

BPE MIC1 Microeconomics 1 – Fall Semester 2010

**Final exam - 24.01.2011, 1:30 - 3:00 p.m.**

**Test Version: A**

**Guidelines and Rules:**

1. The test setup has 7 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 in the spaces corresponding to the respective questions 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. \_\_\_\_\_ is the rate at which a consumer is willing to trade one good for another.
2. Market with sellers offering slightly different products is \_\_\_\_\_ .
3. The advantage of a producer of a good to another based on their productivity is called \_\_\_\_\_ .
4. \_\_\_\_\_ is what a producer pays to use a factor for a limited period of time.
5. \_\_\_\_\_ simplify the economic reality based on assumptions.
6. Two goods for which an increase in the price for one leads to an increase in the demand for the other are called \_\_\_\_\_ .
7. The change in consumption that results when a price change moves the consumer along a given indifference curve is called \_\_\_\_\_ .
8. Two goods with straight-line indifference curves are \_\_\_\_\_ .
9. \_\_\_\_\_ describes the world in a way that can be verified by factual evidence.
10. The quantity that minimizes average total cost is called \_\_\_\_\_ .

**True/False**

*Indicate whether the statement is true or false.*

- \_\_\_\_ 11. Necessities tend to have inelastic demands, whereas luxuries have elastic demands.
- \_\_\_\_ 12. The economic field of industrial organization examines how firms' decisions about prices and quantities depend on the market conditions they face.
- \_\_\_\_ 13. A decrease in income will shift the demand curve for an inferior good to the right.

- \_\_\_ 14. Producing a soccer ball costs Jake \$5. He sells it to Darby for \$35. Darby values the soccer ball at \$50. For this transaction, the total surplus in the market is \$40.
- \_\_\_ 15. Let  $L$  represent the quantity of labor and let  $Q$  represent the quantity of output. Suppose a certain production function includes the points  $(L = 7, Q = 27)$ ,  $(L = 8, Q = 35)$ , and  $(L = 9, Q = 45)$ . Based on these three points, this production function exhibits diminishing marginal product.
- \_\_\_ 16. While the production possibilities frontier is a useful model, it cannot be used to illustrate economic growth.
- \_\_\_ 17. The marginal rate of substitution is the slope of the budget constraint.
- \_\_\_ 18. The law of demand is true for most goods in the economy.
- \_\_\_ 19. Some countries win in international trade, while other countries lose.
- \_\_\_ 20. Susie wins \$1 million in her state's lottery. If Susie keeps working after she wins the money, we can infer that the income effect is larger than the substitution effect for her.

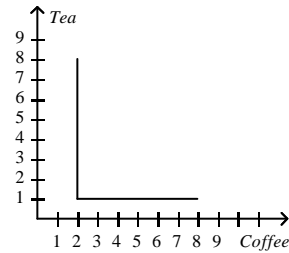
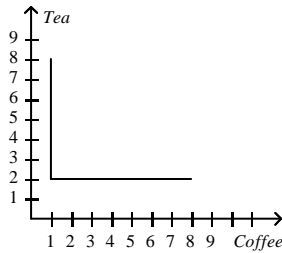
### Multiple Choice

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

- \_\_\_ 21. In the long run, when marginal cost is above average total cost, the average total cost curve exhibits
- efficient scale.
  - economies of scale.
  - constant returns to scale.
  - diseconomies of scale.
- \_\_\_ 22. An equilibrium occurs in a game when
- price equals marginal cost.
  - all independent strategies counterbalance all dominant strategies.
  - quantity supplied equals quantity demanded.
  - all players follow a strategy that they have no incentive to change.
- \_\_\_ 23. If a competitive firm is currently producing a level of output at which marginal cost exceeds marginal revenue, then
- a one-unit increase in output will increase the firm's profit.
  - total cost exceeds total revenue.
  - a one-unit decrease in output will increase the firm's profit.
  - total revenue exceeds total cost.
- \_\_\_ 24. Each firm in a monopolistically competitive firm faces a downward-sloping demand curve because
- the firm's product is different from those offered by other firms in the market.
  - there are many other sellers in the market.
  - that firm faces the threat of entry into the market by new firms.
  - there are very few other sellers in the market.
- \_\_\_ 25. When two goods are perfect complements, the indifference curves are
- straight lines.
  - negatively sloped.
  - right angles.
  - positively sloped.
- \_\_\_ 26. One assumption that distinguishes short-run cost analysis from long-run cost analysis for a profit-maximizing firm is that in the short run,
- output is not variable.
  - the number of workers used to produce the firm's product is fixed.
  - the size of the factory is fixed.
  - there are no fixed costs.

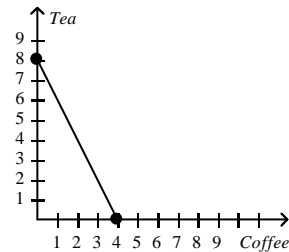
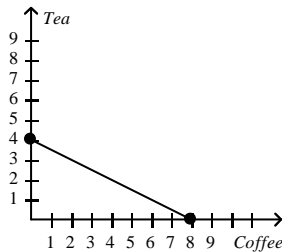
27. Consider the labor market for computer programmers. Because of the dot.com boom in the late 1990s, a lot of workers went to school to learn how to write computer code for one of thousands of new dot.com companies. However, when these computer programming students graduated, the dot.com bust took place. The dot.com bust decreased the value of the marginal product of computer programmers. Holding all else equal, what effect did these two circumstances have on the equilibrium wage in the labor market for computer programmers?
- The equilibrium wage increased.
  - It is not possible to determine what happens to the equilibrium wage.
  - The equilibrium wage did not change.
  - The equilibrium wage decreased.

28. Suppose Caroline is indifferent between tea and coffee as long as she consumes an equivalent amount of caffeine. Suppose that coffee has twice as much caffeine as tea. Which graph would illustrate a representative indifference curve?



a.

c.



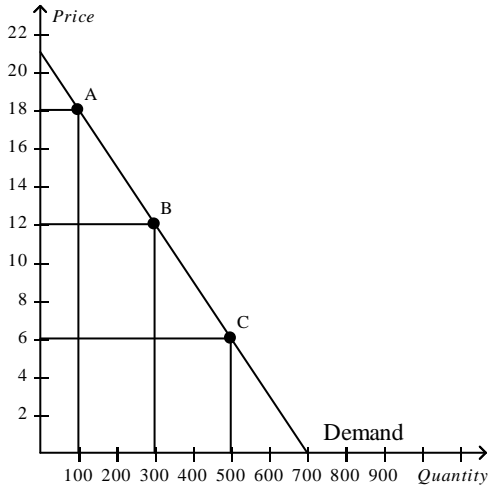
b.

d.

29. The scientific method is
- the search for evidence to support preconceived theories about how the world works.
  - the use of controlled laboratory experiments to understand the way the world works.
  - the use of modern technology to understand the way the world works.
  - the dispassionate development and testing of theories about how the world works.
30. If a production possibilities frontier is bowed outward, then the opportunity cost of producing more of the first good is highest when
- the economy is producing equal amounts of the first and second goods.
  - the economy is producing much of the first good and little of the second good.
  - the economy is producing little of the first good and much of the second good.
  - None of the above is correct because the opportunity cost of producing more of the first good is constant.
31. A weaker demand together with a stronger supply would necessarily result in
- a higher price.
  - a decrease in equilibrium quantity.
  - a lower price.
  - an increase in equilibrium quantity.
32. In which of the following games is it clearly the case that the cooperative outcome of the game is *good* for the two players and *bad* for society?
- Two airlines dominate air travel between City A and City B, and each airline decides whether to charge a "high" airfare or a "low" airfare on flights between those two cities.
  - Two oil companies own adjacent oil fields over a common pool of oil, and each company decides whether to drill one well or two wells.
  - Two superpowers decide whether to build new weapons or to disarm.
  - In all of the above cases, the cooperative outcome of the game is good for the two players and bad for society.

- \_\_\_\_\_ 33. If government regulation sets the maximum price for a natural monopoly equal to its marginal cost, then the natural monopolist will
- earn economic profits.
  - produce a lower quantity of output than is socially optimal.
  - earn zero economic profits.
  - earn economic losses.

- \_\_\_\_\_ 34. **Figure 5-6**

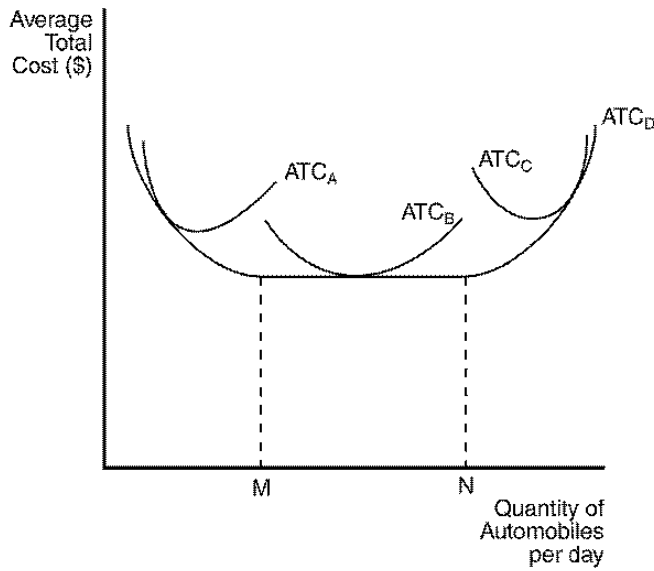


**Refer to Figure 5-6.** Using the midpoint method, the price elasticity of demand between point A and point B is

- 2.
  - 1.5.
  - 2.5.
  - 1.
- \_\_\_\_\_ 35. **Refer to Figure 5-6.** If the price decreased from \$18 to \$6,
- total revenue would increase by \$1,200, and demand is elastic between points A and C.
  - total revenue would decrease by \$800, and demand is inelastic between points A and C.
  - total revenue would decrease by \$1,200, and demand is inelastic between points A and C.
  - total revenue would increase by \$800, and demand is elastic between points A and C.
- \_\_\_\_\_ 36. **Refer to Figure 5-6.** Which of the following price changes would result in no change in sellers' total revenue?
- The price decreases from \$9 to \$5.
  - The price increases from \$9 to \$15.
  - The price decreases from \$12 to \$9.
  - The price increases from \$6 to \$9.

37. **Figure 13-9**

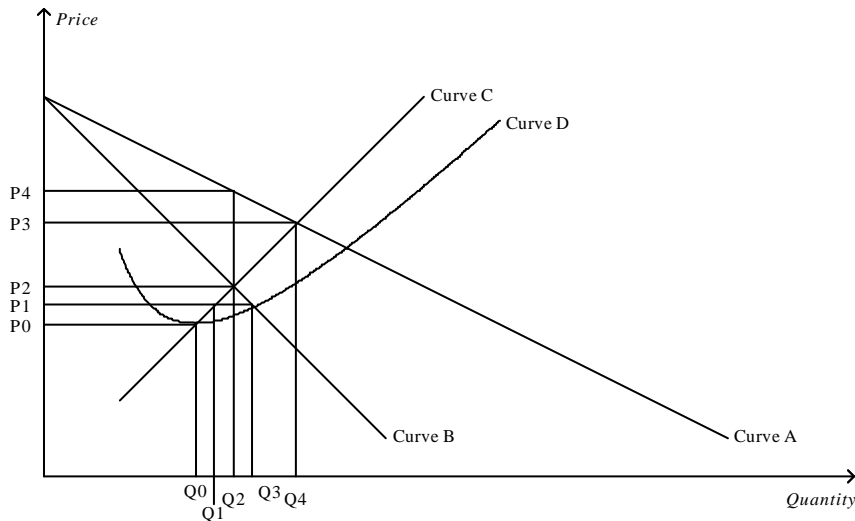
The figure below depicts average total cost functions for a firm that produces automobiles.



**Refer to Figure 13-9.** The firm experiences economies of scale at which output levels?

- output levels greater than N
- output levels between M and N
- output levels less than M
- All of the above are correct as long as the firm is operating in the long run.

38. **Figure 15-4**



**Refer to Figure 15-4.** If the monopoly firm is currently producing  $Q_3$  units of output, then a decrease in output will necessarily cause profit to

- increase as long as the new level of output is at least  $Q_1$ .
- decrease.
- remain unchanged.
- increase as long as the new level of output is at least  $Q_2$ .

39. **Refer to Figure 15-4.** A profit-maximizing monopoly's total revenue is equal to

- $P_4 \times Q_2$ .
- $(P_4 - P_3) \times Q_2$ .
- $P_3 \times Q_4$ .
- $(P_4 - P_2) \times Q_2$ .

- \_\_\_\_\_ 40. A profit-maximizing firm in a competitive market is currently producing 200 units of output. It has average revenue of \$9 and average total cost of \$7. It follows that the firm's
- profit is \$400.
  - average variable cost curve intersects the marginal cost curve at an output level of less than 200 units.
  - average total cost curve intersects the marginal cost curve at an output level of less than 200 units.
  - All of the above are correct.
- \_\_\_\_\_ 41. The Sherman Act made cooperative agreements
- unenforceable outside of established judicial review processes.
  - a criminal conspiracy.
  - a crime, but did not give direction on possible penalties.
  - enforceable with proper judicial review.
- \_\_\_\_\_ 42. The George Stigler quote, "...the degree of 'market failure' for the American economy is much smaller than the 'political failure' arising from the imperfections of economic policies ..." illustrates the advantage of which type of public policy toward monopolies?
- public ownership
  - antitrust laws
  - regulation
  - "do nothing"
- \_\_\_\_\_ 43. Consider the labor market for computer programmers. During the late 1990s, the value of the marginal product of all computer programmers increased dramatically. Holding all else equal, what effect did this process have on the labor market for computer programmers?
- The equilibrium wage decreased and the equilibrium quantity of labor increased.
  - The equilibrium wage decreased and the equilibrium quantity of labor decreased.
  - The equilibrium wage increased and the equilibrium quantity of labor decreased.
  - The equilibrium wage increased and the equilibrium quantity of labor increased.

- \_\_\_\_\_ 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.** What is the marginal product of the second worker?
- 20
  - 25
  - 15
  - 22.5
- \_\_\_\_\_ 45. **Refer to Table 13-1.** Alyson's pet sitting service experiences diminishing marginal productivity with the addition of the
- third worker.
  - second worker.
  - first worker.
  - fourth worker.
- \_\_\_\_\_ 46. **Refer to Table 13-1.** Suppose that Alyson's pet sitting service has a fixed cost of \$50 per month for her cell phone. Each worker costs Alyson \$60 per day. What is the shape of Alyson's total cost curve as output increases from 0 to 45?
- Total cost increases and gets steeper.
  - Total cost decreases but gets steeper.
  - Total cost increases but gets flatter.
  - Total cost decreases and gets flatter.
- \_\_\_\_\_ 47. An indifference curve illustrates
- a consumer's preferences.
  - a consumer's budget.
  - the prices of two goods.
  - a firm's profits.

- \_\_\_\_\_ 48. Which of the following statements is *not* correct about a market in equilibrium?
- Those sellers whose costs are less than the price choose to produce and sell the good.
  - Consumer surplus will be equal to producer surplus.
  - The price determines which buyers and which sellers participate in the market.
  - Those buyers who value the good more than the price choose to buy the good.
- \_\_\_\_\_ 49. Firm A is a perfectly competitive firm. Firm B is a monopolistically competitive firm. Both firms are currently maximizing their respective profits. Which of the following statements is correct?
- Neither Firm A nor Firm B would care whether it made an additional sale or not.
  - Firm A would be eager to make an additional sale, but Firm B would not care whether it made an additional sale or not.
  - Firm B would be eager to make an additional sale, but Firm A would not care whether it made an additional sale or not.
  - Both Firm A and Firm B would be eager to make an additional sale.
- \_\_\_\_\_ 50. The principle of comparative advantage does not provide answers to certain questions. One of those questions is
- How are the gains from trade shared among the parties to a trade?
  - Is it absolute advantage or comparative advantage that really matters?
  - Is it possible for specialization and trade to increase total output of traded goods?
  - Do specialization and trade benefit more than one party to a trade?

**Final exam - 24.01.2011, 1:30 - 3:00 p.m.**  
**Answer Section**

**Test Version: A**

**COMPLETION**

1. ANS: marginal rate of substitution  
PTS: 1
2. ANS: monopolistically competitive  
PTS: 1
3. ANS: absolute advantage  
PTS: 1
4. ANS: rental price  
PTS: 1
5. ANS: economic models  
PTS: 1
6. ANS: substitutes  
PTS: 1
7. ANS: substitution effect  
PTS: 1
8. ANS: perfect substitutes  
PTS: 1
9. ANS: positive economics  
PTS: 1
10. ANS: efficient scale  
PTS: 1

**TRUE/FALSE**

- |  |        |                   |           |
|--|--------|-------------------|-----------|
| 11. ANS: T   | PTS: 1 | DIF: 2            | REF: 5-1  |
| TOP: Price elasticity of demand                          |        | MSC: Interpretive |           |
| 12. ANS: T   | PTS: 1 | DIF: 2            | REF: 13-0 |
| TOP: Industrial organization                             |        | MSC: Interpretive |           |
| 13. ANS: T   | PTS: 1 | DIF: 2            | REF: 4-2  |
| TOP: Inferior goods                                      |        | MSC: Interpretive |           |
| 14. ANS: F   | PTS: 1 | DIF: 2            | REF: 7-3  |
| TOP: Total surplus                                       |        | MSC: Applicative  |           |
| 15. ANS: F   | PTS: 1 | DIF: 2            | REF: 18-1 |
| TOP: Diminishing marginal product                        |        | MSC: Applicative  |           |
| 16. ANS: F   | PTS: 1 | DIF: 2            | REF: 2-1  |
| TOP: Production possibilities frontier   Economic growth |        | MSC: Interpretive |           |



17. ANS: F                   PTS: 1                   DIF: 1                   REF: 21-2  
TOP: Marginal rate of substitution                   MSC: Definitional
18. ANS: T                   PTS: 1                   DIF: 1                   REF: 4-2  
TOP: Law of demand                   MSC: Definitional
19. ANS: F                   PTS: 1                   DIF: 2                   REF: 3-3  
TOP: Gains from trade                   MSC: Interpretive
20. ANS: F                   PTS: 1                   DIF: 2                   REF: 21-4  
TOP: Labor supply                   MSC: Interpretive

**MULTIPLE CHOICE**

21. ANS: D                   PTS: 1                   DIF: 2                   REF: 13-4  
TOP: Diseconomies of scale                   MSC: Applicative
22. ANS: D                   PTS: 1                   DIF: 2                   REF: 17-2  
TOP: Nash equilibrium                   MSC: Interpretive
23. ANS: C                   PTS: 1                   DIF: 2                   REF: 14-2  
TOP: Competitive firms                   MSC: Analytical
24. ANS: A                   PTS: 1                   DIF: 2                   REF: 16-2  
TOP: Demand curve                   MSC: Interpretive
25. ANS: C                   PTS: 1                   DIF: 1                   REF: 21-2  
TOP: Perfect complements                   MSC: Interpretive
26. ANS: C                   PTS: 1                   DIF: 1                   REF: 13-4  
TOP: Short run                   MSC: Interpretive
27. ANS: D                   PTS: 1                   DIF: 2                   REF: 18-1 | 18-2 | 18-3  
TOP: Labor-market equilibrium                   MSC: Analytical
28. ANS: D                   PTS: 1                   DIF: 3                   REF: 21-2  
TOP: Perfect substitutes                   MSC: Applicative
29. ANS: D                   PTS: 1                   DIF: 1                   REF: 2-1  
TOP: Scientific method                   MSC: Definitional
30. ANS: B                   PTS: 1                   DIF: 2                   REF: 2-1  
TOP: Production possibilities frontier | Opportunity cost                   MSC: Interpretive
31. ANS: C                   PTS: 1                   DIF: 2                   REF: 4-4  
TOP: Equilibrium                   MSC: Interpretive
32. ANS: A                   PTS: 1                   DIF: 3                   REF: 17-2  
TOP: Prisoners' dilemma                   MSC: Interpretive
33. ANS: D                   PTS: 1                   DIF: 2                   REF: 15-5  
TOP: Regulation | Natural monopoly                   MSC: Applicative
34. ANS: C                   PTS: 1                   DIF: 2                   REF: 5-1  
TOP: Midpoint method | Price elasticity of demand                   MSC: Applicative
35. ANS: A                   PTS: 1                   DIF: 2                   REF: 5-1  
TOP: Total revenue | Price elasticity of demand                   MSC: Applicative
36. ANS: C                   PTS: 1                   DIF: 3                   REF: 5-1  
TOP: Total revenue | Price elasticity of demand                   MSC: Applicative
37. ANS: C                   PTS: 1                   DIF: 2                   REF: 13-4  
TOP: Economies of scale                   MSC: Analytical
38. ANS: D                   PTS: 1                   DIF: 2                   REF: 15-2  
TOP: Profit maximization                   MSC: Analytical
39. ANS: A                   PTS: 1                   DIF: 2                   REF: 15-2  
TOP: Total revenue                   MSC: Analytical

40. ANS: D                   PTS: 1                   DIF: 3                   REF: 14-2  
TOP: Profit maximization                   MSC: Applicative
41. ANS: B                   PTS: 1                   DIF: 1                   REF: 17-3  
TOP: Antitrust           MSC: Interpretive
42. ANS: D                   PTS: 1                   DIF: 2                   REF: 15-5  
TOP: Do nothing       MSC: Interpretive
43. ANS: D                   PTS: 1                   DIF: 2                   REF: 18-1 | 18-3  
TOP: Labor-market equilibrium           MSC: Applicative
44. ANS: B                   PTS: 1                   DIF: 2                   REF: 13-2  
TOP: Marginal product                   MSC: Analytical
45. ANS: A                   PTS: 1                   DIF: 3                   REF: 13-2  
TOP: Diminishing marginal product           MSC: Analytical
46. ANS: C                   PTS: 1                   DIF: 3                   REF: 13-2  
TOP: Total-cost curve                   MSC: Interpretive
47. ANS: A                   PTS: 1                   DIF: 1                   REF: 21-2  
TOP: Indifference curves                   MSC: Definitional
48. ANS: B                   PTS: 1                   DIF: 2                   REF: 7-3  
TOP: Consumer surplus | Producer surplus           MSC: Interpretive
49. ANS: C                   PTS: 1                   DIF: 2                   REF: 16-2  
TOP: Monopolistic competition | Perfect competition           MSC: Interpretive
50. ANS: A                   PTS: 1                   DIF: 2                   REF: 3-2  
TOP: Comparative advantage                   MSC: Interpretive