition.

**Part II. Problem-solving questions**

16. Suppose the demand for Botox, a drug to treat some eye conditions, is  $p = 775 - 375Q$  (Q in million vials) and the monopolistic drug seller's marginal cost is constant at \$25 (MC = 25). What are the monopoly's profit maximizing price and quantity (This question is adapted from Perloff, 2012, pp. 375-376)? **(Please do NOT include words or "\$" in your answer. Round your answer to two decimal places unless it is an integer.)**

Answers: Price: \$ \_\_\_\_\_  
 Quantity: \_\_\_\_\_ million

17. Refer to the graph below.



- If we express the demand curve as  $P = 8 - bQ$ , what is  $b$ ?
- At what level of output does average cost fall to its minimum level?
- What price would clear the market if output were set at this minimum AC level?
- What would profit be when output were at the minimum AC level?
- At what output would profit be maximized?
- What is marginal revenue at this output?
- What is marginal cost at this output?
- What is average cost at this output? (Assume it's 20 cents above the minimum AC level.)
- What is price at this output?
- What is total profit at this output?

**(Please do NOT include words like "units" or "\$" in your answer. Round your answers to TWO decimal places.)**

Your answer: a. \_\_\_\_\_ b. \_\_\_\_\_  
 c. \_\_\_\_\_ d. \_\_\_\_\_  
 e. \_\_\_\_\_ f. \_\_\_\_\_  
 g. \_\_\_\_\_ h. \_\_\_\_\_  
 i. \_\_\_\_\_ j. \_\_\_\_\_

18. Here is a consulting opportunity for you. Refer to the table below.

<i>Case</i>	<i>Price</i>	<i>Marginal Revenue</i>	<i>Quantity of Output</i>	<i>Total Revenue</i>	<i>Total Cost</i>	<i>Fixed Cost</i>	<i>Average Cost</i>	<i>Marginal Cost</i>	<i>Answer</i>
a.	\$8.00	\$4.00	2,000			\$2,000	\$4.00	\$3.00	
b.	5.00	4.00	1,000		\$4,000	1,000	At minimum level		
c.			4,000	\$ 8,000			1.80	2.00	
d.	1.00	2.00	10,000			2,000	2.00	2.00	
e.	2.50	2.00	10,000			4,000	3.00	2.00	

What would you recommend in each of the five cases listed in this table? In each case, the firm in question is a monopoly and wants to maximize its profits (or minimize its losses). Enough information is supplied in each case, though you may have to fill in some of the blank spaces in the table to do your job. *Hint:* There is one “nonsense case,” in which the figures are inconsistent and cannot be correct. Ferreting out such a circumstance could lead you to tell your client to do a better job in picturing either his or her market or cost structure.

Answer for each case by putting one of the numbers 1 through 5 from the code list below into the extreme right-hand column of the table. (The same number should not be used for more than one question.)

- 1 = Firm is now at correct position.
- 2 = Firm should increase price and reduce quantity produced and sold.
- 3 = Firm should reduce price and increase quantity produced and sold.
- 4 = Firm should shut down operations because loss at best possible operating position exceeds fixed cost.
- 5 = A nonsense case—the figures supplied are inconsistent and could not all be correct.

**(Please answer with number 1 to 5.)**

Your answer: a. \_\_\_\_\_ (1/2/3/4/5) b. \_\_\_\_\_ (1/2/3/4/5)  
 c. \_\_\_\_\_ (1/2/3/4/5) d. \_\_\_\_\_ (1/2/3/4/5)  
 e. \_\_\_\_\_ (1/2/3/4/5)

