Multiple Choice

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

___ 1. Economics is
   a. the study of the markets for stocks and bonds
   b. the study of choice under conditions of scarcity
   c. exclusively the study of business firms
   d. fundamentally the same as sociology
   e. applicable only when scarcity is not a problem

___ 2. Scarcity is a situation in which
   a. available resources cannot satisfy all potential uses for the resources
   b. there are unlimited wants
   c. resources outnumber the potential uses for resources in society
   d. there is a surplus, since buyers cannot obtain all of the goods that they want
   e. society's productive capital is publicly owned

___ 3. Because of economic scarcity
   a. there are not enough jobs for everyone
   b. people are afraid to become entrepreneurs
   c. the government interferes in the economy
   d. businesses cannot obtain the resources they need
   e. people and organizations have to allocate resources carefully

___ 4. Because households have limited incomes, they must
   a. rarely take vacations
   b. live below the poverty line
   c. allocate their spending carefully
   d. gamble in casinos frequently
   e. save for the future

___ 5. Which of the following is the study of what "should be" rather than the study of what "is"?
   a. positive economics
   b. law and economics
   c. microeconomics
   d. development economics
   e. normative economics

___ 6. The opportunity cost of any activity can be measured by the
   a. value of the best alternative that is given up
   b. price (or monetary costs) of the activity
   c. level of technology
   d. time needed to select among various alternatives
   e. fringe benefits associated with the activity
7. Carl is considering attending a concert with a ticket price of $35. He estimates that the cost of driving to the concert and parking there will total an additional $20. In order to attend the concert, Carl will have to take time off from his part-time job and forgo studying for an exam scheduled for the next morning. He estimates that he will lose 3 hours at work, at a wage of $6 per hour, plus 2 hours of study time. Carl's opportunity cost of attending the concert equals
   a. $73 plus the value of the higher exam grade he could earn by studying longer
   b. $73
   c. $35 plus the value of the higher exam grade he could earn by studying longer
   d. $35
   e. $55 plus the value of the higher exam grade he could earn by studying longer

8. Society as a whole faces opportunity costs because
   a. there is not enough money to go around
   b. politicians are greedy
   c. workers shirk their responsibilities and management is unable to compensate for this
   d. resources are abundant
   e. resources are scarce

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**Figure B-2**

9. Figure B-2 illustrates the trade-off for a particular student between time spent studying per week and income per week from working part-time. What is the opportunity cost for this person of moving from point a to point b?
   a. $5 of income per week
   b. $10 of income per week
   c. two hours of studying per week
   d. $10 per hour of studying per week
   e. $20 of income per week
10. Which production possibilities frontier(s) in Figure B-5 depict(s) a situation in which all resources are perfect substitutes in production?
   a. both C and E
   b. both D and E
   c. C
   d. D
   e. E

11. Which of the following could explain the shift in the production possibilities frontier from AB to AC in Figure B-8?
   a. a productive improvement in petroleum production that has no effect on clothing production
   b. a productive improvement in clothing production that has no effect on petroleum production
   c. an increase in the size of the labor force that can produce either petroleum products or clothing
   d. major oil reserves in Alaska are declared off-limits to producers in order to protect the environment
   e. major oil reserves are discovered off the coast of Africa
12. Specialization leads to greater production than is otherwise possible
   a. only if different workers have different natural abilities
   b. only if production is organized within business firms
   c. under capitalism, but not under communism
   d. even if different workers have identical natural abilities
   e. under communal ownership, but not under capitalism

13. Bill can cook dinner in 45 minutes and mow the lawn in 1.5 hours. Eileen can cook dinner in 1.5 hours and mow the lawn in 2 hours. Which of the following statements is correct?
   a. Bill has both an absolute advantage and a comparative advantage in cooking dinner
   b. Bill has both an absolute advantage and a comparative advantage in mowing the lawn
   c. Eileen has both an absolute advantage and a comparative advantage in cooking dinner
   d. Eileen has both an absolute advantage and a comparative advantage in mowing the lawn
   e. Bill has the comparative advantage in both cooking dinner and mowing the lawn

<table>
<thead>
<tr>
<th>Figure B-12</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Jack</strong></td>
</tr>
<tr>
<td>Pails Fetched Per Hour</td>
</tr>
<tr>
<td>Boards Sawed Per Hour</td>
</tr>
<tr>
<td><strong>Jill</strong></td>
</tr>
<tr>
<td>Pails Fetched Per Hour</td>
</tr>
<tr>
<td>Boards Sawed Per Hour</td>
</tr>
</tbody>
</table>

14. According to the information in Figure B-12,
   a. Jill has an absolute advantage in fetching pails
   b. Jill has an absolute advantage in sawing boards
   c. Jill has a comparative advantage in sawing boards
   d. Jack has a comparative advantage in sawing boards
   e. Jill has a comparative advantage in fetching pails

15. Under market capitalism, resources are allocated by
   a. command and owned privately
   b. the market and owned privately
   c. command and owned by the state
   d. the market and owned by the state
   e. tradition and owned by all

16. When individuals come together to buy and sell goods and services, they form a(n)
   a. economy
   b. market
   c. production possibilities frontier
   d. supply curve
   e. demand curve

17. In a perfectly competitive market,
   a. there can be few or many buyers and sellers
   b. the price can be driven upward by suppliers holding back on goods and services
   c. each participant is too small to affect the market price
   d. government intervention is needed to ensure that prices are *fair* for consumers
   e. resources are allocated by a central authority
18. Suppose that initially the market for cassette tapes is at point A on demand curve $D_2$ in Figure C-3. If the price of cassette tapes decreased,
   a. the demand curve will shift to $D_3$
   b. the market will move to point B on demand curve $D_2$
   c. the market will move to point C on demand curve $D_2$
   d. there will be no change from point A
   e. the demand curve will shift to $D_1$

19. An increase in supply results in a(n)
   a. increase in demand
   b. decrease in equilibrium quantity and an increase in equilibrium price
   c. decrease in equilibrium quantity and a decrease in equilibrium price
   d. decrease in equilibrium price and an increase in equilibrium quantity
   e. unfavorable shift in tastes and preferences

20. Assume the North Island of New Zealand can produce 2,000 fishing poles or 20 kayaks per day and the South Island of New Zealand can produce 1,000 fishing poles or 5 kayaks per day. The South Island has a comparative advantage in producing kayaks.
   a. True
   b. False

21. For each watch Switzerland produces, it gives up the opportunity to produce 50 pounds of cheese. Germany can produce one watch at a cost of 100 pounds of cheese. Which of the following is true?
   a. the opportunity cost of producing watches is greater in Switzerland
   b. the opportunity cost of producing cheese is greater in Switzerland
   c. the opportunity cost of producing cheese is the same in both countries
   d. it is impossible to compare costs because the two countries use different technologies
   e. in the two countries combined, the cost of producing one watch is 150 pounds of cheese
22. Suppose the opportunity cost is a constant 500 TV sets for 1 car in Canada and 1,000 TV sets for 8 cars in Mexico. Then, if both countries specialize in accordance with their comparative advantage, the production of 1,000 extra TV sets in one country and 1,000 fewer TV sets in the other would imply that the world as a whole can have
   a. 2 more cars
   b. 6 more cars
   c. 8 more cars
   d. 125 more cars
   e. 500 more cars

23. Protectionism arises because
   a. people misunderstand the benefits of free trade
   b. trade generally harms some groups in society
   c. the costs of free trade outweigh the benefits for all groups in society
   d. the costs of trade for both exporting and importing nations outweigh the benefits
   e. a lack of comparative advantage

24. If an excise tax is imposed on steak,
   a. the government's tax revenue will decrease
   b. the government's tax revenue will increase
   c. the amount of steak produced and sold will increase
   d. the market price of steak will decrease
   e. the market price will rise but the market quantity will be unaffected

25. The measure of the sensitivity of one economic variable to changes in another variable is known as
   a. the variability coefficient
   b. elasticity
   c. the sensitivity coefficient
   d. the cross-variability coefficient
   e. the law of demand

26. If the price elasticity of demand for Cheer detergent is -3.0, then a
   a. 12 percent drop in price leads to a 36 percent rise in the quantity demanded
   b. 12 percent drop in price leads to a 4 percent rise in the quantity demanded
   c. $1,000 drop in price leads to a 3,000-unit rise in the quantity demanded
   d. $1,000 drop in price leads to a 333-unit rise in the quantity demanded
   e. 12 percent rise in price leads to a 36 percent rise in the quantity demanded
Figure D-9

<table>
<thead>
<tr>
<th>Price</th>
<th>Quantity Demanded</th>
</tr>
</thead>
<tbody>
<tr>
<td>$1</td>
<td>100</td>
</tr>
<tr>
<td>$2</td>
<td>80</td>
</tr>
<tr>
<td>$3</td>
<td>60</td>
</tr>
<tr>
<td>$4</td>
<td>40</td>
</tr>
<tr>
<td>$5</td>
<td>20</td>
</tr>
</tbody>
</table>

27. Figure D-9 shows the demand schedule for hockey pucks. What is the price elasticity of demand when the price changes from $4 per puck to $5 per puck (using the midpoint formula)?
   a. -0.33
   b. -1.00
   c. -1.15
   d. -3.00
   e. none of these

28. If the percentage change in quantity demanded divided by the percentage change in price equals -1, then
   a. supply is inelastic
   b. supply is elastic
   c. demand is elastic
   d. demand is inelastic
   e. demand is unit elastic

Figure D-11

29. Figure D-11 shows the demand curve for chicken. Between points L and M, the price elasticity of demand is
   a. -0.44, and demand is elastic
   b. -0.44, and demand is inelastic
   c. -2.25, and demand is elastic
   d. -2.25, and demand is inelastic
   e. -0.028, and demand is inelastic
Figure D-16

<table>
<thead>
<tr>
<th>Income</th>
<th>Demand for Public Higher Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>$45 billion</td>
<td>90,000 student years</td>
</tr>
<tr>
<td>$55 billion</td>
<td>110,000 student years</td>
</tr>
<tr>
<td>$65 billion</td>
<td>130,000 student years</td>
</tr>
<tr>
<td>$75 billion</td>
<td>150,000 student years</td>
</tr>
<tr>
<td>$85 billion</td>
<td>170,000 student years</td>
</tr>
</tbody>
</table>

30. Figure D-16 shows five different levels of income for a particular state (in billions of dollars) and the demand for public higher education there (for a given level of tuition). Given this information, what can be said about the state's demand for public higher education?
   a. it follows the law of demand
   b. it violates the law of demand
   c. public higher education is a luxury good
   d. public higher education is an inferior good for income levels above $65 million
   e. public higher education is a normal good

31. For a normal good, demand
   a. increases as income rises, so the income elasticity of demand is positive
   b. increases as income rises, so the income elasticity of demand is negative
   c. falls as income rises, so the income elasticity of demand is positive
   d. falls as income rises, so the income elasticity of demand is negative
   e. remains unchanged as income rises, so the income elasticity of demand is zero

32. The intercept of a budget line measures the
   a. amount of a good that a consumer will purchase
   b. maximum amount of a good that a consumer could purchase, given his consumption of some other good
   c. maximum amount of a good that could be consumed at given prices and income
   d. minimum amount of a good that could be consumed at given prices and income
   e. minimum consumption of a good consistent with utility maximization
33. Which panel in Figure E-2 shows the effect of a decrease in the price of apples, other things constant?
   a. panel a  
   b. panel b  
   c. panel c  
   d. panel d  
   e. panel e

34. Stanley receives the following marginal utilities from the first four car washes that he buys each year, respectively: 20, 15, 10, and 5. If each car wash sells for $10, then the marginal utility per dollar spent on the third car wash is
   a. 10  
   b. 4.5  
   c. 1  
   d. 45  
   e. 5

35. Kate laments that she receives less additional utility from each additional automobile. Being an economist, she estimates that the total utility she receives from one, two, and three automobiles are 15,000, 27,000, and 36,000, respectively. If the price of an automobile is $15,000, then what is the marginal utility per dollar spent on the second automobile?
   a. 1.8  
   b. 0.8  
   c. 27,000  
   d. 12,000  
   e. 0.6

36. If a consumer allocates her income between two goods, x and y, then she will be in equilibrium when
   a. \( \frac{MU_x}{P_x} = \frac{MU_y}{P_y} \) and she is below her budget constraint  
   b. \( MU_x = MU_y \) and she has spent all of her income  
   c. \( MU_x / MU_y > P_x / P_y \) and all of her income is spent  
   d. \( MU_x / P_x = MU_y / P_y \) and all of her income is spent  
   e. \( MU_x = MU_y \) and she is below her budget constraint
37. The market demand curve for a good is found by
   a. adding up the quantities demanded by all consumers at different prices of that good
   b. adding up the quantities demanded by all consumers at different incomes
   c. adding up the maximum price each consumer is willing to pay for each possible quantity
      of the good
   d. varying consumers' total income and determining what prices they are willing to pay
   e. vertically summing the individual consumers' demand curves

38. When firms have lower costs than independent contractors due to hiring employees, those firms
   a. usually charge higher prices
   b. are operating at a point inside of their production possibilities frontier
   c. will have higher risks for potential owners
   d. can charge lower prices
   e. set wages equal to costs

39. An economy in which each participant is completely self-reliant would
   a. generate a high average standard of living
   b. forego all of the gains from specialization
   c. have each person producing according to her comparative advantage
   d. enjoy a high level of exchange
   e. be equivalent to production by independent contractors

<table>
<thead>
<tr>
<th>Quantity of Labor</th>
<th>Total Product</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>10</td>
<td>100</td>
</tr>
<tr>
<td>20</td>
<td>230</td>
</tr>
<tr>
<td>30</td>
<td>340</td>
</tr>
<tr>
<td>40</td>
<td>410</td>
</tr>
<tr>
<td>50</td>
<td>460</td>
</tr>
</tbody>
</table>

40. Figure G-2 indicates a firm's short-run production function. What is the marginal product of labor between 20 and 30 units of labor?
   a. 340 units
   b. 220 units
   c. 11 units
   d. 110 units
   e. 34 units

41. Average total cost is
   a. the change in cost as output decreases
   b. the change in cost as output increases
   c. TC - MC
   d. MC - TC
   e. AFC + AVC

42. Marginal cost is
   a. the increase in total cost from producing one more unit of output
   b. total variable cost per unit of output
   c. fixed cost per marginal unit
   d. average total cost divided by the quantity of inputs used
   e. total cost per unit of output
43. Figure G-9 shows three different cost curves, labeled A, B, and C, for a firm. Which of these curves is most likely to represent marginal cost?
   a. curve A
   b. curve B
   c. curve C
   d. neither A, B, nor C
   e. cannot be determined without more information

44. The firm depicted in Figure G-13 has a larger plant size at point
   a. H than at point F
   b. F than at point H
   c. F than at point G
   d. G than at point H
   e. H than at point G
__45. If a firm experiences constant returns to scale at all output levels, then its long-run average total cost curve would
   a. slope downward
   b. be horizontal
   c. slope upward
   d. slope downward for low output levels and upward for high output levels
   e. slope upward for low output levels and downward for high output levels

__46. Economists assume that the goal of the firm is to
   a. maximize total revenue
   b. maximize profits
   c. minimize costs
   d. equate total revenue and total cost
   e. break even in the long run

__47. The behavior of firms is best understood by focusing on
   a. money profit
   b. economic profit
   c. accounting profit
   d. economic profit minus implicit costs
   e. money profit minus explicit costs

__48. If the price of gasoline rises at the Exxon gas station at a busy intersection, the Mobil station at the same intersection will experience
   a. a shift outward of the demand curve it faces
   b. a shift inward of the demand curve it faces
   c. a movement rightward along the same demand curve it faces
   d. a movement leftward along the same demand curve it faces
   e. neither a shift in nor a movement along the demand curve it faces

__49. What can be said about the firm shown in Figure H-2?
   a. the firm faces a perfectly elastic demand curve
   b. the firm will maximize profits at the point where the TR and TC curves intersect
   c. when price rises, the TC curve will shift upward
   d. when fixed costs rise, the TR curve will pivot upward
   e. the firm faces a downward-sloping demand curve
**Figure H-3**

<table>
<thead>
<tr>
<th>Units of Output</th>
<th>Total Cost</th>
<th>Total Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>$500</td>
<td>0</td>
</tr>
<tr>
<td>100</td>
<td>$900</td>
<td>$800</td>
</tr>
<tr>
<td>200</td>
<td>$1,200</td>
<td>$1,500</td>
</tr>
<tr>
<td>300</td>
<td>$1,600</td>
<td>$2,100</td>
</tr>
<tr>
<td>400</td>
<td>$2,300</td>
<td>$2,500</td>
</tr>
<tr>
<td>500</td>
<td>$3,300</td>
<td>$2,800</td>
</tr>
</tbody>
</table>

50. Figure H-3 shows the total revenue and total cost for a firm at selected output levels. Which is the highest possible level of profit for this firm over this output range?
   a. $500
   b. $2,100
   c. $1,600
   d. -$500
   e. $300

51. The additional revenue received by a firm from selling one more unit of output is known as
   a. total revenue
   b. price
   c. average revenue
   d. marginal cost
   e. marginal revenue

52. When a firm faces a downward-sloping demand curve, marginal revenue
   a. is constant regardless of how much output the firm produces
   b. is below the demand curve
   c. increases as the firm produces more output
   d. decreases if the firm produces less output
   e. is equal to the price per unit of output

53. If total revenue falls as more output is produced,
   a. marginal revenue is negative
   b. marginal revenue is positive
   c. marginal cost is negative
   d. average revenue is negative
   e. total costs exceed total revenue
54. Consider the marginal revenue and marginal cost curves shown in Figure H-13. Assume that the firm represented is able to cover its variable costs if it operates in the short run. What is the firm's optimal output level?
   a. 150 units  
   b. 80 units  
   c. 50 units  
   d. less than 50 units  
   e. between 50 and 80 units

55. The principal-agent problem becomes serious when a firm is attempting to take over a rival.
   a. True  
   b. False

56. The principal-agent problem in firms creates difficulties when
   a. agents and managers strongly agree with the organization's goals  
   b. marginal cost rises in response to output changes  
   c. agents have incentives to act in ways that support profit maximization  
   d. agents act in ways that work against profit maximization  
   e. there are few, if any, agents

57. The characteristics of a market that influence the behavior of market participants is (are) known as
   a. perfect competition  
   b. market power  
   c. barriers to entry  
   d. market structure  
   e. monopolistic competition

58. Which of the following is a characteristic of perfect competition?
   a. easy entry into or exit from the market  
   b. a small number of buyers  
   c. a high degree of government regulation  
   d. a differentiated product  
   e. a high degree of collusion

59. Under conditions of perfect competition, if any one buyer increases her purchases, the market price
   a. rises  
   b. remains unchanged  
   c. falls  
   d. either rises or falls  
   e. will change, but in an unpredictable fashion
60. Figure I-1 shows the marginal cost and average total cost curves for a perfectly competitive firm. If the market price is $10, then
a. the firm earns $10 profit on each unit sold  
b. the firm earns $8 profit on each unit sold  
c. marginal revenue equals $10  
d. the firm is losing money in the short run  
e. marginal cost always equals marginal revenue

61. Figure I-7 shows cost curves for Penny's Parasols, a perfectly competitive firm. At which of the point would Penny's Parasols close down?
   a. A  
   b. B  
   c. C  
   d. D  
   e. E
62. A firm will shut down if
   a. it earns too little economic profit
   b. there are a large number of buyers and sellers
   c. it suffers an economic loss
   d. there is a change in tastes and preferences
   e. price is everywhere less than average variable cost

63. In the short run, each firm in a perfectly competitive market is free to
   a. increase its plant size
   b. vary its output level within its existing capacity
   c. exit the industry without losses
   d. set a price above the market price
   e. decrease its plant size

64. A market that involves only one seller of a good or service is known as
   a. a monopoly
   b. perfect competition
   c. monopolistic competition
   d. an oligopoly
   e. perfect monopolistic competition

65. A monopoly is a
   a. large number of producers each with a small share of the total market output
   b. single seller of a product that has no close substitutes
   c. small group of producers with similar products
   d. single buyer of an input into production
   e. cartel of firms with incentives to cooperate

66. Which of the following is not considered a barrier to entry?
   a. large economies of scale
   b. control of inputs used in production
   c. a homogeneous product
   d. patents
   e. copyrights

67. Patents and copyrights are designed to
   a. eliminate above-normal profit in the short run
   b. move monopoly prices closer to prices that would occur under perfect competition
   c. prevent the capitalization of monopoly profit
   d. allow a period of above-normal profit to encourage innovation
   e. limit a monopoly's rent-seeking activities
68. Figure J-4 depicts a single price monopoly. What are the equilibrium price and output?
   a. there is no equilibrium under monopoly
   b. P' and Q'
   c. P and Q
   d. P' and Q
   e. P and Q'

69. The profit-maximizing, or loss-minimizing, firm depicted in Figure J-8 will produce
   a. approximately 100 units of output
   b. approximately 150 units of output
   c. approximately 175 units of output
   d. more than 200 units of output
   e. nothing since it should close
70. What is the total profit (or loss) for the monopolist shown in Figure J-9?
  a. profit of cbgf
  b. loss of fcbg
  c. profit of egbd
  d. loss of edcf
  e. profit of edcf

71. Suppose a firm is considering entering a market where it would face the demand and cost conditions shown in Figure J-13. Which of the following statements is correct?
  a. the firm should produce output level Q* and charge a single price equal to G
  b. the firm should produce output level Q* and charge a single price equal to F
  c. the firm should produce output level Q* and charge a single price equal to H
  d. the firm should produce output level Q** and charge a single price equal to I
  e. the firm is a natural monopolist that will suffer long-run economic losses if it charges a single price
72. Consider the single-price monopolist illustrated in Figure J-17. In order to maximize its economic profit in the short run, the firm should produce
a. the output level associated with point F
b. the output level associated with point G
c. the output level associated with point H
d. the output level associated with point I
e. zero

73. Figure J-23 illustrates the market supply and market demand for an industry that is constituted initially of many identical and perfectly competitive firms. If all the firms merge to form a single-price monopoly, then market output will
a. drop from 750 to 500 units, and the price will rise from L to K
b. drop from 750 to 500 units, and the price will fall from K to L
c. rise from 500 to 750 units, and the price will rise from L to K
d. rise from 500 to 750 units, and the price will fall from K to L
e. remain unchanged while the price rises from L to K
74. Price discrimination occurs when
   a. price exceeds marginal cost
   b. a firm charges different customers different prices, and the differences are not explained by cost factors
   c. price exceeds average cost
   d. a firm charges different customers different prices, where these differences are based on cost differences
   e. price equals average variable cost

75. The monopoly represented in Figure J-26 has constant marginal cost and no fixed costs. If the firm is a perfect price discriminator, it will produce
   a. Q** units
   b. Q* units
   c. between 0 and Q* units
   d. between Q* and Q** units
   e. more than Q** units

76. The monopoly represented in Figure J-26 has constant marginal cost and no fixed costs. If the firm is a perfect price discriminator, economic profit will equal
   a. the area PABP'
   b. the area PACP'
   c. the area TCQ**0
   d. the area TCP'
   e. zero

77. If a market has more than one seller, but fewer sellers than under perfect competition, it is referred to as
   a. a monopoly
   b. competitive
   c. imperfect competition
   d. an efficient market
   e. optimal
78. Imperfect competition differs from monopoly because
   a. only a monopoly faces a downward-sloping demand curve for its product
   b. all imperfectly competitive firms produce the same homogeneous product
   c. no single imperfectly competitive firm can affect the market price
   d. there is more than one seller in imperfect competition
   e. all imperfectly competitive firms are small

79. All of the following, except one, are sources of product differentiation. Which is the exception?
   a. product quality
   b. location
   c. price
   d. consumer tastes
   e. buyers' perceptions

80. Each of the following, except one, is a characteristic of a monopolistically competitive market. Which is the exception?
   a. differentiated products
   b. no significant barriers to entry
   c. many buyers
   d. a standardized product
   e. many sellers

81. Consider the monopolistically competitive firm whose demand curve and cost structure are illustrated in Figure K-1. Which of the following statements is correct in the short run?
   a. the firm will produce 100 units and suffer a loss of $400 per week
   b. the firm will produce 100 units and suffer a loss of $300 per week
   c. the firm will produce 100 units and suffer a loss of $1,000 per week
   d. the firm will produce 100 units and suffer a loss of $100 per week
   e. the firm will produce zero units and suffer a loss of $300 per week
82. The profit-maximizing, or loss-minimizing, output for the firm in Figure K-3 is
   a. zero units
   b. 50 units
   c. 70 units
   d. 75 units
   e. 83 units

83. If the firm represented in Figure K-7 is typical of other firms in the industry, then, as the long run approaches,
   a. some firms will exit, and the demand curves facing the remaining firms will shift to the left
   b. some firms will exit, and the demand curves facing the remaining firms will shift to the right
   c. some firms will enter, and the demand curves facing the remaining firms will shift to the left
   d. some firms will enter, and the demand curves facing the remaining firms will shift to the right
   e. the industry will eventually disappear

84. In monopolistic competition, product differentiation causes
   a. the firms to earn economic profits in the long run
   b. a horizontal demand curve for each firm's output
   c. the firms to operate with excess capacity
   d. significant barriers to entry
   e. high concentration ratios
85. Figure K-10 shows the long-run market demand curve and the cost structure for a typical monopolistic competitor. The minimum efficient scale (MES) is
   a. 0
   b. 200 units
   c. 400 units
   d. 800 units
   e. 1,200 units

86. In the prisoner's dilemma,
   a. the prisoners easily collude in order to achieve the best possible payoff for both
   b. only one player has a dominant strategy
   c. each player has a dominant strategy
   d. playing the dominant strategy leads to a better payoff for one prisoner than would jointly selecting a different strategy
   e. playing the dominant strategy leads to a better payoff for both prisoners than would jointly selecting a different strategy

87. A dominant strategy is one that
   a. makes every player better off
   b. makes at least one player better off without hurting the competitiveness of any other player
   c. increases the total payoff for the player
   d. is best for the player, regardless of what strategy other players follow
   e. leads to a quicker convergence to market equilibrium

88. The outcomes of different combinations of strategies by two players in a game are indicated in the
   a. strategy box
   b. payoff matrix
   c. competition matrix
   d. outcome dilemma
   e. collusion matrix
Brian and Matt own the only two bicycle repair shops in town. Each must choose between a low price for repair work and a high price. The yearly economic profits from each strategy are indicated in Figure K-12. The upper right side of each rectangle shows Brian's profits; the lower left side shows Matt's profits. Which of the following statements is correct?

a. Matt's dominant strategy is to charge a low price
b. Brian's dominant strategy is to charge a high price
c. the dominant strategy for both Brian and Matt is to charge a low price
d. Matt's dominant strategy is to charge a high price
e. neither Brian nor Matt has a dominant strategy

A cartel is a(n)

a. form of explicit collusion in which the parties collectively behave like a monopoly
b. market that changes very little as firms enter and exit
c. implicit pricing scheme that does not involve explicit communication between the parties
d. form of nonprice competition
e. group of firms engaged in price discrimination

A cartel

a. has one firm that acts as the price leader
b. is a group of firms engaged in price discrimination
c. acts like a monopoly
d. involves competition between rival firms
e. prices its output equal to marginal cost

Pollution resulting from the production of a good creates a market failure called a negative externality.

a. True
b. False

Positive externalities are market failures arising from some beneficial consequences of the production or consumption of a product that spill over to third parties. Ultimately, too little of the production that create positive externalities takes place.

a. True
b. False

Suppose that production of a good creates a negative externality. An excise tax equivalent to the difference between the marginal social cost and the marginal private cost of a good can correct the inefficiency.

a. True
b. False
95. Production involving a significant positive externality will be inefficient.
   a. True
   b. False

96. A subsidy equivalent to the marginal private benefit of a good can be used to make a market with a positive externality efficient.
   a. True
   b. False

97. Both positive externalities and negative externalities produce inefficiency.
   a. True
   b. False

98. The noise inflicted on bystanders by users of chain saws, lawn mowers, and motorcycles is an example of
   a. a positive externality
   b. public goods
   c. nonexcludability
   d. marginal private benefit exceeding marginal social benefit
   e. marginal social cost and the free-rider problem

99. Which of the following may hold when a positive externality is associated with consumption of a good?
   a. either c or d
   b. marginal social benefit is less than the marginal private benefit
   c. marginal social benefit exceeds marginal private benefit
   d. marginal social cost is less than the marginal private cost
   e. marginal social cost exceeds marginal private cost

100. Negative externalities create inefficiency because at the market-clearing quantity,
    a. price does not equal marginal revenue
    b. marginal social costs exceed marginal private benefit
    c. the market is perfectly competitive
    d. side payments are illegal in the United States
    e. marginal social benefits exceed marginal private costs
101. Assume the production of the product in Figure O-1 imposes a cost on society of $7.00 per unit. If the free market equilibrium output is 50 units, the government should
   a. impose an excise tax of $2.50 per unit
   b. reduce the output of the firm by approximately 39 units
   c. impose a lump-sum tax of $350 per period
   d. impose an excise of $7.00 per unit
   e. impose a lump-sum tax of $175 per period

102. Subsidization helps create efficiency when
   a. there are negative externalities
   b. marginal social cost equals marginal private cost
   c. marginal private cost is zero
   d. there are positive externalities
   e. marginal social benefit equals marginal private benefit

103. Marginal social benefits equal marginal private benefits when
   a. there are no negative externalities
   b. side payments are made in the market
   c. there are no externalities
   d. taxes are used to promote efficiency
   e. other individuals receive benefits from having others consume the good

104. A good is said to be excludable if
   a. those who do not pay for it can be prevented from consuming it
   b. those who do not produce the good can be prevented from consuming it
   c. it is not traded in the public market
   d. there is no rivalry in consumption
   e. its use can be continued indefinitely

105. The two defining characteristics of private goods are
   a. nonrivalry and excludability
   b. positive externalities and efficiency
   c. nonexcludability and nonrivalry
   d. efficiency and profitability
   e. rivalry and excludability
106. Which of the following is an example of a nonrival good?
   a. food
   b. automobiles
   c. a view of the sun rising
   d. housing
   e. hot tubs

107. If a good is excludable and nonrival,
   a. the market will provide too much of the good
   b. the market will provide the good
   c. the market will not provide the good
   d. neither the market nor government will provide the good
   e. only the government will provide the good

108. Public goods are
   a. rival and excludable
   b. rival and nonexcludable
   c. nonrival but excludable
   d. nonrival and nonexcludable
   e. those provide by government agencies

109. A private good is
   a. nonrival and nonexcludable
   b. rival but excludable
   c. rival and excludable
   d. nonrival but excludable
   e. one whose production imposes a cost on third parties

110. The private market will produce goods that are
   a. neither rival nor excludable
   b. rival, but not excludable
   c. socially desirable, regardless of their excludability and their rivalrous characteristics
   d. both rival and excludable
   e. rival, but not profitable

111. The property of a public good that allows additional persons to consume the good without reducing its availability to others is called
   a. free riding
   b. an externality
   c. allocative efficiency
   d. nonexcludability
   e. nonrivalry
The following is a payoff matrix for two people - X and Y. Each of these individuals has a total of three possible actions. X can choose x1, x2, or x3. Y can choose y1, y2, or y3. The numbers in the cells correspond to the profit (in dollars) that each individual would receive given any two actions. For example: if X chooses x1 and Y chooses y1 then X will receive $1 and Y will receive $4.

<table>
<thead>
<tr>
<th></th>
<th>y1</th>
<th>y2</th>
<th>y3</th>
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<tbody>
<tr>
<td>x1</td>
<td>(1,4)</td>
<td>(2,2)</td>
<td>(2,3)</td>
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<tr>
<td>x2</td>
<td>(3,1)</td>
<td>(1,5)</td>
<td>(4,1)</td>
</tr>
<tr>
<td>x3</td>
<td>(2,0)</td>
<td>(3,4)</td>
<td>(1,2)</td>
</tr>
</tbody>
</table>

Payoffs: (Person X, Person Y)

112. What is person X’s best response if person Y chooses y1?
   a. x3  d. x2
   b. x4  e. y3
   c. x1

113. What is person X’s best response if Y chooses y3?
   a. y1  d. x2
   b. y2  e. x3
   c. x1

114. What is Y’s best response if X chooses x2?
   a. y1  d. y3
   b. y2  e. x3
   c. x1

115. What will be the progression of actions to equilibrium if Y chooses y1 to start?
   a. y1 then x2 then y2 then x3  d. y1 then x1 then y2
   b. y1 then x1 then y3 then x2 then y2  e. y1 then x2 then y2 then x1
   c. y1 then x3 then y2 then x1 then y1

116. A public good is defined as a good or service which is:
   a. non-rival and excludable  d. provided by the government
   b. rival and excludable      e. rival and non-excludable
   c. non-rival and non-excludable

117. An example of a good which has a positive externality is
   a. pollution  d. air
   b. sunshine    e. both b and d
   c. education
118. At what price and quantity combination on the following graph would a firm in a monopolistically competitive market produce at?

a. P1 and q1  
d. P4 and q4
b. P2 and q2  
e. 0 and 0
c. P3 and q3