

1. A monopolist faces a constant marginal cost of 1 euro. If at the price he is charging, the price elasticity of demand for the monopolist is -0.5 , then:

- a. the price he is charging must be 2 euro.
- b. the price he is charging must exceed 2 euro.
- c. the price he is charging must be less than 2 euro.
- d. the monopolist cannot be maximizing profits.

2. A natural monopoly has a marginal cost that is:

- a. lower than average cost.
- b. equal to average cost.
- c. higher than average cost.
- d. less than, equal to, or greater than the average cost.

3. A monopolist has a positive marginal cost of production. Despite this fact, the monopolist decides to produce a quantity that maximizes total revenues (instead of total profits). Assume that the marginal revenue curve for this monopolist always has a negative slope. Then the monopolist:

- a. is minimizing its profits.
- b. produces the same output that it would if it maximized profits.
- c. produces less output than it would if it were maximizing profits.
- d. produces more output than it would if it were maximizing profits.

4. Which of the following is a characteristic of a two-part tariff practiced by a monopoly?

- a. Charging different prices based on consumer preferences.
- b. Setting a single price for all units sold according to marginal cost.
- c. Charging a fixed entry price and a usage price per quantity consumed.
- d. Offering discounts for purchases in large quantities.

5. Consider a monopoly that knows the willingness to pay of each consumer and practices first-degree price discrimination. The demand function is $P = 2000 - 10Q$. The marginal costs are constant and equal to 500. Fixed costs are zero. The profit-maximizing monopolist will:

- a. sell 75 cars and make a total profit of 56,250.
- b. sell 150 cars at a price of 500 a car.
- c. sell 150 cars and make a profit of 112,500.
- d. sell 180 cars and make a profit of 180,000.

6. A monopolist produces a good at zero marginal costs. However, the fixed costs are equal to F . The demand for the good is given by $Q = 12 - p$. The profit-maximizing monopolist will:

- a. only produce if $F \leq 36$.
- b. only produce if $F \leq 12$.
- c. produce 12 units.
- d. produce 9 units.

7. A monopolist sells in two markets. The demand curve in the first market is $p_1 = 141 - 3Q_1$, and the demand curve in the second market is $p_2 = 115 - 2Q_2$, where Q_i is the quantity sold in market i and p_i is the price charged in market i . Marginal costs are constant and equal to 3, and there are no fixed costs. The monopolist can charge different prices in the two markets. What is the profit maximizing combination of quantities?

- a. $Q_1 = 51$ and $Q_2 = 23$.
- b. $Q_1 = 23$ and $Q_2 = 28$.
- c. $Q_1 = 46$ and $Q_2 = 30$.
- d. $Q_1 = 33$ and $Q_2 = 26$.

8. A duopoly faces the inverse demand curve $p = 160 - 2Q$. Both firms in the industry have constant marginal costs of 10. In the Cournot equilibrium, how much output will each firm sell?

- a. 25
- b. 35
- c. 75
- d. 54

9. What characterizes the Nash equilibrium in the Stackelberg model?

- a. The leader and follower determine the quantities to produce simultaneously.
- b. The leader chooses its strategy knowing the follower's strategy and the follower's strategy is to be dominant in its market share.
- c. The follower chooses its strategy knowing the strategy of the leader and the leader considers the follower's response when defining its strategy.
- d. The follower chooses its strategy knowing the leader's strategy and the leader's decision to maximize profit is independent of the follower's strategy.

10. Suppose the market demand for a good is $p = 100 - Q$. There are two firms in this market that compete on prices. Both firms' marginal costs are constant and equal to 40. In Bertrand equilibrium, what is the price and how much does each firm produce?

- a. The price is 40 and each firm produces 30.
- b. The price is 40 and each firm produces 60.
- c. The price is 60 and each firm produces 20.
- d. The price is 60 and each firm produces 40.

11. Which industry is least likely to compete on prices?

- a. Cars
- b. Airplanes
- c. Scooters
- d. Motorbikes

12. Suppose that the market demand for a particular good is given by $p = 880 - 4Q$. Suppose that the market has two firms: a Stackelberg leader and a follower. Each firm has a constant marginal cost of 80. In equilibrium, total market output by the two firms will be:

- a. 50.
- b. 100.
- c. 150.
- d. 200.

13. Consider a simultaneous game with two players where none have a dominant strategy. It can be said that:

- a. there is a Nash equilibrium in pure strategies.
- b. there is at least one Nash equilibrium.
- c. there are no Nash equilibria.
- d. there is a Nash equilibrium in pure strategies that is efficient.

14. Two friends -- Pedro and Ana -- wait until Christmas morning with the decision to buy or not to buy gifts for each other. Consider that their choice is made simultaneously, and that their payoff matrix is:

		Ana	
		<i>Gift</i>	<i>No gift</i>
Pedro	<i>Gift</i>	3,3	1,5
	<i>No gift</i>	5,1	2,2

In each cell, the first number is the payoff of Pedro and the second number the payoff of Ana. What is the Nash equilibrium of this game in pure strategies?

- a. Pedro: Gift, Ana: Gift
- b. Pedro: Gift, Ana: No gift
- c. Pedro: No gift, Ana: Gift
- d. Pedro: No gift, Ana: No gift

15. Consider now that Pedro decides first whether to buy a gift, and then Ana follows, after having observed Pedro's choice. The payoffs remain the same as in question 14 above. What is the Nash equilibrium of this game in pure strategies?

- a. Pedro: Gift, Ana: Gift
- b. Pedro: Gift, Ana: No gift
- c. Pedro: No gift, Ana: Gift
- d. Pedro: No gift, Ana: No gift

16. In monopolistic competition, which of the following statements correctly describes the long-run equilibrium?

- a. Each company that enters the market causes a negative demand shock for others.
- b. The price is equal to the average cost.
- c. Each firm faces a downward-sloping demand curve.
- d. All the above are correct.

Answers Version A

1. d
2. a
3. d
4. c
5. c
6. a
7. b
8. a
9. c
10. a
11. b
12. c
13. b
14. d
15. d
16. d