Chapter 10 – Output and Costs – Sample Questions

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

1) The short run is a period of time in which 1) _____
A) nothing the firm does can be altered.
B) the amount of output is fixed.
C) prices and wages are fixed.
D) the quantities of some resources the firm uses are fixed.

2) The short run is a period of time in which 2) _____
A) output prices are fixed.
B) the quantity used of at least one resource is fixed.
C) resource prices are fixed.
D) the quantities used of all resource are fixed.

3) The short run is a time frame in which 3) _____
A) the quantities of some resources are fixed and the quantities of other resources can be varied.
B) the quantities of all resources are fixed.
C) the quantities of all resources can be varied.
D) all costs are sunk costs.

4) An example of a variable resource in the short run is 4) _____
A) an employee. B) capital equipment.
C) land. D) a building.

5) A cost that has already been made and cannot be recovered is called a 5) _____
A) marginal cost. B) fixed cost. C) variable cost. D) sunk cost.

6) The long run is a time frame in which 6) _____
A) the quantities of all resources are fixed.
B) the quantities of all resources can be varied.
C) the quantities of some resources are fixed and the quantities of other resources can be varied.
D) all costs are sunk costs.

7) In the long run, a firm can vary 7) _____
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.

8) The long run is distinguished from the short run in that, in the long run, 8) _____
A) output prices can vary.
B) the firm no longer maximizes its profit.
C) resource prices can vary.
D) the quantities of all resources can be varied.

9) The marginal product of labor is the increase in total product from a 9) _____

A) one dollar increase in the wage rate, while holding the price of capital constant.

B) one unit increase in the quantity of labor, while also increasing the quantity of capital by one unit.

C) one unit increase in the quantity of labor, while holding the quantity of capital constant.

D) one percent increase in the wage rate, while also increasing the price of capital by one percent.

10) The marginal product of labor is the change in total product from a one–unit increase in 10) _____

A) the wage rate.

B) both the quantity of labor and the quantity of capital employed.

C) the quantity of labor employed, holding the quantity of capital constant.

D) the quantity of capital employed, holding the quantity of labor constant.

11) The marginal product of labor is the 11) _____

A) output level above which the slope of the total product curve falls.

B) output level above which the rate of total product per unit of labor falls.

C) maximum output attainable with fixed factors when labor is the only variable factor.

D) change in output resulting from a one–unit increase in labor.

12) The average product of labor is 12) _____

A) the inverse of the average product of capital.

B) total product divided by the total quantity of labor employed.

C) the slope of the curve showing the total product of labor.

D) the slope of the curve showing the marginal product of labor.

13) Average product is the 13) _____

A) maximum output attainable with fixed factors and one variable factor.

B) total product per unit of an input.

C) change in total product due to a one unit change in input.

D) total product divided by the total cost.

Total Product, Marginal Product, Average Product

Labor (workers per day)	Total product (units per day)	Marginal product	Average product
0	0	0	0
1	2	2	2
2	8		
3	12		
4	15		
5	16	1	

14) In the above table, the total product that is produced when the firm employs four workers is 14) _____

A) 8 . B) 15. C) 3.75. D) 3.

15) In the above table, the marginal product of the third worker is 15) _____

A) 2. B) 1. C) 4. D) 3.

16) In the above table, the marginal product of the fourth worker is 16) _____

A) 6. B) 3. C) 1. D) 4.

17) In the above table, the marginal product is greatest when the 17) _____

A) third worker is hired. B) second worker is hired.

C) fourth worker is hired. D) first worker is hired.

18) In the above table, the average product of three workers is 18) _____

A) 1. B) 4. C) 3. D) 2.

19) In the above table, the average product is less than the marginal product 19) _____

A) when the first worker is hired. B) when the second worker is hired.

C) for the entire range of output given. D) when the third worker is hired.

20) Points below a firm's total product curve are 20) _____

A) technologically efficient but not attainable.

B) both attainable and technologically efficient.

C) attainable but not technologically efficient.

D) neither attainable nor technologically efficient.

21) Points on a firm's total product curve are 21) _____

A) both attainable and technologically efficient.

B) neither attainable nor technologically efficient.

C) technologically efficient but not attainable.

D) attainable but not technologically efficient.

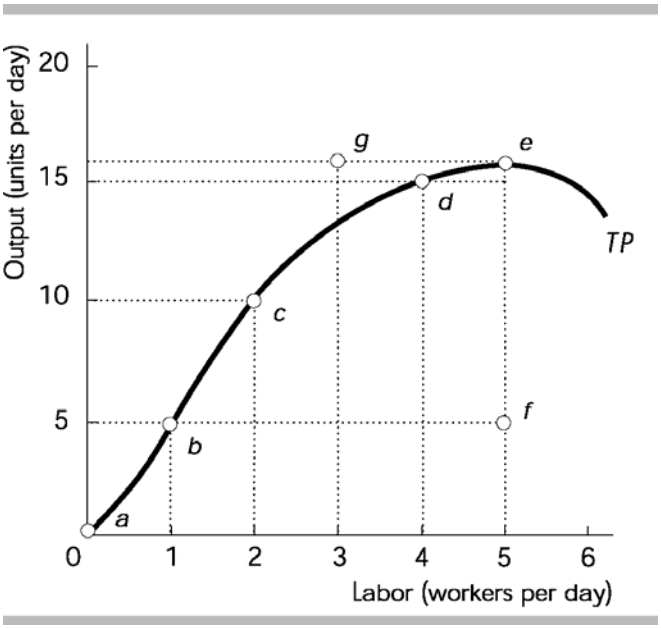
22) When the total product curve is drawn in a figure that measures employment along the horizontal axis, it is a graph that shows the 22) _____

A) maximum output attainable for each quantity of labor employed.

B) minimum cost of producing a given amount of output using different techniques.

C) maximum profit attainable for each unit of output sold per unit of labor employed.

D) minimum output attainable for each quantity of labor employed.



23) In the figure above, the marginal product of the second worker is 23) _____
A) 10 units. B) 2 units. C) 5 units. D) 1 units.

24) In the above figure, after the second worker is hired, the marginal product of labor is 24) _____
A) constant. B) increasing. C) zero. D) diminishing.

25) At point *d* in the above figure, the average product of labor equals 25) _____
A) approximately 1. B) 3.75.
C) 15. D) 4.

26) In the above figure, the average product of labor at point *c* is 26) _____
A) 5. B) 2.
C) 10. D) None of the above answers are correct.

27) In the figure above, 27) _____
A) *f* is an efficient point. B) *g* is an efficient point.
C) *d* is an efficient point. D) there are no efficient points.

28) In the above figure, an inefficient point is 28) _____
A) *a*. B) *f*. C) *g*. D) *e*.

29) In the above figure, an unattainable point is 29) _____
A) *a*. B) *e*. C) *f*. D) *g*.

30) In the above figure, the most efficient way to produce 10 units is to hire 30) _____
A) 1 worker. B) 5 workers. C) 2 workers. D) 3 workers.

31) In the above figure, the most efficient way to produce 15 units is to hire 31) _____
A) 5 workers. B) 3 workers. C) 4 workers. D) 2 worker.

32) In the above figure, the maximum number of units that 4 workers can produce is 32) _____

A) 15 units. B) more than 15 units.

C) 5 units. D) 10 units.

33) In the above figure, the marginal product of labor is zero at point 33) _____

A) *a*. B) *f*. C) *e*. D) *c*.

34) At point *e* in the above figure, the marginal product of labor definitely 34) _____

A) is at its maximum.

B) is less than the average product of labor.

C) equals the average product of labor.

D) is greater than the average product of labor.

35) The steeper the slope of the total product curve, the 35) _____

A) more efficient is the technology employed. B) higher is the level of the total cost curve.

C) larger is the marginal product of labor. D) smaller is the marginal product of labor.

36) Increasing marginal returns to labor might occur at low levels of labor input because of 36) _____

A) differing factor proportions.

B) decreasing use of machinery and increasing use of technology.

C) increasing average costs.

D) increasing specialization of tasks.

37) In general, increasing marginal returns occur 37) _____

A) as output expands at high levels of production.

B) whenever the slope of the total product curve is positive.

C) as output expands at low levels of production.

D) through the entire range of production.

38) "Diminishing marginal returns" refer to a situation in which the 38) _____

A) average cost of the last worker hired is less than the average cost of the previous worker hired.

B) marginal cost of the last worker hired is less than the marginal cost of the previous worker hired.

C) average product of the last worker hired is less than the average product of the previous worker hired.

D) marginal product of the last worker hired is less than the marginal product of the previous worker hired.

39) The law of diminishing returns implies that, with the use of capital fixed, as the use of labor rises, 39) _____

A) the marginal product of labor will fall eventually.

B) total product will fall eventually.

C) the production process will become technologically inefficient eventually.

D) the total product of labor will fall below the marginal product of labor.

40) The law of diminishing returns states that as 40) _____

A) a firm uses more of a variable input, given the quantity of fixed inputs, the firm's average total cost will decrease eventually.

B) the size of a plant increases, the firm's fixed cost decreases.

C) a firm uses more of a variable input, given the quantity of fixed inputs, the marginal product of the variable input eventually diminishes.

D) the size of a plant increases, the firm's fixed cost increases.

41) If a firm's marginal product of labor is less than its average product of labor, then an increase in the quantity of labor it employs definitely will 41) _____

A) not change its average product of labor. B) decrease its average product of labor.

C) increase its marginal product of labor. D) decrease its total product.

42) Total cost is the sum of fixed costs and 42) _____

A) implicit costs. B) accounting costs.

C) explicit costs. D) variable costs.

43) A firm has fixed costs 43) _____

A) in the short run but not in the long run.

B) in the long run but not in the short run.

C) in the short run and in the long run.

D) neither in the long run nor in the short run.

44) Total fixed cost is the sum of all 44) _____

A) costs associated with the production of goods.

B) explicit costs.

C) costs of the firm's fixed inputs.

D) costs that rise as output increases.

45) Total variable cost is the sum of all 45) _____

A) implicit costs.

B) costs of the firm's fixed inputs.

C) costs that rise as output increases.

D) costs associated with the production of goods.

46) A firm's marginal cost is the increase in its total cost divided by the increase in its 46) _____

A) output. B) average cost.

C) average revenue. D) quantity of labor.

47) Marginal cost is 47) _____

A) all the costs of production of goods.

B) all the costs of the fixed inputs.

C) the change in the total cost resulting from a one–unit change in output.

D) all the costs that vary with output.

48) Marginal cost is calculated as 48) _____

A) the increase in total cost divided by the increase in labor, given the amount of capital.

B) total cost minus total fixed cost.

C) total cost divided by output.

D) the increase in total cost divided by the increase in output.

49) A company could produce 99 units of a good for $316 or produce 100 units of the same good for $320. The marginal cost of the 100th unit 49) _____

A) is $320.

B) is $3.20.

C) is $4.00

D) cannot be calculated with this information.

50) A company could produce 100 units of a good for $320 or produce 101 units of the same good for $324. The $4 difference in costs is 50) _____

A) the marginal benefit of producing the 101st unit.

B) the marginal cost of producing the 101st unit.

C) both the marginal benefit and the marginal cost of producing the 101st unit.

D) neither the marginal benefit nor the marginal cost of producing the 101st unit.

51) As output increases, marginal cost will 51) _____

A) eventually decrease because of the law of diminishing returns.

B) eventually increase because of the law of diminishing returns.

C) eventually decrease because of the law of increasing returns.

D) eventually increase because of the law of increasing returns.

52) By using more labor to produce more output, a firm can always reduce its 52) _____

A) average fixed cost. B) marginal fixed cost of labor.

C) marginal fixed cost of output. D) average cost of labor.

53) By using more labor to produce more output, a firm can always reduce its 53) _____

A) average total cost. B) average fixed cost.

C) average variable cost. D) marginal cost.

54) Average total costs are total costs divided by 54) _____

A) total fixed costs. B) total output.

C) the total number of workers employed. D) total variable costs.

55) Average total costs are 55) _____

A) the change in output divided by the change in total costs.

B) total costs divided by total output.

C) the change in total costs divided by the change in output.

D) total output divided by total costs.

Cost schedule

Labor (workers)	Output (units per day)	Total fixed cost (dollars)	Total variable cost (dollars)
0	0	20	0
1	4	20	25
2	9	20	50
3	13	20	75
4	16	20	100
5	18	20	125

56) In the above table, the total cost of producing 9 units of output is 56) _____

A) $20. B) $50. C) $70. D) $30.

57) The above table shows a firm's 57) _____

A) short–run and long–run costs.

B) long–run costs.

C) short–run costs.

D) More information is needed to determine if the costs are long–run costs or short–run costs.

58) In the above table, the total variable cost of producing 16 units of output is 58) _____

A) $60. B) $20. C) $100. D) $120.

59) Using the data in the above table, when output increases from 4 to 9 units, the marginal cost of *one* of those 5 units is 59) _____

A) $4.25. B) $4.00. C) $6.25. D) $5.00.

60) Using the data in the above table, the average fixed cost of producing 9 units per day is 60) _____

A) $2.22. B) $20.00. C) $5.00. D) $5.55.

61) Using the data in the above table, the average total cost of producing 16 units per day is 61) _____

A) $6.25. B) $1.25. C) $7.00 D) $7.50.

Cost schedule

Labor (workers)	Output (units per day)	Total variable cost (dollars)	Total cost (dollars)
0	0	0	30
1	3	20	50
2	8	40	70
3	12	60	90
4	14	80	110
5	15	100	130

62) In the above table, the total fixed cost is 62) _____

A) $30. B) $50. C) $20. D) $0.

63) In the above table, the total fixed cost at 3 units of output is 63) _____
A) $30. B) $60. C) $90. D) $0.

64) In the above table, when output increases from 8 to 12 units, the marginal cost of one of those 4 units is 64) _____
A) $1.20. B) $15.00. C) $5.00. D) $2.00.

65) In the above table, the average fixed cost of producing 15 units of output is 65) _____
A) $6.66. B) $0.50. C) $2.00. D) $8.66.

66) In the above table, the average variable cost of producing 14 units of output is 66) _____
A) $0.175. B) $7.86. C) $5.71. D) $10.00.

67) In the above table, the average total cost of producing 14 units of output is 67) _____
A) $5.71. B) $7.00. C) $7.86. D) $6.75.

68) A firm's average total cost is $100, its average variable cost is $90, and its total fixed cost is $1,000. Its output is 68) _____
A) between 70 and 120 units. B) less than 70 units.
C) more than 170 units. D) between 120 and 170 units.

69) A firm's average total cost is $80, its average variable cost is $75, and its output is 50 units. Its total fixed cost is 69) _____
A) less than $100. B) more than $300.
C) between $200 and $300. D) between $100 and $200.

70) A firm's average variable cost is $60, its total fixed cost is $3,000, and its output is 600 units. Its average total cost is 70) _____
A) more than $64. B) between $58 and $62.
C) between $62 and $64. D) less than $58.

71) A firm's average variable cost is $90, its total fixed cost is $10,000, and its output is 1,000 units. Its total cost is 71) _____
A) more than $105,000. B) less than $85,000.
C) between $95,000 and $105,000. D) between $85,000 and $95,000.

72) A firm's average total cost is $80, its fixed cost is $1000, and its output is 100 units. Its average variable cost 72) _____
A) is between $40 and $60.
B) is more than $60.
C) is less than $40.
D) cannot be determined without more information.

73) A firm's marginal cost is $30, its average total cost is $50, and its output is 800 units. Its total cost of producing 801 units is 73) _____

A) between $40,050 and $40,080.
B) greater than $40,080.
C) less than $40,000.
D) between $40,000 and $40,050.

74) A firm's marginal cost is $82, its average total cost is $50, and its output is 800 units. Its total cost of producing 801 units is 74) _____

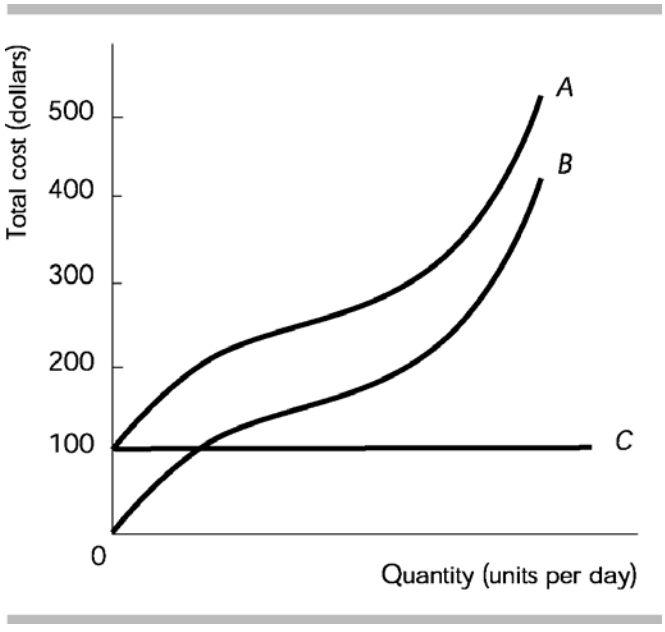
A) greater than $40,080.
B) between $40,050 and $40,080.
C) less than $40,000.
D) between $40,000 and $40,050.

75) A firm's output is 80 units, its marginal cost is $42, its average variable cost is also $42, and its average fixed cost is $10. The slope of its average fixed cost curve is 75) _____

A) positive but the precise slope cannot be calculated.
B) positive and the slope is between 0 and 1.50.
C) negative.
D) not able to be calculated without more information.

76) The vertical distance between a firm's total cost (*TC*) and its total variable cost (*TVC*) curves 76) _____

A) is equal to the average variable cost, *AVC*.
B) decreases as output decreases.
C) is equal to the marginal cost, *MC*.
D) is equal to the total fixed cost, *TFC*.



77) In the above figure, the total fixed cost curve is curve 77) _____

A) *B*.
B) *A*.
C) *C*.
D) none of the curves in the figure

78) In the above figure, the total variable cost curve is curve 78) _____

A) *A*.
B) *B*.
C) *C*.
D) none of the curves in the figure

79) In the above figure, the total cost curve is curve 79) _____

A) *A*. B) *B*.

C) *C*. D) none of the curves in the figure

80) In the above figure, the relationship between costs indicates that the distance between curves 80) _____

A) *B* and *C* is equal to the average total cost. B) *A* and *B* is equal to the variable cost.

C) *A* and *B* is equal to the fixed cost. D) *B* and *C* is equal to the fixed cost.

81) As output increases, the slope of the curve showing the firm's average fixed cost is 81) _____

A) first negative then positive. B) always positive.

C) always negative. D) first positive then negative.

82) The vertical distance between a firm's average total cost curve, *ATC*, and its average variable cost curve, *AVC*, 82) _____

A) is equal to its average product. B) is equal to its marginal cost, *MC*.

C) decreases as output increases. D) is equal to its total fixed cost, *TFC*.

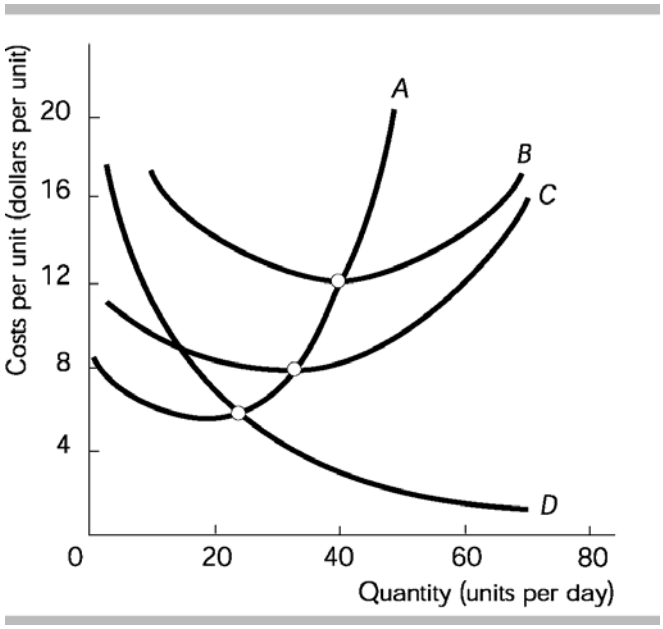
83) The marginal cost (*MC*) curve intersects the 83) _____

A) *AVC* and *AFC* curves at their minimum points.

B) *ATC* and *AFC* curves at their minimum points.

C) *ATC* and *AVC* curves at their minimum points.

D) *ATC*, *AVC*, and *AFC* curves at their minimum points.



84) In the above figure, the marginal cost curve is curve 84) _____

A) *A*. B) *B*. C) *C*. D) *D*.

85) In the above figure, the average fixed cost curve is curve 85) _____

A) *A*. B) *B*. C) *C*. D) *D*.

86) In the above figure, the average variable cost curve is curve 86) _____

A) *A*. B) *B*. C) *C*. D) *D*.

87) In the above figure, the average total cost curve is curve 87) _____

A) *A*. B) *B*. C) *C*. D) *D*.

88) In the above figure, as output increases, the distance between curves *B* and *C* decreases because 88) _____

A) average fixed cost decreases as output increases.

B) total cost decreases as output increases.

C) there are increasing marginal costs as output increases.

D) there are diminishing returns to average total cost.

89) In the above figure, curve *D* slopes downward because 89) _____

A) there are diminishing returns.

B) average fixed costs decrease as output increases.

C) all costs decrease as output increases.

D) there are decreasing marginal costs.

90) In the above figure, the intersection of curves *A* and *C* is the point at which 90) _____

A) total product is maximized. B) average fixed cost is minimized.

C) average variable cost is minimized. D) average total cost is minimized.

91) In the above figure, the intersection of curves *A* and *B* is the point at which 91) _____

A) average total cost is minimized. B) total product is maximized.

C) average variable cost is minimized. D) average fixed cost is minimized.

92) Average variable cost is at a minimum at the same amount of output at which 92) _____

A) average product is at a minimum. B) marginal product is at a minimum.

C) marginal product is at a maximum. D) average product is at a maximum.

93) The range of output over which a firm's average variable cost is decreasing is the same as the range over which its 93) _____

A) marginal cost is increasing. B) average product is increasing.

C) average product is decreasing. D) average fixed cost is decreasing.

94) A change in technology that shifts the firm's total product curve upward without changing the quantity of capital used 94) _____

A) does not change the cost curves.

B) shifts the marginal cost curve upward.

C) shifts the average total cost curve upward.

D) shifts the average total cost curve downward.

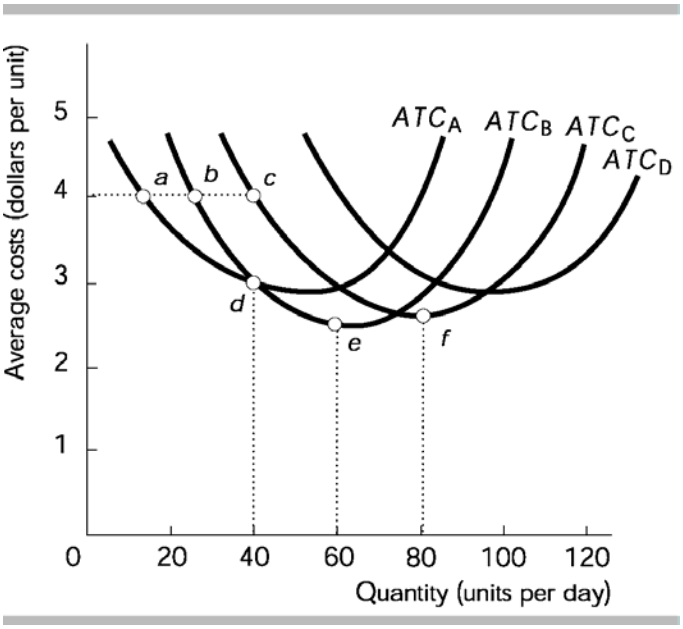
95) Which of the following is FALSE? 95) _____

A) Fixed costs increase in the long run.

B) In the long run, both the amount of capital and labor used by the firm can be changed.

C) Long-run average variable costs equal long-run average total costs.

D) As a firm produces more output, eventually it experiences diseconomies of scale.



96) 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? 96) _____

A) plant A B) plant B C) plant C D) plant D

97) 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 60 units per day? 97) _____

A) plant A B) plant B C) plant C D) plant D

98) 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 80 units per day? 98) _____

A) plant A B) plant B C) plant C D) plant D

99) The average total cost curves for plants A, B, C, and D are shown in the above figure. The plant size that is the most economically efficient 99) _____

A) is plant A. B) is plant B.

C) is plant C. D) depends on the desired level of output.

100) The average total cost curves for plants A, B, C, and D are shown in the above figure. It is possible that the long-run average cost curve runs through points 100) _____

A) *d*, *e*, and *f*. B) *a*, *b*, and *c*. C) *c* and *d*. D) *b*, *d*, and *e*.

101) A firm is operating in its range of economies of scale and is on both its *LRAC* curve and its short–run *ATC* curve. At that level of output, the slope of its *LRAC* curve is 101) _____

A) zero and the slope of its *ATC* curve is zero.

B) zero and the slope of its *ATC* curve is negative.

C) negative and the slope of its *ATC* curve is negative.

D) negative and the slope of its *ATC* curve is zero.

102) When economies of scale are present, the *LRAC* curve touches each short–run *ATC* curve 102) _____

A) at no points.

B) to the right of the *ATC* curve's minimum point.

C) at the *ATC* curve's minimum point.

D) to the left of the *ATC* curve's minimum point.

103) Economies to scale refer to 103) _____

A) the fact that in the long run, fixed costs remain constant as output increases.

B) the range of output over which the long–run average cost falls as output increases.

C) the point at which marginal cost equals average cost.

D) a feature of short–run production functions but not long–run production functions.

104) In the short run 104) _____

A) some firms experience economies of scale.

B) all firms experience increasing returns to scale.

C) all inputs are variable.

D) no firm experiences economies of scale.

105) When long–run average costs decrease as output increases, there are 105) _____

A) economies of scale. B) constant marginal costs.

C) diseconomies of scale. D) constant returns to scale.

106) "Diseconomies of scale" occur in 106) _____

A) the short run, but not the long run. B) the long run, but not the short run.

C) both the short run and the long run. D) neither the short run nor the long run.

107) When long–run average costs increase as output increases, there are 107) _____

A) diseconomies of scale. B) constant returns to scale.

C) constant marginal costs. D) economies of scale.

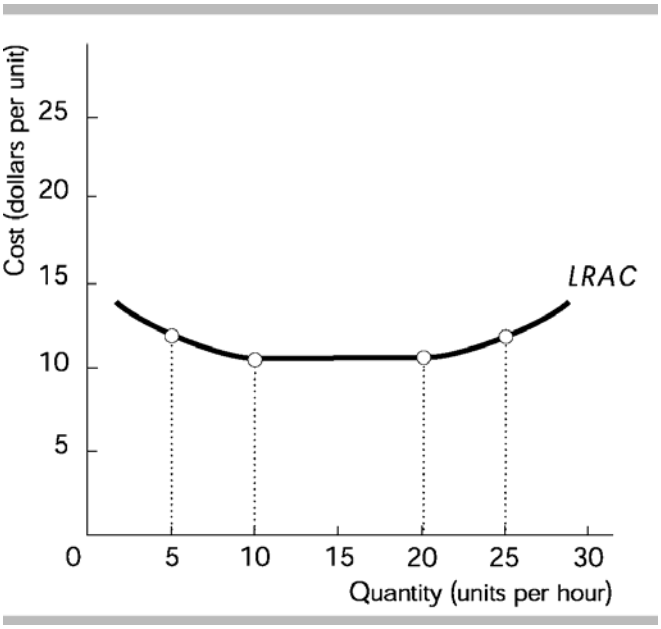
108) A common source of diseconomies of scale is the 108) _____

A) application of the law of diminishing marginal returns to labor.

B) application of the law of diminishing marginal returns to capital.

C) application of the law of diminishing marginal returns to land.

D) growing complexity of management and organizational structure.



109) In the above figure, the long–run average cost curve exhibits economies of scale 109) _____
A) between 5 and 10 units per hour.
B) between 20 and 25 units per hour.
C) between 10 and 20 units per hour.
D) along the entire curve.

110) In the above figure, between 5 and 10 units per hour, the firm experiences 110) _____
A) constant returns to scale.
B) diseconomies of scale.
C) economies of scale.
D) decreasing total fixed costs.

111) In the above figure, the long–run average cost curve exhibits constant returns to scale 111) _____
A) between 5 and 10 units per hour.
B) between 20 and 25 units per hour.
C) between 10 and 20 units per hour.
D) along the entire curve.

112) In the above figure, the long–run average cost curve exhibits diseconomies of scale 112) _____
A) between 10 and 20 units per hour.
B) between 5 and 10 units per hour.
C) between 20 and 25 units per hour.
D) along the entire curve.

113) In the above figure, between 20 and 25 units per hour, the firm experiences 113) _____
A) economies of scale.
B) constant returns to scale.
C) increasing total fixed costs.
D) diseconomies of scale.

114) In the short run, 114) _____
A) the size of the plant is fixed.
B) all inputs are fixed.
C) all inputs are variable.
D) some firms experience increasing returns to scale.

115) The long run is a time period in which 115) _____

A) all inputs are variable.

B) one year or less elapses.

C) all inputs are fixed.

D) there is at least one fixed input and at least one variable input.

116) Total product divided by the total quantity of labor employed equals the 116) _____

A) average product of labor. B) average total cost.

C) marginal product of labor. D) average variable cost.

117) Diminishing marginal returns occurs when 117) _____

A) all inputs are increased and output decreases.

B) all inputs are increased and output increases by a smaller proportion.

C) a variable unit is increased and its marginal product falls.

D) a variable input is increased and output decreases.

118) The average product of labor exceeds the marginal product of labor 118) _____

A) when the average product of labor is at its maximum.

B) when the marginal product of labor is at its maximum.

C) when the average product of labor is rising.

D) when the average product of labor is falling.

119) When the marginal product of labor exceeds the average product of labor, 119) _____

A) the average product of labor is increasing.

B) the average product of labor is decreasing.

C) the firm is experiencing decreasing returns to scale.

D) the total product curve is negatively sloped.

120) Which cost *always* increases as output increases? 120) _____

A) total cost B) average total cost

C) marginal cost D) average fixed cost

121) Pat's Catering finds that when it caters 20 meals a week, its total cost is $6,000. If Pat has total variable cost of $5,000, what is Pat's total fixed cost? 121) _____

A) $6,000 B) $50 C) $250 D) $1,000

122) The change in total cost from producing another unit of output equals the 122) _____

A) marginal cost. B) variable cost.

C) average total cost. D) average variable cost.

123) A farmer discovers that the total cost of growing 50 acres of eggplant is $50,000 and that the total cost of growing 51 acres of eggplant is $52,000. The marginal cost of the 51st acre of eggplant is 123) _____

A) $2,000. B) $50,000. C) $1,000. D) $52,000.

124) Which curve intersects the *AVC* curve at its minimum point? 124) _____

A) the *AFC* curve B) the *MP* curve C) the *ATC* curve D) the *MC* curve

125) If the *ATC* curve has a positive slope, then the *MC* curve must be 125) _____

A) horizontal.
B) below the *ATC* curve.
C) above the *ATC* curve.
D) vertical.

126) The average variable cost curve shifts downward if 126) _____

A) the cost of a variable input increases.
B) there is a decrease in fixed costs.
C) there is a technological advance.
D) the price of output decreases.

127) The cost of a variable input, such as the wage paid to workers, decreases. This decrease shifts the 127) _____

A) marginal product of labor curve downward.
B) average variable cost curve downward.
C) total fixed cost curve downward.
D) marginal product of labor curve upward.

128) The *LRAC* curve 128) _____

A) equals the minimum points on all the short–run *ATC* curves.
B) generally lies above the short–run *ATC* curves.
C) equals the lowest attainable average total cost for all levels of output when all inputs can be varied.
D) equals the lowest possible marginal cost of producing the different levels of output.

129) The *LRAC* curve generally is 129) _____

A) downward sloping.
B) upward sloping.
C) shaped as an upside–down U.
D) U–shaped.

130) When a firm is experiencing economies of scale, 130) _____

A) the *MP* curve slopes upward.
B) the *MC* curve slopes downward.
C) the *LRAC* curve slopes downward.
D) diminishing returns to labor have been suspended.

131) Constant returns to scale means that as all inputs are increased, 131) _____

A) total output increases in the same proportion as do the inputs.
B) average total cost rises.
C) average total cost rises at the same rate as do the inputs.
D) total output remains constant.

132) When a firm is experiencing diseconomies of scale, 132) _____

A) the *LRAC* curve has a positive slope.
B) the *MC* curve has a negative slope.
C) it must also experience diminishing returns to labor.
D) the *MP* curve has a negative slope.

Labor (workers)	Total product (units per day)
0	0
1	3
2	12
3	19
4	23
5	25

133) Using the data in the above table, if the firm employs 3 workers, total product (measured in units per day) and average product and marginal product of the third worker (measured in units per worker) are 133) _____

A) 19, 6 1/3, and 9 respectively.
B) 19, 3, and 9 respectively.
C) 19, 6 1/3, and 7 respectively.
D) 3, 19, and 6 1/3 respectively.

134) Using the data in the above table, if the firm employs 5 workers, total product (measured in units per day) and average product and marginal product of the fifth worker (measured in units per worker) are 134) _____

A) 25, 5.75, and 4 respectively.
B) 23, 5.75, and 4 respectively.
C) 25, 5.00, and 2 respectively.
D) 23, 5.00, and 4 respectively.

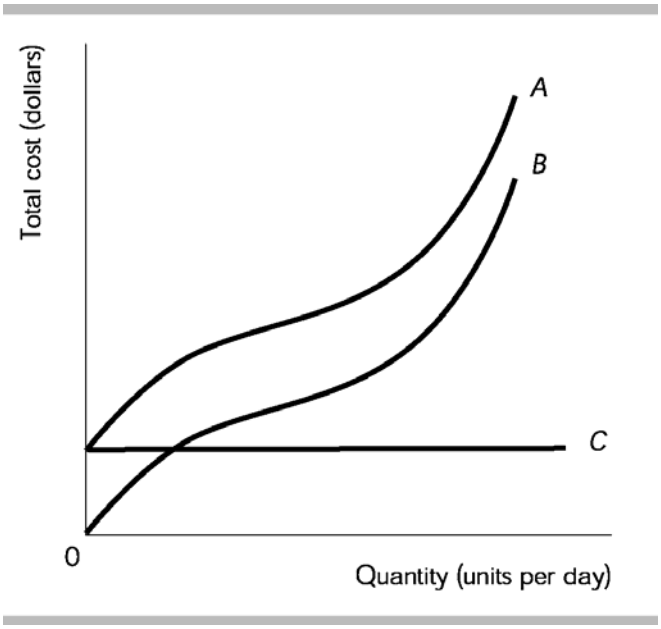
Labor (workers)	Output (units)	Total fixed cost, *TFC* (dollars)	Total variable cost, *TVC* (dollars)	Total cost, *TC* (dollars)
0	0	20	0	20
1	4	20	25	45
2	9	20	50	70
3	13	20	75	95
4	16	20	100	120
5	18	20	125	145

135) Using the data in the above table, the average fixed cost of producing 16 units is 135) _____

A) $1.54 a unit.
B) $2.22 a unit.
C) $1.11 a unit.
D) $1.25 a unit.

136) Using the data in the above table, when the firm increases its output from 4 to 9 units, the marginal cost of a unit is 136) _____

A) $5.00 a unit.
B) $7.00 a unit.
C) $4.00 a unit.
D) $6.00 a unit.



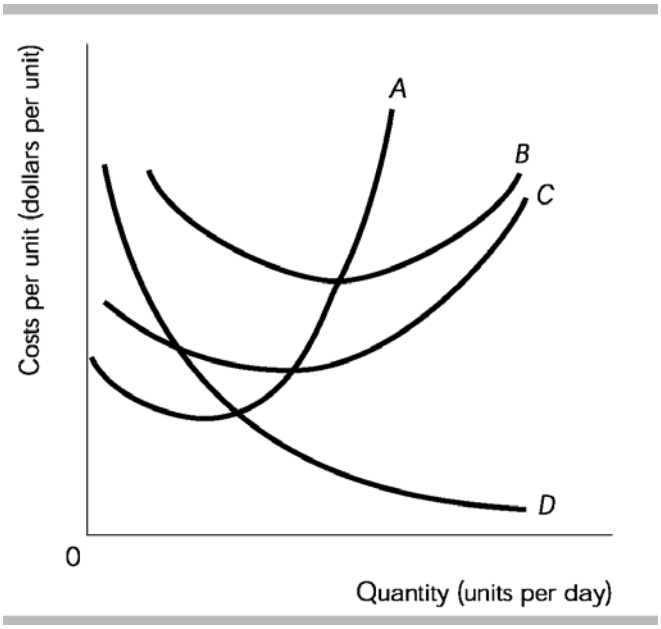
137) In the above figure, which of the following statements is FALSE? 137) _____

A) The total fixed cost curve is curve *C*.

B) Total variable cost and total cost both increase as output increases.

C) The vertical gap between curves *A* and *B* is equal to average fixed cost.

D) Marginal cost is equal to the slope of curve *A*.



138) In the above figure, which of the following statements is FALSE? 138) _____

A) Average fixed cost decreases as output decreases.

B) The vertical gap between curves *B* and *C* equals marginal fixed cost.

C) Curve *A* is the marginal cost curve.

D) The vertical gap between curves *B* and *C* gets smaller as *AFC* decreases.

139) Poppy Lipstick is a lipstick producer. A decrease in the rent paid by Poppy Lipstick 139) _____

A) shifts its *TFC* curve downward but not its *TVC* curve.

B) does not shift its *TFC* curve but shifts its *TVC* curve upward.

C) does not shift its *TFC* curve but shifts its *TVC* curve downward.

D) shifts both its *TFC* curve and its *TVC* curve downward.

140) Sticky Cakes is a bakery. A decrease in the wage rate that Sticky Cakes pays its workers 140) _____

A) shifts both its *MC* curve and its *ATC* curve downward.

B) does not shift its *MC* curve or its *ATC* curve.

C) does not shift its *MC* curve but shifts its *ATC* curve downward.

D) shifts its *MC* curve downward but not its *ATC* curve.

Answer Key
Testname: UNTITLED2.TST

1) D
2) B
3) A
4) A
5) D
6) B
7) C
8) D
9) C
10) C
11) D
12) B
13) B
14) B
15) C
16) B
17) B
18) B
19) B
20) C
21) A
22) A
23) C
24) D
25) B
26) A
27) C
28) B
29) D
30) C
31) C
32) A
33) C
34) B
35) C
36) D
37) C
38) D
39) A
40) C
41) B
42) D
43) A
44) C
45) C
46) A
47) C
48) D
49) C
50) B

51) B
52) A
53) B
54) B
55) B
56) C
57) C
58) C
59) D
60) A
61) D
62) A
63) A
64) C
65) C
66) C
67) C
68) A
69) C
70) A
71) C
72) B
73) D
74) A
75) C
76) D
77) C
78) B
79) A
80) C
81) C
82) C
83) C
84) A
85) D
86) C
87) B
88) A
89) B
90) C
91) A
92) D
93) B
94) D
95) A
96) A
97) B
98) C
99) D
100) A

101) C
102) D
103) B
104) D
105) A
106) B
107) A
108) D
109) A
110) C
111) C
112) C
113) D
114) A
115) A
116) C
117) C
118) D
119) A
120) A
121) D
122) A
123) A
124) D
125) C
126) C
127) B
128) A
129) D
130) C
131) A
132) A
133) C
134) C
135) D
136) A
137) C
138) B
139) A
140) A