

BPE MIC1 Microeconomics 1 – Fall Semester 2010

Final Exam - 06.12.2010, 9:00-10:30 a.m.

Test Version: A

Guidelines and Rules:

1. The test setup has 8 pages. It is your responsibility to check that you have all the pages.
2. The time limit is 90 minutes.
3. The exam is worth 50 points.
4. You are NOT allowed to use any books or notes.
5. Any violation of academic honesty will be punished to the fullest extent possible.
6. At most one exam-taker is allowed to be outside the room at one time.
7. Write the answers to the **fill-the-gaps** and **true/false** questions in the spaces corresponding to the respective questions in the setup sheet.
8. Mark the right answer on the **multiple-choice** questions by circling the true letter directly in the setup sheet
10. When ready, **submit** the filled setup sheet with **your name** written on the first page.

This exam will count for 50% of your final grade from the course. Good luck!

Fill the gaps

Complete each statement.

1. Because of diminishing returns, a factor in abundant supply has a low _____ .
2. In the long run, competitive markets are characterized by the assumption for _____ by firms.
3. The accumulation of machinery used in the production of new goods and services is referred to as _____ .
4. The fundamental source of monopoly power is _____ .
5. Both monopolistic competition and oligopoly fall in between the more extreme market structures of _____ and _____ .
6. Most markets are not _____ in the real world because there are reasonable substitutes for most goods.
7. The _____ of capital is the price a person pays to own that factor of production indefinitely.
8. In terms of price determination, a competitive firm is a _____, whereas a monopolist is a _____.
9. The market for novels has a _____ structure.
10. The simplest type of oligopoly is _____.

True/False

Indicate whether the statement is true or false.

- _____ 11. In a competitive market, there are so few buyers and so few sellers that each has a significant impact on the market price.

- ___ 12. A monopolist that can practice perfect price discrimination will not impose a deadweight loss on society.
- ___ 13. All points on a demand curve are optimal consumption points.
- ___ 14. In the United States, technological advances help explain persistently rising employment in the face of rising wages.
- ___ 15. If two players engaged in a prisoner's dilemma game are likely to repeat the game, they are more likely to cooperate than if they play the game only once.
- ___ 16. A firm operating in a perfectly competitive industry will continue to operate if it earns zero economic profits because it is likely to be earning positive accounting profits.
- ___ 17. Welfare economics is the study of the welfare system.
- ___ 18. In some cases, specialization allows larger factories to produce goods at a lower average cost than smaller factories.
- ___ 19. When each person specializes in producing the good in which he or she has a comparative advantage, each person can gain from trade but total production in the economy is unchanged.
- ___ 20. The claim that advertising reduces the elasticity of demand is likely to be made by a defender of advertising.

Multiple Choice

Identify the choice that best completes the statement or answers the question.

- ___ 21. Which of the following statements about a production function is correct for a firm that uses labor to produce output?
 - a. The production function depicts the relationship between the quantity of labor and the quantity of output.
 - b. The quantity of output determines the maximum amount of labor the firm will hire.
 - c. The slope of the production function measures marginal cost.
 - d. All of the above are correct.
- ___ 22. Consider the market for land. Suppose the value of the marginal product of land decreases. Holding all else constant, what will happen to the equilibrium rental price for land?
 - a. The equilibrium rental rate increases.
 - b. The equilibrium rental rate does not change.
 - c. The equilibrium rental rate decreases.
 - d. It is not possible to determine what will happen to the equilibrium rental rate.
- ___ 23. Suppose that a violent earthquake causes the uninhabited Hawaiian island of Mokuauia (also called Goat Island) to fall into the Pacific Ocean. No people are killed or injured, and since the island is undeveloped, no buildings are destroyed. The island was a source of tourist income for Hawaiian landowners. Which of the following statements correctly describes the rents earned by the people who own land on the surrounding islands?
 - a. As the supply of vacation land decreases, the marginal productivity of the remaining land will increase; thus, rents will decrease.
 - b. As the supply of vacation land decreases, the marginal productivity of the remaining land will increase; thus, rents will increase.
 - c. As the supply of vacation land decreases, the marginal productivity of the remaining land will decrease; thus rents will decrease.
 - d. There would be no change in the rents earned by the other landowners because the effects of supply and demand would exactly cancel each other out.

24. *Table 17-6. The table shows the demand schedule for a particular product.*

Quantity	Price
0	16
1	14
2	12
3	10
4	8
5	6
6	4
7	2
8	0

Refer to Table 17-6. Suppose the market for this product is served by two firms that have formed a cartel. What price will the cartel charge in this market if the marginal cost of production is \$0?

- a. \$12
- b. \$6
- c. \$10
- d. \$8

25. Farm programs that pay farmers not to plant crops on all their land

- a. help farmers by cutting costs, which helps consumers by lowering food prices.
- b. help farmers by increasing total revenue in the market but hurt consumers by raising prices.
- c. help farmers directly since they receive government payments but have no real effects on consumers.
- d. hurt farmers by lowering their total revenue and hurt consumers by causing shortages of some food items.

26. If workers respond to an increase in the opportunity cost of leisure by taking more leisure, then their labor supply curve is

- a. horizontal.
- b. vertical.
- c. backward sloping.
- d. upward sloping.

27. In the short run, there are 500 identical firms in a competitive market. The firms do not use any resources that are available in limited quantities, and each of them has the following cost structure:

Output	Total Cost
0	\$0
1	\$10
2	\$12
3	\$15
4	\$24
5	\$40

The long-run supply curve for this market is

- a. horizontal at a price of \$5.
- b. positively sloped.
- c. horizontal at a price of \$3.33.
- d. horizontal at a price of \$7.

- _____ 28. A profit-maximizing monopolist charges a price of \$12. The intersection of the marginal revenue and marginal cost curves occurs where output is 10 units and marginal cost is \$6. Average total cost for 10 units of output is \$5. What is the monopolist's profit?
- \$120
 - \$100
 - \$60
 - \$70
- _____ 29. **Figure 17-3.** Katie and Taylor are roommates. On a particular day, their lawn needs to be mowed. Each person has to decide whether to take part in mowing the lawn. At the end of the day, either the lawn will be mowed (if one or both roommates take part in mowing), or it will remain unmowed (if neither roommate mows). With happiness measured on a scale of 1 (very unhappy) to 10 (very happy), the possible outcomes are as follows:

Katie's Decision

		Mow	Don't mow
Taylor's Decision	Mow	Katie's happiness = 7 Taylor's happiness = 7	Katie's happiness = 10 Taylor's happiness = 2
	Don't mow	Katie's happiness = 5 Taylor's happiness = 8	Katie's happiness = 4 Taylor's happiness = 4

- Refer to Figure 17-3.** If this game is played only once, then which of the following outcomes is the most likely one?
- Taylor mows and Katie does not mow.
 - Katie and Taylor both mow.
 - Katie mows and Taylor does not mow.
 - All of the above outcomes are equally likely.
- _____ 30. Suppose that demand for a good increases and, at the same time, supply of the good decreases. What would happen in the market for the good?
- Equilibrium quantity would increase, but the impact on equilibrium price would be ambiguous.
 - Equilibrium quantity would decrease, but the impact on equilibrium price would be ambiguous.
 - Equilibrium price would increase, but the impact on equilibrium quantity would be ambiguous.
 - Equilibrium price would decrease, but the impact on equilibrium quantity would be ambiguous.
- _____ 31. A simultaneous increase in both the demand for MP3 players and the supply of MP3 players would imply that
- the value of MP3 players to consumers has decreased, and the cost of producing MP3 players has increased.
 - both the value of MP3 players to consumers and the cost of producing MP3 players has increased.
 - both the value of MP3 players to consumers and the cost of producing MP3 players has decreased.
 - the value of MP3 players to consumers has increased, and the cost of producing MP3 players has decreased.

- _____ 32. Suppose an economy produces two goods, food and machines. This economy always operates on its production possibilities frontier. Last year, it produced 50 units of food and 30 machines. This year it experienced a technological advance in its machine-making industry. As a result, this year the society wants to produce 55 units of food and 30 machines. Which of the following statements is correct?
- In order to increase food production in these circumstances without reducing machine production, the economy must reduce inefficiencies.
 - The technological advance reduced the amount of resources needed to produce 30 machines, so these resources could be used to produce more food.
 - Because the technological advance occurred in the machine-making industry, increases in output can only occur in the machine industry.
 - Because the technological advance occurred in the machine-making industry, it will not be possible to increase food production without reducing machine production below 30.
- _____ 33. A monopolistically competitive market is like both a competitive market and a monopoly in that firms in all three market structures
- can earn economic profits in the short run.
 - charge a price above marginal cost.
 - can earn economic profits in the long run.
 - All of the above are correct.
- _____ 34. Inefficiency exists in an economy when a good is
- not produced because buyers do not value it very highly.
 - being produced with less than all available resources.
 - not being consumed by buyers who value it most highly.
 - not distributed fairly among buyers.
- _____ 35. Both Diana and Sarah like jazz music and music by the Beatles. Diana likes music by the Beatles much better than jazz music, whereas Sarah prefers jazz music to music by the Beatles. If we were to graph an indifference curve with cd's by the Beatles on the horizontal axis and jazz cd's on the vertical axis, then
- Sarah's indifference curve would be steeper than Diana's indifference curve.
 - Diana and Sarah would have identical indifference curves.
 - Diana's indifference curve would be steeper than Sarah's indifference curve.
 - We do not have enough information to compare their indifference curves.
- _____ 36. The owners of capital resources are compensated according to the
- marginal product of capital.
 - absolute level of production of final goods and services.
 - purchase price of the capital stock.
 - value of the marginal product of capital.
- _____ 37. Which of the following statements regarding a competitive market is *not* correct?
- Price exceeds marginal revenue.
 - There are many buyers and many sellers in the market.
 - Firms can freely enter or exit the market.
 - Price equals average revenue.
- _____ 38. Total revenue
- remains unchanged as price increases when demand is unit elastic.
 - always increases as price increases.
 - increases as price increases, as long as demand is elastic.
 - decreases as price increases, as long as demand is inelastic.

39. **Table 17-7.** The table shows the demand schedule for a particular product.

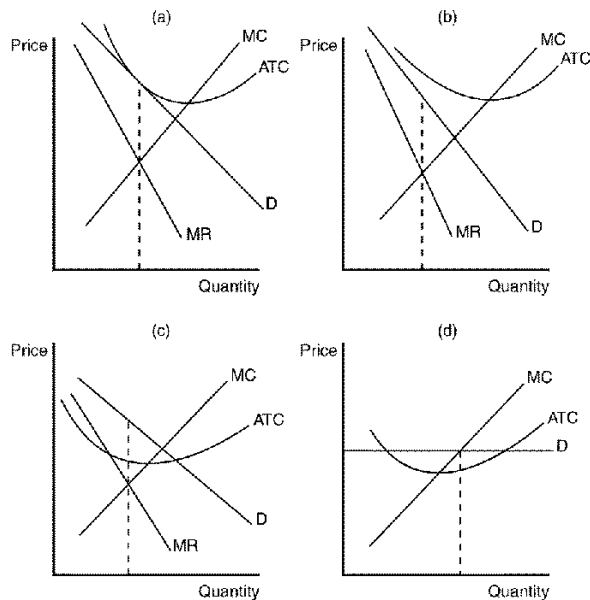
Quantity	Price
0	10
5	9
10	8
15	7
20	6
25	5
30	4
35	3
40	2
45	1
50	0

Refer to Table 17-7. Suppose the marginal cost to produce this product is constant at \$1 per unit. If this market is served by two duopolists who choose their production levels independently, acting in their own self-interest, what is the Nash equilibrium production level for each firm?

- a. 5 units
- b. 15 units
- c. 20 units
- d. 10 units

40. Economies of scale occur when a firm's
- a. long-run average total costs are decreasing as output increases.
 - b. long-run average total costs are increasing as output increases.
 - c. marginal costs are constant as output increases.
 - d. marginal costs are equal to average total costs for all levels of output.

41. **Figure 16-4**



Refer to Figure 16-4. Which of the graphs depicts a short-run equilibrium that will not encourage either the entry or exit of firms in a monopolistically competitive industry?

- a. panel c
- b. panel d
- c. panel a
- d. panel b

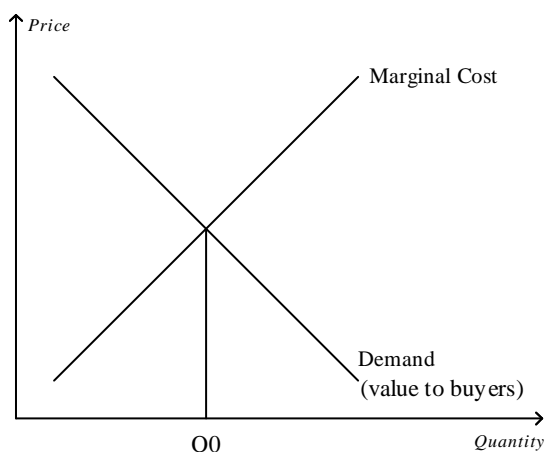
- _____ 42. Refer to Figure 16-4. Which of the panels depicts a firm in a monopolistically competitive market earning positive economic profits?
- a. panel c
b. panel d
c. panel b
d. panel a
- _____ 43. If a market is allowed to move freely to its equilibrium price and quantity, then an increase in supply will
- a. increase consumer surplus.
b. reduce consumer surplus.
c. not affect consumer surplus.
d. Any of the above are possible.

- _____ 44. Table 13-1
Alyson's Pet Sitting Service

Number of Workers	Output (number of pet visits)
0	0
1	20
2	45
3	60
4	70

- Refer to Table 13-1. Alyson's pet sitting service experiences diminishing marginal productivity with the addition of the
- a. second worker.
b. fourth worker.
c. first worker.
d. third worker.
- _____ 45. Carlos goes to the movies every Sunday afternoon. The movie theater offers 4 combinations of popcorn and beverages: the "mini-combo" costs \$5 and includes a small popcorn and a small drink, the "medium-combo" costs \$7 and includes a medium popcorn and a medium drink, the "value-combo" also costs \$7 and includes a small popcorn and a large drink, and the "large-combo" costs \$9 and includes a large popcorn and a large drink. Carlos always purchases the "value-combo." We can conclude that
- a. Carlos prefers a combo with a larger popcorn-to-beverage ratio.
b. Carlos cannot afford the "medium-combo."
c. Carlos cannot afford the "large-combo."
d. Carlos prefers a combo with a smaller popcorn-to-beverage ratio.
- _____ 46. Suppose that the market for labor is initially in equilibrium. An increase in immigration will cause
- a. the equilibrium wage to fall and the quantity of labor to rise.
b. the equilibrium wage to rise and the quantity of labor to fall.
c. the equilibrium wage and the quantity of labor to both fall.
d. the equilibrium wage and the quantity of labor to both rise.

47. *Figure 15-6*



Refer to Figure 15-6. If the monopoly operates at an output level less than Q_0 , then an increase in output toward (but not exceeding) Q_0 would

- raise the price and raise total surplus.
- lower the price and lower total surplus.
- raise the price and lower total surplus.
- lower the price and raise total surplus.

48. Granting a pharmaceutical company a patent for a new medicine will lead to
- a product that is priced higher than it would be without the exclusive rights.
 - incentives for pharmaceutical companies to invest in research and development.
 - higher quantities of output than without the patent.

- (ii) and (iii) only
- (i), (ii), and (iii)
- (i) and (iii) only
- (i) and (ii) only

49. When regulators use a marginal-cost pricing strategy to regulate a natural monopoly, the regulated monopoly
- will experience a price below average total cost.
 - will experience a loss.
 - may rely on a government subsidy to remain in business.
 - All of the above are correct.

50. Assume for Namibia that the opportunity cost of each hut is 200 bowls. Then which of these pairs of points could be on Namibia's production possibilities frontier?
- (200 huts, 30,000 bowls) and (150 huts, 35,000 bowls)
 - (300 huts, 50,000 bowls) and (200 huts, 60,000 bowls)
 - (300 huts, 60,000 bowls) and (200 huts, 80,000 bowls)
 - (200 huts, 40,000 bowls) and (150 huts, 30,000 bowls)

Final Exam - 06.12.2010, 9:00-10:30 a.m.
Answer Section

Test Version: A

COMPLETION

1. ANS: marginal product
PTS: 1
2. ANS: free entry and exit
PTS: 1
3. ANS: capital
PTS: 1
4. ANS: barriers to entry
PTS: 1
5. ANS: competition, monopoly
PTS: 1
6. ANS: monopolies
PTS: 1
7. ANS: purchase price
PTS: 1
8. ANS: price taker, price maker
PTS: 1
9. ANS: monopolistically competitive
PTS: 1
10. ANS: duopoly
PTS: 1

TRUE/FALSE

- | | | | |
|-----------------------------------|-----------------|-------------------|-----------|
| 11. ANS: F | PTS: 1 | DIF: 1 | REF: 4-1 |
| TOP: Competitive markets | | MSC: Definitional | |
| 12. ANS: T | PTS: 1 | DIF: 3 | REF: 15-4 |
| TOP: Perfect price discrimination | | MSC: Interpretive | |
| 13. ANS: T | PTS: 1 | DIF: 3 | REF: 21-3 |
| TOP: Demand | MSC: Analytical | | |
| 14. ANS: T | PTS: 1 | DIF: 2 | REF: 18-1 |
| TOP: Labor demand | | MSC: Applicative | |
| 15. ANS: T | PTS: 1 | DIF: 2 | REF: 17-2 |
| TOP: Prisoners' dilemma | | MSC: Interpretive | |
| 16. ANS: T | PTS: 1 | DIF: 2 | REF: 14-3 |
| TOP: Competitive markets | | MSC: Interpretive | |

17. ANS: F PTS: 1 DIF: 1 REF: 7-1
TOP: Welfare MSC: Definitional
18. ANS: T PTS: 1 DIF: 2 REF: 13-4
TOP: Specialization MSC: Interpretive
19. ANS: F PTS: 1 DIF: 2 REF: 3-2
TOP: Gains from trade MSC: Interpretive
20. ANS: F PTS: 1 DIF: 2 REF: 16-3
TOP: Advertising MSC: Interpretive

MULTIPLE CHOICE

21. ANS: A PTS: 1 DIF: 2 REF: 13-2
TOP: Production function MSC: Interpretive
22. ANS: C PTS: 1 DIF: 2 REF: 18-1 | 18-3 | 18-4
TOP: Factor markets MSC: Analytical
23. ANS: B PTS: 1 DIF: 3 REF: 18-4
TOP: Land markets MSC: Interpretive
24. ANS: D PTS: 1 DIF: 2 REF: 17-1
TOP: Cartels MSC: Applicative
25. ANS: B PTS: 1 DIF: 2 REF: 5-3
TOP: Total revenue MSC: Applicative
26. ANS: C PTS: 1 DIF: 2 REF: 18-2
TOP: Labor supply MSC: Interpretive
27. ANS: A PTS: 1 DIF: 3 REF: 14-3
TOP: Competitive markets MSC: Analytical
28. ANS: D PTS: 1 DIF: 2 REF: 15-2
TOP: Profit MSC: Applicative
29. ANS: C PTS: 1 DIF: 3 REF: 17-2
TOP: Game theory MSC: Applicative
30. ANS: C PTS: 1 DIF: 2 REF: 4-4
TOP: Equilibrium MSC: Interpretive
31. ANS: D PTS: 1 DIF: 2 REF: 7-3
TOP: Efficiency MSC: Interpretive
32. ANS: B PTS: 1 DIF: 3 REF: 2-1
TOP: Production possibilities frontier MSC: Analytical
33. ANS: A PTS: 1 DIF: 2 REF: 16-4
TOP: Monopolistic competition | Monopoly MSC: Interpretive
34. ANS: C PTS: 1 DIF: 2 REF: 7-3
TOP: Efficiency MSC: Interpretive
35. ANS: C PTS: 1 DIF: 2 REF: 21-2
TOP: Indifference curves MSC: Analytical
36. ANS: D PTS: 1 DIF: 2 REF: 18-4
TOP: Capital MSC: Interpretive
37. ANS: A PTS: 1 DIF: 2 REF: 14-1
TOP: Competitive markets MSC: Interpretive
38. ANS: A PTS: 1 DIF: 2 REF: 5-1
TOP: Total revenue | Price elasticity of demand MSC: Applicative
39. ANS: B PTS: 1 DIF: 3 REF: 17-1
TOP: Duopoly | Nash equilibrium MSC: Applicative

- | | | | | |
|-----|---|-------------------|-------------------|-----------|
| 40. | ANS: A | PTS: 1 | DIF: 1 | REF: 13-4 |
| | TOP: Economies of scale | | MSC: Definitional | |
| 41. | ANS: C | PTS: 1 | DIF: 2 | REF: 16-2 |
| | TOP: Short-run equilibrium | | MSC: Interpretive | |
| 42. | ANS: A | PTS: 1 | DIF: 2 | REF: 16-2 |
| | TOP: Monopolistic competition | | MSC: Interpretive | |
| 43. | ANS: A | PTS: 1 | DIF: 2 | REF: 7-3 |
| | TOP: Consumer surplus | | MSC: Applicative | |
| 44. | ANS: D | PTS: 1 | DIF: 3 | REF: 13-2 |
| | TOP: Diminishing marginal product | | MSC: Analytical | |
| 45. | ANS: D | PTS: 1 | DIF: 2 | REF: 21-3 |
| | TOP: Optimization | | MSC: Analytical | |
| 46. | ANS: A | PTS: 1 | DIF: 2 | REF: 18-3 |
| | TOP: Labor-market equilibrium | | MSC: Interpretive | |
| 47. | ANS: D | PTS: 1 | DIF: 2 | REF: 15-3 |
| | TOP: Total surplus | | MSC: Analytical | |
| 48. | ANS: D | PTS: 1 | DIF: 2 | REF: 15-1 |
| | TOP: Patents | MSC: Interpretive | | |
| 49. | ANS: D | PTS: 1 | DIF: 2 | REF: 15-5 |
| | TOP: Regulation Natural monopoly | MSC: Interpretive | | |
| 50. | ANS: C | PTS: 1 | DIF: 3 | REF: 3-2 |
| | TOP: Production possibilities frontier Opportunity cost | MSC: Analytical | | |