Economics 103h Fall 2012: Review Questions for Midterm 2

Essay/Graphing questions

1. Explain the shape of the budget line.
2. What shifts the budget line and why? Give an example in words and demonstrate on a graph.
3. What rotates the budget line and why? Give an example in words and demonstrate on a graph.
4. In a budget line graph, the price of the good on the y axis falls with total budget held constant. Show what happens on a graph and explain in words why this happens.
5. Explain the shape (slope) of the total and marginal utility curves.
6. Explain the relationship between the shapes (slopes) of the total and marginal utility curves and show them on a graph.
7. Explain the shape (slope) of the indifference curve. Explain why it is first steep and then shallow.
8. Draw on a graph and explain in words the consumer equilibrium (best affordable point). Explain why this is a point of tangency and not a point of intersection between the relevant curves. This requires an explanation of the slopes of the relevant curves and an explanation of why the point of tangency maximizes utility.
9. Draw on a graph and explain in words how the demand curve is derived from the indifference curve/budget line analysis of the consumer equilibrium (best affordable point).
10. Explain the shapes (slopes) of the total and marginal product and the total and marginal cost curves. Explain the relationship between the marginal and total product and cost curves and demonstrate this relationship on two graphs, one for product and one for costs.
11. Explain the shapes and draw on a graph the total fixed cost, total variable cost and total cost curves. Do the same for the marginal and average cost curves.
12. The cost curves are linked to the product curves. Using two graphs, one below the other, demonstrate the relationship between the two sets of curves with the MP and AP curves in the top graph and the MC and AVC curves in the bottom graph. Explain this in terms of the three regions on each set of curves.
13. Explain the shape of the long run average total cost curve and show the curve on a graph. What is the relationship between short-run and long-run average total cost curves?
14. Show on the graph in question 13 the regions of increasing, constant and decreasing returns to scale.
15. Explain the ‘fourfold classification of goods’.
16. Demonstrate on a graph and explain in words the inefficiency of a private market equilibrium when there are positive externalities (external benefits). Do the same to show and explain the efficiency of government intervention into the market in the case of external benefits.
Multiple choice review questions

1) A good or service or a resource is nonexcludable if
A) it is possible to prevent someone from enjoying its benefits.
B) it is not possible to prevent someone from benefiting from it.
C) its use by one person decreases the quantity available for someone else.
D) its use by one person does not decrease the quantity available for someone else.
Answer: B

2) A good or service or a resource is nonrival if
A) it is possible to prevent someone from enjoying its benefits.
B) it is not possible to prevent someone from benefiting from it.
C) its use by one person decreases the quantity available for someone else.
D) its use by one person does not decrease the quantity available for someone else.
Answer: D

3) A private good is _________ and __________.
A) rival; excludable
B) nonrival; excludable
C) rival; nonexcludable
D) nonrival; nonexcludable
Answer: A

4) Which of the following is the BEST example of a private good?
A) a house
B) a bridge during rush hour
C) air traffic control
D) fish in the ocean
Answer: A

5) An example of a public good is
A) national defense services.
B) a Ford truck.
C) a loaf of bread.
D) a home computer.
Answer: A

6) Which of the following is the BEST example of a common resource?
A) a house
B) the Internet
C) air traffic control
D) fish in the ocean
Answer: D

7) An example of a natural monopoly is
A) a house.
B) the Internet.
C) air traffic control.
D) fish in the ocean.

8) The external benefit of a good
A) equals its consumer surplus.
B) equals its producer surplus.
C) equals its total surplus.
D) is a benefit from the good falling on people who are not the consumers of the good.
Answer: D

9) In which of the following markets are external benefits most likely to exist?
A) In the market for gasoline
B) In the market for ball pens
C) In the market for flu shots
D) In the market for cigarettes
Answer: C

10) The free-rider problem arises when consumption of a good is
A) rival.
B) excludable.
C) nonrival but excludable.
D) nonexcludable.
Answer: D

11) Public goods create a free-rider problem because the quantity of the good that a person consumes ______ for that good.
A) does not depend on the amount that the person pays
B) increases as that person pays less
C) increases as that person pays more
D) decreases as that person pays more
Answer: A

12) John receives a marginal benefit of $80 from one missile. Nick receives a marginal benefit of $50 from one missile. Christina receives a marginal benefit of $65 from one missile. John, Nick, and Christina are the only people in the economy. What is the economy's marginal social benefit from one missile?
A) $50
B) $65
C) $80
D) $195
Answer: D

13) Efficiency in the provision of a public good is achieved when its
A) total social benefit equals its total social cost.
B) average social benefit equals its average social cost.
C) marginal social benefit equals its marginal social cost.
D) marginal social benefit equals zero.
Answer: C

14) The free-rider problem with a public good leads to
A) inefficiency if the good is provided by only private markets with no government action.
B) overproduction if the good is provided by private markets.
C) underproduction if the good is provided by the government.
D) None of the above answers is correct.
Answer: A

<table>
<thead>
<tr>
<th>Quantity (hours per day)</th>
<th>Marginal cost (dollars per hour)</th>
<th>Marginal benefit for Pooh (dollars per hour)</th>
<th>Marginal benefit for Piglet (dollars per hour)</th>
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15) Suppose two individuals, Pooh and Piglet, desire protection (provided by Tigger) for their community, The Hundred Acre Wood, from heffalumps. Protection is a public good. The marginal cost of protection as well as Piglet's and Pooh's marginal benefits from protection are in the table above. What is the quantity of protection that achieves the maximum net benefit?
A) 1 hour per day
B) 2 hours per day
C) 3 hours per day
D) 4 hours per day
Answer: C

16) Rational ignorance suggests that voters will
A) be ignorant about all issues.
B) be ignorant about issues that are of no special interest to them.
C) pursue information on all issues before voting.
D) avoid voting if they have no information.
Answer: B

17) The marginal private benefit of education is
A) less than the marginal social benefit.
B) equal to the marginal social benefit.
C) greater than the marginal social benefit.
D) equal to the marginal social cost.
Answer: A

18) In an unregulated, competitive market, less than the efficient quantity of education is produced and consumed because
A) the decisions to produce and consume education are based on marginal private costs and marginal private benefits.
B) the decisions to produce and consume education are based on marginal social costs and marginal social benefits.
C) the decisions to produce and consume education are based on marginal private benefits and marginal social costs.
D) marginal private costs are consistently greater than marginal private benefits.
Answer: A

19) When the consumption of a good creates an external benefit,
A) the marginal social cost curve lies below the marginal private cost curve.
B) the marginal social benefit curve lies above the marginal private benefit curve.
C) the quantity produced in an unregulated, competitive market is greater than the efficient quantity.
D) None of the above answers is correct.
Answer: B

24) If production of a good produces an external benefit, in order for the marginal social cost to equal the marginal social benefit,
A) the good should be taxed.
B) permits should be required to purchase the good.
C) the good could be subsidized.
D) the government needs to take no action.
Answer: C

<table>
<thead>
<tr>
<th>Quantity (millions of students per year)</th>
<th>Marginal private benefit (thousands of dollars per student per year)</th>
<th>Marginal social benefit (thousands of dollars per student per year)</th>
<th>Marginal private cost and marginal social cost (thousands of dollars per student per year)</th>
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<tbody>
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25) The table above shows the marginal costs and marginal benefits of college education. If the market for college education is perfectly competitive and unregulated, how many
students are enrolled in college?
A) 12 million
B) 20 million
C) 16 million
D) 24 million
Answer: C

26) The table above shows the marginal costs and marginal benefits of college education. If the market for college education is perfectly competitive and unregulated, what is the price of college education?
A) $8,000 per year
B) $12,000 per year
C) $14,000 per year
D) $16,000 per year
Answer: C
27) The table above shows the marginal costs and marginal benefits of college education. If 8 million students are enrolled, the marginal external benefit is
A) zero.
B) $4,000.
C) $5,000.
D) $7,000.
Answer: D

28) In the above figure, if the market is competitive and unregulated, output will be
A) zero.
B) 50 units per week.
C) 150 units per week.
D) 250 units per week.
Answer: C

29) In the above figure, if a subsidy is granted to producers that generates an efficient level of production, then the deadweight loss will be
A) zero.
B) $500
C) $1,000.
D) $2,000.
Answer: A

30) Which of the following is NOT an assumption of marginal utility theory?
A) A consumer derives utility from the goods consumed.
B) Each additional unit of consumption yields additional utility.
C) Consumers maximize their total utility.
D) As more of a good is consumed, the decrease in the marginal utility from the good
means that the total utility from the good decreases also.
Answer: D

31) The total utility you get from eating slices of pizza on a given night is the
A) marginal utility of the last slice times the total number of slices eaten.
B) sum of the differences in marginal utility as you increase the number of slices eaten.
C) sum of the marginal utilities of all slices eaten.
D) sum of the marginal utilities per dollar spent on all slices eaten.
Answer: C

32) In the figure above, the curve that shows the diminishing marginal utility is
A) total utility curve A because it gets steeper as consumption of tomatoes increases.
B) total utility curve A because it is higher than total utility curves B or C.
C) total utility curve C because it gets flatter as consumption of tomatoes increases.
D) total utility curve C because it is lower than total utility curves B and C.
Answer: C

33) In the figure above, the marginal utility of the third crate of tomatoes for the person
with total utility curve C is
A) 13 units of utility.
B) 16 units of utility.
C) 32 units of utility.
D) 45 units of utility.
Answer: A

| Quantity of | Marginal utility | Quantity of | Marginal utility |
Quantity of magazines | MU from magazines | Quantity of gummy bears | MU from gummy bears |
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<td>5</td>
<td>120</td>
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34) Kelly's marginal utilities for magazines and packages of gummy bears are listed in the table above. For Kelly, what is the total utility received from consuming 5 magazines?
A) 5  
B) 20  
C) 25  
D) 255  
Answer: D

35) When Ramona is in consumer equilibrium,
A) her total utilities of all goods are equal.  
B) she is maximizing her utility, given her income and the prices of goods and services.  
C) her total utility per dollar spent is equal for all goods.  
D) any change in prices would make her worse off.  
Answer: B

36) If the price of a good increases, all else the same, then the consumer's total utility will
A) increase.  
B) decrease.  
C) remain the same as consumption shifts to cheaper goods.  
D) decrease if there are no substitutes for the good and remain the same if there are substitutes for the good.  
Answer: B

37) Total utility is maximized when a consumer has spent all of his or her income and
A) spent equal amounts on all goods.  
B) marginal utility is maximized.  
C) the total utility per dollar from all goods is equal.  
D) the marginal utility per dollar from all goods is equal.  
Answer: D

<table>
<thead>
<tr>
<th>Quantity of DVDs</th>
<th>Marginal utility from DVDs</th>
<th>Quantity of pizza</th>
<th>Marginal utility from pizza</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>150</td>
<td>1</td>
<td>200</td>
</tr>
<tr>
<td>2</td>
<td>120</td>
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38) Lisa spends all her income on pizzas and DVDs. The above table shows Lisa's marginal utility for pizza and marginal utility for DVDs. If the price of a pizza is $10, the price of a DVD is $5, and Lisa has $40 to spend on the two goods, what combination of pizza and DVDs will maximize her utility?
A) 6 DVDs and 1 pizza
B) 4 DVDs and 2 pizzas
C) 2 DVDs and 3 pizzas
D) 5 DVDs and 4 pizzas

<table>
<thead>
<tr>
<th>Bags of Popcorn</th>
<th>Bottles of soda</th>
</tr>
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<tbody>
<tr>
<td>Quantity</td>
<td>Marginal utility</td>
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<td>60</td>
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39) In the table above, if Brent maximizes his utility by consuming 3 bags of popcorn and 3 bottles of soda, then the ratio of the price of popcorn to the price of soda is expected to be
A) 1/2.
B) 5/6.
C) 6/5.
D) 2.
Answer: D

<table>
<thead>
<tr>
<th>Hours spent</th>
<th>Total utility from sailing</th>
<th>Total utility from skiing</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
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<td>4</td>
<td>140</td>
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</tbody>
</table>

40) As shown in the above table, Sam enjoys sailing and skiing equally well. Which of the following is true?
A) Sam will not consume the same number of hours of sailing and skiing if the price per hour of sailing is more than that of skiing.
B) If the prices per hour of sailing and skiing are the same, Sam will not spend the same
number of hours at each activity.
C) The marginal utility of the 3rd hour of either sailing or skiing is 120.
D) None of the above is true.
Answer:  A

41) When economists speak of normal goods they mean goods for which
A) the demand curve slopes downward.
B) marginal utility is positive.
C) marginal utility decreases as consumption increases.
D) demand decreases when incomes fall.
Answer:  D

42) The only goods you consume are pizza and soda. Both are normal goods. For you, pizza and soda are substitutes. Which of the following leads you to buy more of both goods?
A) The price of a pizza falls.
B) The price of a soda falls.
C) Your income increases.
D) Both answers A and B are correct.
Answer:  C

43) Jeremiah spends all of his income on oranges and cookies, which are normal goods. If Jeremiah's income decreases, he will buy ________ oranges and ________ cookies. His marginal utility from oranges will ________ and his marginal utility from cookies will ________.
A) fewer; fewer; decrease; increase
B) more; more; decrease; decrease
C) the same quantity of; fewer; remain constant; decrease
D) fewer; fewer; increase; increase
Answer:  B

44) Andy spends $30 a week on movies and magazines. The price of a movie is $8, the price of a magazine is $2, and Andy sees 3 movies a week and buys 3 magazines. The price of a magazine increases to $4 and Andy's brother gives him $6 a week so that he can still see 3 movies a week and buy 3 magazines. In this situation, Andy will see ________ movies a week and buy ________ magazines.
A) fewer than 3; fewer than 3
B) 3; 3
C) fewer than 3; more than 3
D) more than 3; fewer than 3
Answer:  D

45) The variables that determine a household's budget line are
A) its preferences and income.
B) its preferences and prices.
C) prices and income.
D) None of the above are correct.
46) In order to determine a household's budget line, you must know the
A) prices of the goods bought and the household's income.
B) prices of the goods bought, but not the household's income.
C) household's income, but not the prices of goods bought.
D) household's income, prices of the goods bought, and the household's preferences.
Answer: A

47) All points below the budget line are
A) inferior to every point on the budget line.
B) preferred to every point on the budget line.
C) affordable.
D) Answers A and C are correct.
Answer: C

48) Tonya, who is rich, and Jerome, who is poorer, both buy orange juice and croissants for lunch at the student cafeteria. Their budget constraints on a diagram with orange juice on the vertical axis and croissants on the horizontal have the same
A) horizontal intercepts.
B) vertical intercepts.
C) slopes.
D) midpoints.
Answer: C

49) Ernie has an income of $40 which he plans to spend on cookies and milk. The price of milk is $1 per gallon, and the price of cookies is $2 per dozen. If Ernie buys 12 gallons of milk, how many dozens of cookies will he buy if he spends all of his income?
A) 28
B) 20
C) 14
D) 12
Answer: C

50) Jordan has two goods that he consumes this week. He can choose to go to the arcade and play video games or he can purchase baseball cards. The price of each video game is $.50 and each pack of baseball cards is $1. Jordan will spend all his allowance this week on these two goods. Jordan's consumption possibilities are listed in the table above. What is the amount of Jordan's allowance?
A) $10
B) $5
C) $15
D) $50
Answer: B
51) Based on the above figure showing a budget line, which of the following combinations of soda and bottled water are not affordable?
A) 3 bottles of water and 4 cans of soda.
B) 4 bottles of water and 2 cans of soda.
C) 2 bottles of water and 6 cans of soda.
D) None of the above, that is, all the combinations listed are affordable.
Answer: C

52) If the price of soda falls
A) the budget line shift outward
B) the budget line shifts inward
C) the budget line rotates inward with no change in the horizontal intercept
D) the budget line rotates inward with no change in the vertical intercept
Answer: C

53) Which of the following factors is NOT part of the budget equation?
A) relative prices
B) real income
C) quantities of goods
D) preferences
Answer: D
54) Given the budget line in the above figure, which of the following combinations of pizza and milk are affordable?
A) 0 pizzas, 12 gallons of milk
B) 2 pizzas, 2 gallons of milk
C) 4 pizzas, 4 gallons of milk
D) All of the above combinations are affordable.
Answer: B

59) Given the budget line in the above figure, what is the relative price of pizza?
A) 10 gallons of milk per pizza
B) 6 gallons of milk per pizza
C) 4 gallons of milk per pizza
D) 2 gallons of milk per pizza
Answer: D

60) If the relative price of pizza in terms of movies is 3, this means that
A) the opportunity cost of a pizza is 3 movies.
B) 3 pizzas can be traded for 9 movies.
C) in terms of the dollars that must be spent to buy the product, pizza is more expensive than movies.
D) All of the above answers are correct.
Answer: D

61) If all prices fall by 5 percent and money income remains constant, the new budget line will have
A) a positive slope.
B) the same slope.
C) a steeper slope.
D) a flatter slope.
Answer: B

62) Ron spends $150 on movie tickets and pizza. The price of a pizza is $10 and a movie ticket is $7.50. With the quantity of movies measured along the vertical axis, the slope of Ron's budget line (with movies on the vertical axis) is ________ per pizza
A) 1.33 movies
B) -1.33 movies
C) 0.75 of a movie
D) -0.75 of a movie
Answer: B
63) In the above figure, a shift in the budget line in the direction indicated would occur as a result of
A) a decrease in money income.
B) an increase in money income.
C) a fall in the price of a movie.
D) a rise in the price of movie.
Answer: B

64) In the figure above, which budget line results in the most real income in terms of compact discs?
A) $AD$
B) $BD$
C) $CD$
D) Real income is equal for all three budget lines.
Answer: C
65) In the figure above, which budget line results in the most real income in terms of carrots?
A) $AD$
B) $BD$
C) $CD$
D) Real income is equal for all three budget lines.
Answer: D

66) The figure above shows Ilene's budget line. The price of a can of cat food is $2. The price of a can of dog food
A) is $1.60.
B) is $4.00.
C) is $5.00.
D) cannot be determined without more information.
Answer: C

67) The figure above shows Ilene's budget line. If her dog, Muffin, runs away and she adopts another cat, named Sphynx, the budget line shown in the figure will
A) become flatter.
B) become steeper.
C) shift outward (because cats eat less).
D) not move.
Answer: D

68) Which of the following results in a "parallel" shift outward of your indifference curves between gasoline and movie rentals?
A) any decrease in the prices of gasoline and movie rentals
B) an equal percentage decrease in the prices of gasoline and movie rentals
C) an increase in your income
D) none of the above
Answer: D

69) An indifference curve shows combinations of goods _______.

A) which the consumer prefers equally
B) that are affordable
C) that are inside or on the budget line
D) that have the same relative price
Answer: A

69) Indifference curves are drawn on a diagram with the
A) price of a good on the vertical axis and its quantity on the horizontal axis.
B) price of one good on the vertical axis and the price of another good on the horizontal axis.
C) quantity of a good on the vertical axis and its price on the horizontal axis.
D) quantity of one good on the vertical axis and the quantity of another good on the horizontal axis.
Answer: D

70) The above figure shows one of Sam's indifference curves between gasoline and coffee. Which of the following about a movement along Sam's indifference curve is correct?
A) As he moves leftward along the curve, he likes the combinations of gasoline and coffee better and better.
B) As he moves rightward along the curve, he likes the combinations of gasoline and coffee better and better.
C) He likes all combinations of gasoline and coffee along the curve equally well.
D) None of the above is true.
Answer: C

71) ________ on an indifference curve that is farther from the origin ________ on an indifference curve that is closer to the origin.
A) Some combinations; are preferred to some combinations
B) Any combination; is preferred to any combination
C) Most combinations; are preferred to all combinations
D) Combinations; are not as affordable as combinations
Answer: B

72) If the combination of goods consumed at point C is preferred to combination D then
A) point C is on a higher indifference curve.
B) point C is on the same indifference curve but at a point where the vertical axis value is greater than point D's vertical axis value.
C) point C is on a lower indifference curve.
D) point C is on the same indifference curve but at a point where the horizontal axis value is greater than point D's horizontal axis value.
Answer: A

73) Except for perfect complements, an indifference curve has a ________ slope and becomes ________ moving to the right.
A) negative; flatter
B) negative; steeper
C) positive; flatter
D) positive; steeper
Answer: A

74) The rate at which Sam is willing to give up a gallon of gasoline to get one more pound of coffee, and remain on the same indifference curve is called his
A) opportunity cost of coffee.
B) opportunity cost of gasoline.
C) personal price of coffee.
D) marginal rate of substitution.
Answer: D

75) The marginal rate of substitution is equal to the ________.
A) marginal cost of each good
B) magnitude of the slope of the indifference curve
C) inverse of the slope of the budget line
D) relative price of the two goods
Answer: B

76) In an indifference curve diagram, the quantities of good Y are measured along the vertical axis and the quantities of good X are measured along the horizontal axis. The marginal rate of substitution is defined as
A) how much good Y you must give up to get one more unit of good X.
B) how much good Y you are willing to give up to get one more unit of good X.
C) the relative price of good Y in terms of good X.
D) how much you prefer to substitute good X for good Y.
Answer: B

77) Jodie has indifference curves for CDs and colas, with CDs on the vertical axis. The flatter her indifference curves are, the
A) smaller her average rate of substitution.
B) larger her average rate of substitution.
C) smaller her marginal rate of substitution.
D) larger her marginal rate of substitution.
Answer: C

78) The concept of diminishing marginal rate of substitution indicates that
A) individuals are willing to give up an increasing amount of good Y in order to obtain one more unit of good X as the consumption of good X increases.
B) individuals are willing to give up a decreasing amount of good Y in order to obtain one more unit of good X as the consumption of good X increases.
C) along an indifference curve, a consumer prefers the consumption combinations moving to the northwest along the curve.
D) None of the above answers is correct.
Answer: B

79) Larry consumes at a point on his budget line where his marginal rate of substitution is less than the magnitude of the slope of his budget line. As Larry moves toward his consumer equilibrium point, he will
move to a
A) lower budget line.
B) higher budget line.
C) lower indifference curve.
D) higher indifference curve.
Answer: D

80) Consider the budget line in the above figure. If the price of a magazine is $4, then the price of a hamburger is
A) $1.75.
B) $3.00.
C) $4.00.
D) $5.33.
Answer: B
81) The relative price of a magazine in the above figure is
A) 0.5 of a hamburger per magazine.
B) 1 hamburger per magazine.
C) 1.33 hamburgers per magazine.
D) 8 hamburgers per magazine.
Answer: C
Topic: Consumption Possibilities, Relative Price
Skill: Analytical
Question history: Previous edition, Chapter 9
AACSB: Analytical Skills

82) In the above figure, point B
A) is superior to point A.
B) is inferior to point A.
C) is as good as point A.
D) could be superior to, inferior to, or as good as point A but there is no way of telling which.
Answer: B
Topic: Predicting Consumer Behavior, Best Affordable Point
Skill: Analytical
Question history: Previous edition, Chapter 9
AACSB: Analytical Skills

83) In the above figure, which of the following statements is TRUE?
I. The consumer maximizes utility by consuming at point A.
II. The marginal rate of substitution at point B and point A are equal because they are on the same budget line.
A) only I
B) only II
C) both I and II
D) neither I nor II
Answer: A

84) If Sue is consuming two normal goods and her income decreases, then her best affordable bundle of goods will contain ________ goods with ________ marginal rate of substitution as her bundle prior to her income change.
A) less; the same
B) less; a higher
C) less; a lower
D) the same amount of; a lower
Answer: A

85) The short run is a period of time in which
A) the quantity used of at least one factor of production is fixed.
B) the quantities used of all factors of production are fixed.
C) output prices are fixed.
D) factor of production prices are fixed.
Answer: A

86) In the long run, a firm can vary
A) its capital but not its labor.
B) its labor but not its capital.
C) both its labor and its capital.
D) neither its labor nor its capital.
Answer: C

87) Most total product curves have
A) first increasing and then decreasing marginal returns to labor.
B) output first increasing and then decreasing as labor is added.
C) first decreasing and then increasing marginal returns to labor.
D) output increasing at an increasing rate as labor is added.
Answer: A

<table>
<thead>
<tr>
<th>Labor (workers)</th>
<th>Total product (units)</th>
<th>Marginal product</th>
<th>Average product</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>3</td>
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<td>19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>19</td>
<td></td>
<td></td>
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<tr>
<td>5</td>
<td>19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

88) The above (incomplete) table provides information about the relationships between labor and various product measures. The total product that can be produced with 6 units of labor is
A) 20.
B) More information is needed to answer the question.
C) 19.
D) None of the above answers is correct.
Answer: A

89) The above (incomplete) table provides information about the relationships between labor and various product measures. The amount of labor that maximizes the marginal product of labor is
A) 2 units of labor.
B) 3 units of labor.
C) 4 units of labor.
D) 5 units of labor.
Answer: A
90) In the above figure, after the second worker is hired, the marginal product of labor is
A) increasing.
B) diminishing.
C) constant.
D) zero.
Answer: B

91) At point d in the above figure, the average product of labor equals
A) 15.
B) 4.
C) 3.75.
D) approximately 1.
Answer: C

92) A firm's total product curve shows that at first it has
A) economies of scale and then diseconomies of scale.
B) diseconomies of scale and then economies of scale.
C) increasing marginal returns and then diminishing marginal returns.
D) diminishing marginal returns and then increasing marginal returns.
Answer: C

93) The law of diminishing returns implies that, with the quantity of capital fixed, as the use of labor rises,
A) total product will fall eventually.
B) the marginal product of labor will fall eventually.
C) the total product of labor will fall below the marginal product of labor.
D) the production process will become technologically inefficient eventually.
Answer: B
<table>
<thead>
<tr>
<th>Labor (workers)</th>
<th>Total product (dozens of donuts per day)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1</td>
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<td>9</td>
<td>127</td>
</tr>
<tr>
<td>10</td>
<td>128</td>
</tr>
</tbody>
</table>

94) Based on the data in the table above, which worker at Decent Donuts has the highest marginal product?
A) the fourth
B) the fifth
C) the sixth
D) the seventh
Answer: C

95) Based on the data in the table above, what is the average product of labor when Decent Donuts employs five workers?
A) 16.66 dozen donuts per day
B) 17.2 dozen donuts per day
C) 20 dozen donuts per day
D) 22 dozen donuts per day
Answer: B

96) Which of the following statements is true?
A) When marginal product is less than average product, average product is increasing.
B) When marginal product is less than average product, average product is decreasing.
C) When marginal product is falling, average product is decreasing.
D) When marginal product is rising, average product is decreasing.
Answer: B

97) When the marginal and average products of labor are equal to each other, the
A) average product must be at its maximum value.
B) marginal product must be at its maximum value.
C) total product must be at its maximum value.
D) None of the above answers is correct
Answer: A

98) The marginal product and average product curves
A) never intersect.
B) intersect at the maximum point of the marginal product curve.
C) intersect at the maximum point of the average product curve.
D) do not intersect at any predictable point.
Answer: C

99) Which of the following statements is correct?
A) As output increases, total cost and total fixed cost increase by the same amount.
B) As output increases, total cost and total fixed cost increase but not necessarily by the same amount.
C) As output increases, total cost increases and total fixed cost decreases.
D) Total fixed cost plus total variable cost equals total cost.
Answer: D

<table>
<thead>
<tr>
<th>Labor (workers)</th>
<th>Output (bikes)</th>
<th>Total fixed costs (dollars)</th>
<th>Total variable cost (dollars)</th>
<th>Total cost (dollars)</th>
</tr>
</thead>
<tbody>
<tr>
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<td>0</td>
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<td>100</td>
<td></td>
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<td>1</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>3</td>
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<tr>
<td>4</td>
<td>64</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

100) The table above gives costs at Jan's Bike Shop. Unfortunately, Jan's record keeping has been spotty. Each worker is paid $100 a day. Labor costs are the only variable costs of production. What is the total cost of producing 50 bikes?
A) $100
B) $200
C) $300
D) $400
Answer: D

Topic: Total Cost
Skill: Analytical
Question history: Previous edition, Chapter 11
AACSB: Analytical Skills

101) The table above gives costs at Jan's Bike Shop. Unfortunately, Jan's record keeping has been spotty. Each worker is paid $100 a day. Labor costs are the only variable costs of production. What is the total fixed cost of producing 64 bikes?
A) $200
B) $300
C) $400
D) $500
Answer: A

102) Marginal cost ________ as the quantity produced is increased.
A) first increases and then decreases
B) first decreases and then increases
C) always increases
D) always decreases
Answer: B

103) By using more labor to produce more output, a firm can always reduce its
A) marginal cost.
B) average variable cost.
C) average total cost.
D) average fixed cost.
Answer: D

104) As output increases, $AVC$ approaches $ATC$ because of
A) diseconomies of scale.
B) diminishing marginal returns.
C) decreasing average fixed cost.
D) increasing marginal cost.
Answer: C
105) The average total cost curve
A) is U-shaped.
B) diminishes initially because average fixed costs diminish.
C) increases eventually because of diminishing returns.
D) All of the above answers are correct.
Answer: D

<table>
<thead>
<tr>
<th>Labor (workers per hour)</th>
<th>Total product (baseball hats per hour)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>2</td>
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<td>18</td>
</tr>
<tr>
<td>4</td>
<td>25</td>
</tr>
<tr>
<td>5</td>
<td>30</td>
</tr>
</tbody>
</table>

106) The table above gives production information for Bob's Baseball Cap Company. Bob's total cost when zero caps are produced is $200 and workers cost $10 per hour. The total fixed cost of producing 10 baseball hats per hour is
A) $400
B) $200
C) $22
D) More information is needed to answer the question.
Answer: B

107) Fernando charges the restaurant Flaming Fernando's $1,000 annually for use of his name. If Fernando increases the fee for use of his name,
A) the restaurant's average fixed cost, average variable cost, average total cost, and marginal cost curves all shift upward.
B) the restaurant's average fixed cost, average total cost, and marginal cost curves shift upward.
C) the restaurant's average variable cost, average total cost, and marginal cost curves shift upward.
D) the restaurant's average fixed cost and average total cost curves shift upward.
Answer: D

108) If as output increases average product increases, then ________.
A) average total cost decreases
B) average fixed cost decreases
C) marginal cost decreases
D) average variable cost decreases
Answer: D

109) Which of the following shifts the ATC curve upward at the XYZ Co.?
A) an increase in the hourly wage that XYZ pays its workers
B) a decrease in the hourly wage that XYZ pays its workers
C) an increase in the fixed amount of liability insurance premiums that XYZ pays for its business
D) Both answers A and C are correct.
Answer: D

110) Which of the following shifts the AVC curve upward at Barney's Bagel Bakery?
A) an increase in the hourly wage that Barney pays his workers
B) a decrease in the hourly wage that Barney pays his workers
C) an increase in the fixed amount of liability insurance premiums that Barney pays for his business
D) Both answers A and C are correct.
Answer: A

111) A change in technology that shifts the firm's total product curve upward without changing the quantity of capital used
A) shifts the average total cost curve upward.
B) shifts the average total cost curve downward.
C) does not change the cost curves.
D) shifts the marginal cost curve upward.
Answer: B

112) A firm's long-run average cost curve
A) shows the lowest attainable average total cost of producing any level of output when the plant and labor are fixed.
B) is the sum of all of its short-run average cost curves.
C) tells the firm which plant size to use and which quantity of labor to use to minimize the cost of producing any level of output.
D) all of the above
Answer: C

113) The long-run average cost curve is the
A) change in total product divided by the change in capital when the quantity of labor is constant.
B) change in output resulting from a one-unit increase in the quantity of capital.
C) relationship between the lowest attainable average total cost and output when both the plant size and labor are varied.
D) relationship between the lowest attainable average total cost and output when both the plant size and labor are fixed.
Answer: C

114) Which of the following is correct?
A) A firm's short-run average cost curve is derived from a series of long-run average cost curves.
B) A firm's long-run average cost curve is derived from a series of short-run average cost curves.
C) A firm's long-run total cost is the difference between its long-run fixed cost and long-run variable cost.
D) Both answers A and C are correct.
Answer: B
24) The average total cost curves for plants A, B, C and D are shown in the above figure. Which plant is best to use to produce 20 units per day?
A) plant A
B) plant B
C) plant C
D) plant D
Answer: A