BPE_MIC1 Microeconomics 1 – Fall Semester 2010

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

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. The advantage of a producer of a good to another based on their productivity is called _____ .

2. _____ simplify the economic reality based on assumptions.

3. _____ is the rate at which a consumer is willing to trade one good for another.

4. _____ describes the world in a way that can be verified by factual evidence.

5. The quantity that minimizes average total cost is called _____ .

6. _____ is what a producer pays to use a factor for a limited period of time.

7. Two goods with straight-line indifference curves are _____ .

8. The change in consumption that results when a price change moves the consumer along a given indifference curve is called _____ .

9. Market with sellers offering slightly different products is _____ .

10. Two goods for which an increase in the price for one leads to an increase in the demand for the other are called _____ .

**True/False**
Indicate whether the statement is true or false.

____ 11. The economic field of industrial organization examines how firms' decisions about prices and quantities depend on the market conditions they face.

____ 12. While the production possibilities frontier is a useful model, it cannot be used to illustrate economic growth.

____ 13. Some countries win in international trade, while other countries lose.

_____ 14. The law of demand is true for most goods in the economy.

_____ 15. 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.

_____ 16. Necessities tend to have inelastic demands, whereas luxuries have elastic demands.

_____ 17. 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.

_____ 18. The marginal rate of substitution is the slope of the budget constraint.

_____ 19. A decrease in income will shift the demand curve for an inferior good to the right.

_____ 20. 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.

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

_____ 21. *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?
a. 15
b. 22.5
c. 25
d. 20

_____ 22. **Refer to Table 13-1.** Alyson's pet sitting service experiences diminishing marginal productivity with the addition of the
a. third worker.
b. first worker.
c. second worker.
d. fourth worker.

_____ 23. **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?
a. Total cost decreases but gets steeper.
b. Total cost increases but gets flatter.
c. Total cost increases and gets steeper.
d. Total cost decreases and gets flatter.

_____ 24. Which of the following statements is *not* correct about a market in equilibrium?
a. Those sellers whose costs are less than the price choose to produce and sell the good.
b. Consumer surplus will be equal to producer surplus.
c. Those buyers who value the good more than the price choose to buy the good.
d. The price determines which buyers and which sellers participate in the market.

_____ 25. In the long run, when marginal cost is above average total cost, the average total cost curve exhibits
a. diseconomies of scale.
b. economies of scale.
c. efficient scale.
d. constant returns to scale.

_____ 26. If a competitive firm is currently producing a level of output at which marginal cost exceeds marginal revenue, then
  a. a one-unit increase in output will increase the firm's profit.
  b. total cost exceeds total revenue.
  c. a one-unit decrease in output will increase the firm's profit.
  d. total revenue exceeds total cost.

_____ 27. *Figure 13-9*
The figure below depicts average total cost functions for a firm that produces automobiles.
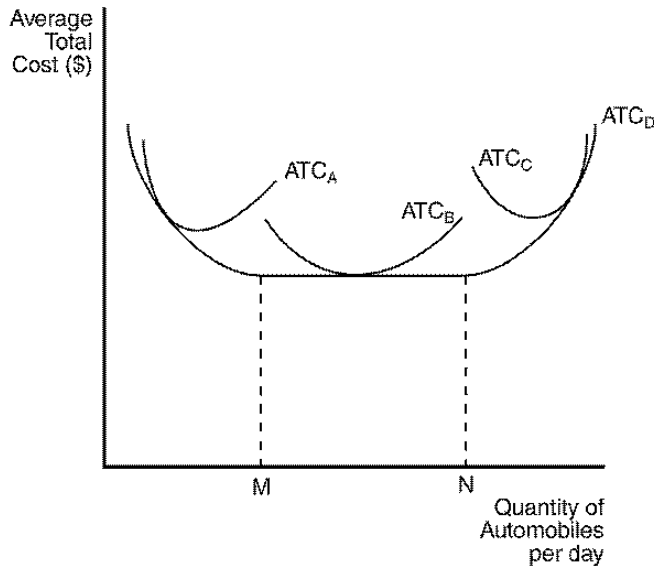
Refer to Figure 13-9. The firm experiences economies of scale at which output levels?
  a. output levels greater than N
  b. output levels less than M
  c. output levels between M and N
  d. All of the above are correct as long as the firm is operating in the long run.

_____ 28. The scientific method is
  a. the use of modern technology to understand the way the world works.
  b. the use of controlled laboratory experiments to understand the way the world works.
  c. the dispassionate development and testing of theories about how the world works.
  d. the search for evidence to support preconceived theories about how the world works.

_____ 29. When two goods are perfect complements, the indifference curves are
  a. straight lines.   c. negatively sloped.
  b. positively sloped.   d. right angles.

_____ 30. 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?
  a. Both Firm A and Firm B would be eager to make an additional sale.
  b. Neither Firm A nor Firm B would care whether it made an additional sale or not.
  c. Firm A would be eager to make an additional sale, but Firm B would not care whether it made an additional sale or not.
  d. Firm B would be eager to make an additional sale, but Firm A would not care whether it made an additional sale or not.

_____ 31. 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?
    a. It is not possible to determine what happens to the equilibrium wage.
    b. The equilibrium wage did not change.
    c. The equilibrium wage increased.
    d. The equilibrium wage decreased.

_____ 32. If a production possibilities frontier is bowed outward, then the opportunity cost of producing more of the first good is highest when
    a. the economy is producing little of the first good and much of the second good.
    b. the economy is producing equal amounts of the first and second goods.
    c. the economy is producing much of the first good and little of the second good.
    d. None of the above is correct because the opportunity cost of producing more of the first good is constant.

_____ 33. A weaker demand together with a stronger supply would necessarily result in
    a. a higher price.
    c. a decrease in equilibrium quantity.
    b. an increase in equilibrium quantity.
    d. a lower price.

_____ 34. Each firm in a monopolistically competitive firm faces a downward-sloping demand curve because
    a. there are very few other sellers in the market.
    b. the firm's product is different from those offered by other firms in the market.
    c. there are many other sellers in the market.
    d. that firm faces the threat of entry into the market by new firms.

_____ 35. If government regulation sets the maximum price for a natural monopoly equal to its marginal cost, then the natural monopolist will
    a. earn economic losses.
    b. earn zero economic profits.
    c. produce a lower quantity of output than is socially optimal.
    d. earn economic profits.

_____ 36. The Sherman Act made cooperative agreements
    a. a crime, but did not give direction on possible penalties.
    b. enforceable with proper judicial review.
    c. unenforceable outside of established judicial review processes.
   d. a criminal conspiracy.

____ 37. *Figure 15-4*
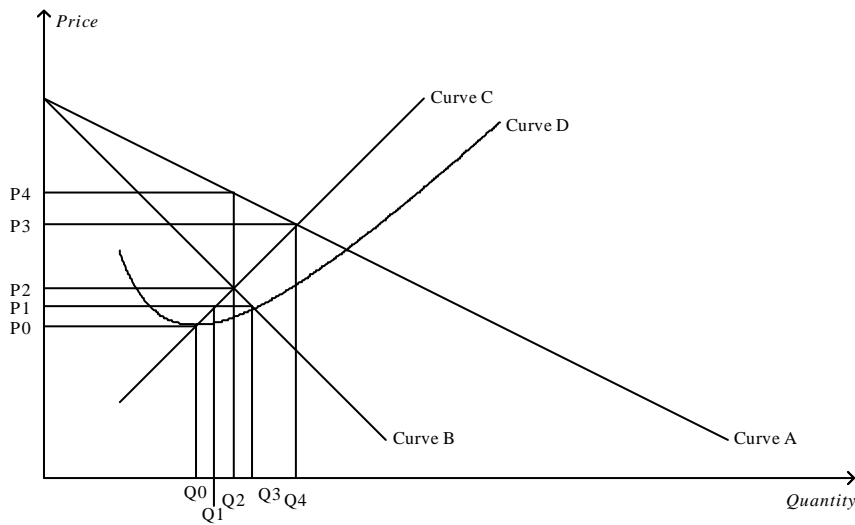
Refer to Figure 15-4. If the monopoly firm is currently producing Q3 units of output, then a decrease in output will necessarily cause profit to
a.   increase as long as the new level of output is at least Q2.
b.   decrease.
c.   remain unchanged.
d.   increase as long as the new level of output is at least Q1.

____ 38. **Refer to Figure 15-4**. A profit-maximizing monopoly's total revenue is equal to
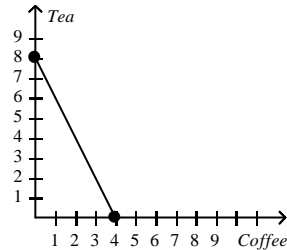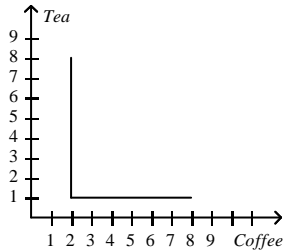a.   (P4-P2) x Q2.   c.   P4 x Q2.
b.   (P4-P3) x Q2.   d.   P3 x Q4.

____ 39. 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?
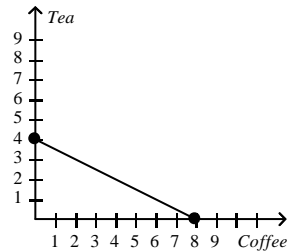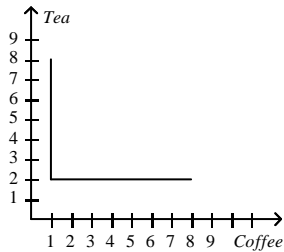
a.

c.

b.

d.

____ 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
   a. average variable cost curve intersects the marginal cost curve at an output level of less than 200 units.
   b. average total cost curve intersects the marginal cost curve at an output level of less than 200 units.
   c. profit is $400.
   d. All of the above are correct.

____ 41. *Figure 5-6*
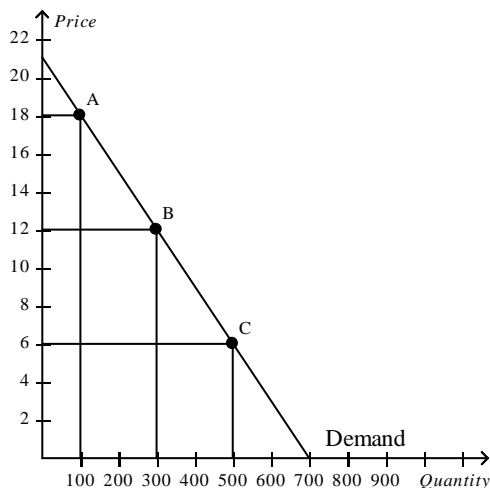
Refer to Figure 5-6. Using the midpoint method, the price elasticity of demand between point A and point B is
   a. 1.5.   c. 2.
   b. 1.   d. 2.5.

____ 42. **Refer to Figure 5-6**. Which of the following price changes would result in no change in sellers' total revenue?
   a. The price decreases from $9 to $5.   c. The price increases from $9 to $15.
   b. The price increases from $6 to $9.   d. The price decreases from $12 to $9.

____ 43. **Refer to Figure 5-6**. If the price decreased from $18 to $6,
   a. total revenue would increase by $1,200, and demand is elastic between points A and C.
   b. total revenue would increase by $800, and demand is elastic between points A and C.
   c. total revenue would decrease by $1,200, and demand is inelastic between points A and C.
   d. total revenue would decrease by $800, and demand is inelastic between points A and C.

____ 44. The principle of comparative advantage does not provide answers to certain questions. One of those questions is
   a. Is it possible for specialization and trade to increase total output of traded goods?
   b. Is it absolute advantage or comparative advantage that really matters?
   c. Do specialization and trade benefit more than one party to a trade?
   d. How are the gains from trade shared among the parties to a trade?

____ 45. 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?
   a. regulation   c. antitrust laws
   b. public ownership   d. "do nothing"

____ 46. An indifference curve illustrates
   a. the prices of two goods.   c. a consumer's budget.
   b. a consumer's preferences.   d. a firm's profits.

_____ 47. One assumption that distinguishes short-run cost analysis from long-run cost analysis for a profit-maximizing firm is that in the short run,
   a.   output is not variable.
   b.   there are no fixed costs.
   c.   the size of the factory is fixed.
   d.   the number of workers used to produce the firm's product is fixed.

_____ 48. 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?
   a.   The equilibrium wage increased and the equilibrium quantity of labor decreased.
   b.   The equilibrium wage increased and the equilibrium quantity of labor increased.
   c.   The equilibrium wage decreased and the equilibrium quantity of labor decreased.
   d.   The equilibrium wage decreased and the equilibrium quantity of labor increased.

_____ 49. An equilibrium occurs in a game when
   a.   all independent strategies counterbalance all dominant strategies.
   b.   price equals marginal cost.
   c.   all players follow a strategy that they have no incentive to change.
   d.   quantity supplied equals quantity demanded.

_____ 50. 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?
   a.   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.
   b.   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.
   c.   Two superpowers decide whether to build new weapons or to disarm.
   d.   In all of the above cases, the cooperative outcome of the game is good for the two players and bad for society

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Answer Section

COMPLETION

  1. ANS: absolute advantage

      PTS: 1
  2. ANS: economic models

      PTS: 1
  3. ANS: marginal rate of substitution

      PTS: 1
  4. ANS: positive economics

      PTS: 1
  5. ANS: efficient scale

      PTS: 1
  6. ANS: rental price

      PTS: 1
  7. ANS: perfect substitutes

      PTS: 1
  8. ANS: substitution effect

      PTS: 1
  9. ANS: monopolistically competitive

      PTS: 1
10. ANS: substitutes

      PTS: 1

TRUE/FALSE

11. ANS: T   PTS: 1   DIF: 2   REF: 13-0
      TOP: Industrial organization   MSC: Interpretive
12. ANS: F   PTS: 1   DIF: 2   REF: 2-1
      TOP: Production possibilities frontier | Economic growth   MSC: Interpretive
13. ANS: F   PTS: 1   DIF: 2   REF: 3-3
      TOP: Gains from trade   MSC: Interpretive
14. ANS: T   PTS: 1   DIF: 1   REF: 4-2
      TOP: Law of demand   MSC: Definitional
15. ANS: F   PTS: 1   DIF: 2   REF: 7-3
      TOP: Total surplus   MSC: Applicative
16. ANS: T   PTS: 1   DIF: 2   REF: 5-1
      TOP: Price elasticity of demand   MSC: Interpretive

17. ANS: F   PTS: 1   DIF: 2   REF: 21-4
     TOP: Labor supply   MSC: Interpretive
18. ANS: F   PTS: 1   DIF: 1   REF: 21-2
     TOP: Marginal rate of substitution MSC: Definitional
19. ANS: T   PTS: 1   DIF: 2   REF: 4-2
     TOP: Inferior goods   MSC: Interpretive
20. ANS: F   PTS: 1   DIF: 2   REF: 18-1
     TOP: Diminishing marginal product MSC: Applicative

MULTIPLE CHOICE

21. ANS: C   PTS: 1   DIF: 2   REF: 13-2
     TOP: Marginal product   MSC: Analytical
22. ANS: A   PTS: 1   DIF: 3   REF: 13-2
     TOP: Diminishing marginal product MSC: Analytical
23. ANS: B   PTS: 1   DIF: 3   REF: 13-2
     TOP: Total-cost curve   MSC: Interpretive
24. ANS: B   PTS: 1   DIF: 2   REF: 7-3
     TOP: Consumer surplus | Producer surplus   MSC: Interpretive
25. ANS: A   PTS: 1   DIF: 2   REF: 13-4
     TOP: Diseconomies of scale   MSC: Applicative
26. ANS: C   PTS: 1   DIF: 2   REF: 14-2
     TOP: Competitive firms   MSC: Analytical
27. ANS: B   PTS: 1   DIF: 2   REF: 13-4
     TOP: Economies of scale   MSC: Analytical
28. ANS: C   PTS: 1   DIF: 1   REF: 2-1
     TOP: Scientific method   MSC: Definitional
29. ANS: D   PTS: 1   DIF: 1   REF: 21-2
     TOP: Perfect complements   MSC: Interpretive
30. ANS: D   PTS: 1   DIF: 2   REF: 16-2
     TOP: Monopolistic competition | Perfect competition   MSC: Interpretive
31. ANS: D   PTS: 1   DIF: 2   REF: 18-1 | 18-2 | 18-3
     TOP: Labor-market equilibrium   MSC: Analytical
32. ANS: C   PTS: 1   DIF: 2   REF: 2-1
     TOP: Production possibilities frontier | Opportunity cost   MSC: Interpretive
33. ANS: D   PTS: 1   DIF: 2   REF: 4-4
     TOP: Equilibrium   MSC: Interpretive
34. ANS: B   PTS: 1   DIF: 2   REF: 16-2
     TOP: Demand curve   MSC: Interpretive
35. ANS: A   PTS: 1   DIF: 2   REF: 15-5
     TOP: Regulation | Natural monopoly MSC: Applicative
36. ANS: D   PTS: 1   DIF: 1   REF: 17-3
     TOP: Antitrust   MSC: Interpretive
37. ANS: A   PTS: 1   DIF: 2   REF: 15-2
     TOP: Profit maximization   MSC: Analytical
38. ANS: C   PTS: 1   DIF: 2   REF: 15-2
     TOP: Total revenue   MSC: Analytical
39. ANS: D   PTS: 1   DIF: 3   REF: 21-2
     TOP: Perfect substitutes   MSC: Applicative

40. ANS: D   PTS: 1   DIF: 3   REF: 14-2
    TOP: Profit maximization   MSC: Applicative
41. ANS: D   PTS: 1   DIF: 2   REF: 5-1
    TOP: Midpoint method | Price elasticity of demand   MSC: Applicative
42. ANS: D   PTS: 1   DIF: 3   REF: 5-1
    TOP: Total revenue | Price elasticity of demand   MSC: Applicative
43. ANS: A   PTS: 1   DIF: 2   REF: 5-1
    TOP: Total revenue | Price elasticity of demand   MSC: Applicative
44. ANS: D   PTS: 1   DIF: 2   REF: 3-2
    TOP: Comparative advantage   MSC: Interpretive
45. ANS: D   PTS: 1   DIF: 2   REF: 15-5
    TOP: Do nothing   MSC: Interpretive
46. ANS: B   PTS: 1   DIF: 1   REF: 21-2
    TOP: Indifference curves   MSC: Definitional
47. ANS: C   PTS: 1   DIF: 1   REF: 13-4
    TOP: Short run   MSC: Interpretive
48. ANS: B   PTS: 1   DIF: 2   REF: 18-1 | 18-3
    TOP: Labor-market equilibrium   MSC: Applicative
49. ANS: C   PTS: 1   DIF: 2   REF: 17-2
    TOP: Nash equilibrium   MSC: Interpretive
50. ANS: A   PTS: 1   DIF: 3   REF: 17-2
    TOP: Prisoners' dilemma   MSC: Interpretive