

Name: _____ Date: _____

1. Marginal physical product is
 - A) always increasing.
 - B) the maximum output that can be produced from different quantities of a variable resource.
 - C) the maximum output that can be produced from different quantities of a fixed resource.
 - D) the additional output produced from one more unit of a variable resource, holding other inputs constant.
 - E) None of the above.

2. Average costs (average total, average fixed, and average variable) are derived by dividing the corresponding _____ costs by _____.
 - A) total; change in output
 - B) change in total; change in output
 - C) change in total; quantity of output
 - D) marginal; quantity of output
 - E) total; quantity of output

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3. Resources, as defined broadly by economists, are
 - A) land and labor.
 - B) land, labor, and workers.
 - C) land, workers, and firms.
 - D) capital, land, and natural resources.
 - E) land, labor, and capital.

4. The transformation of resources into economic goods and services is called
 - A) technical efficiency.
 - B) resourcing.
 - C) production.
 - D) increasing returns.
 - E) output.

5. Economic goods and services produced by business firms are
- A) resources.
 - B) outputs.
 - C) innovations.
 - D) productivity.
 - E) technological progress.
6. Suppose that four workers can harvest 20 bushels of corn on an acre of land per day, while five workers can harvest 25 bushels. Then
- A) the marginal physical product of the fifth worker is 25 and the average physical product of five workers is 20.
 - B) the marginal physical product of the fifth worker is 5 and the average physical product of five workers is 5.
 - C) the marginal physical product of the fourth worker is 5 and the average physical product of five workers is 20.
 - D) the marginal physical product of the fourth worker is 5 and the average physical product of 4 workers is 5.
 - E) marginal and average physical products cannot be determined from the information provided.
7. The average physical product of labor equals
- A) the change in the quantity of labor divided by the change in total output.
 - B) the quantity of output divided by the quantity of labor.
 - C) the quantity of labor divided by the quantity of output.
 - D) the change in total output divided by the change in the quantity of labor.
 - E) total physical product divided by marginal physical product.
8. Diminishing marginal returns means that as you combine more units of a variable resource with a set of fixed resources,
- A) the average physical product increases at an increasing rate.
 - B) the marginal physical product decreases.
 - C) the total product decreases.
 - D) the marginal physical product is negative.
 - E) the marginal physical product increases at a decreasing rate.

9. Diminishing marginal returns occur because
- A) average and marginal relationships behave very differently with respect to each other.
 - B) the fixed resource quantity combined with increasing quantities of the variable resource becomes less and less efficient.
 - C) producers are not careful enough in the manufacturing process.
 - D) workers are lazy and inefficient.
 - E) workers in some industries lack an adequate formal education.
10. For any firm, it is always true that
- A) as output rises, average fixed costs decline because the total fixed cost is divided by a larger and larger number of units produced.
 - B) as output rises, average fixed costs rise equally because of more intense resource utilization.
 - C) as output rises, average fixed costs quickly drop to zero.
 - D) as output rises, average fixed costs become a vertical line.
 - E) as output rises, average fixed costs decline and ultimately become negative.
11. If the total cost of producing 6 units is \$228 and the total cost of producing 7 units is \$245, what is the marginal cost of producing the seventh unit?
- A) \$35
 - B) \$245
 - C) \$3
 - D) \$38
 - E) \$17
12. If the total cost of producing 2 pounds of cheese is \$6 and the total cost of producing 4 pounds of cheese is \$8, then the average total cost of producing 4 pounds of cheese is equal to
- A) \$.50
 - B) \$1
 - C) \$2
 - D) \$4
 - E) \$8

Use the following to answer questions 13-15:

Quantity of Output	Total Fixed Cost	Total Variable Cost
1	\$40	\$30
2	\$40	\$44
3	\$40	\$60
4	\$40	\$80
5	\$40	\$110
6	\$40	\$150
7	\$40	\$200
8	\$40	\$280

13. In the table above, the average fixed cost of the first unit of output is _____ while the average fixed cost of producing 8 units of output is _____.
- A) \$30; \$40
 - B) \$40; \$5
 - C) \$40; \$40
 - D) \$40; \$280
 - E) \$40; \$320
14. If the firm described in the table above decided to produce nothing, which of the following would be true?
- A) Total cost is zero.
 - B) Total variable cost is \$30.
 - C) Total fixed cost is \$40.
 - D) Average total cost is zero.
 - E) Marginal cost is \$10.
15. In the table above, marginal cost is equal to average total cost at a quantity of
- A) 1.
 - B) 3.
 - C) 4.
 - D) 5.
 - E) 8.

Use the following to answer questions 16-19:

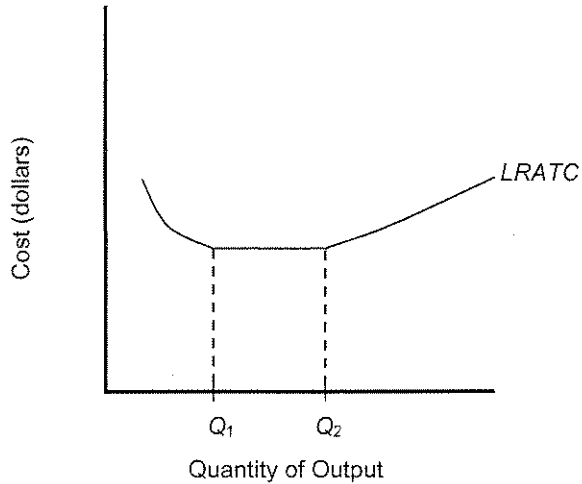
Quantity	Average Total Cost
1	\$10
2	\$8
3	\$7
4	\$8
5	\$9

16. In the table above, what is the total cost of producing 4 units?
- A) \$8
 - B) \$2
 - C) \$4
 - D) \$32
 - E) \$45
17. In the table above, if total fixed cost is \$7, what are the total variable costs of 5 units?
- A) \$9
 - B) \$38
 - C) \$45
 - D) \$7
 - E) Cannot be determined from the information given.
18. In the table above, the average-variable-cost curve is always
- A) falling.
 - B) constant.
 - C) rising.
 - D) above average total cost.
 - E) below average total cost.
19. In the table above, when average total cost is at a minimum, what is marginal cost?
- A) The same as average total cost
 - B) Greater than average total cost
 - C) Less than average total cost
 - D) Average total cost minus average variable cost
 - E) None of the above

20. When the marginal-cost curve lies above the average-total-cost curve, the average-total-cost curve _____ and the average-variable-cost curve _____.
- A) slopes up; also slopes up
 - B) slopes up; slopes down
 - C) slopes down; also slopes down
 - D) slopes down; slopes up
 - E) slopes up; becomes a horizontal line
21. In the long run, which of the following inputs are variable?
- A) Land
 - B) Labor
 - C) Capital
 - D) Raw materials
 - E) All of the above.
22. The period of time in which the firm can change the scale of production is known as
- A) the short run.
 - B) the market period.
 - C) the scale period.
 - D) the long run.
 - E) None of the above.
23. When a firm is making decisions about the use of fixed and variable resources, it is
- A) focusing on the short run.
 - B) focusing on the long run.
 - C) focusing on the very long run.
 - D) focusing on the period in which no changes can be made.
 - E) most likely contemplating a change in its size.
24. Firm A, a large automobile manufacturer in the United States, found that as it increased its production of automobiles, its long-run costs declined at first, but then slowly began to increase again, even when all of its resources were variable over time. According to economic theory, this phenomenon illustrates
- A) first diseconomies of scale and then economies of scale.
 - B) first economies of scale and then diseconomies of scale.
 - C) bad management techniques.
 - D) lazy workers.
 - E) not enough government controls.

25. Constant returns to scale occur when
- A) an increase in all resources causes no change in output.
 - B) the long-run average-cost curve is declining.
 - C) the marginal-cost curve is increasing at a decreasing rate.
 - D) the marginal-cost curve lies below the average-cost curve.
 - E) an increase in all resources results in an exactly proportionate increase in output.

Use the following to answer questions 26-27:

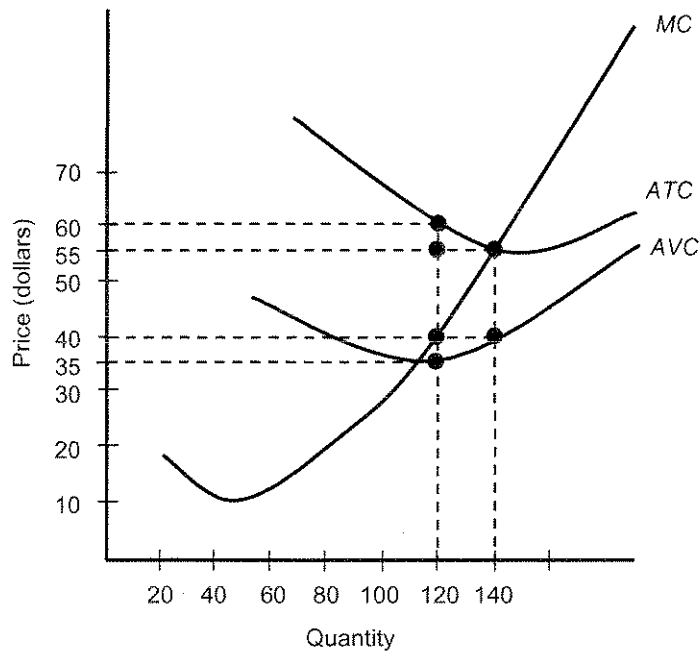


26. Refer to the figure above. Between quantity Q_1 and quantity Q_2 ,
- A) the firm will not produce.
 - B) the firm benefits from economies of scale
 - C) the firm's per unit costs increase as output remains constant.
 - D) diseconomies of scale outweigh the benefits of economies of scale.
 - E) the firm experiences constant returns to scale.
27. Refer to the figure above. Up to a quantity of Q_1 ,
- A) the firm experiences decreasing returns to scale.
 - B) each additional unit of output produced costs more than the unit before it.
 - C) per unit costs decrease because of diminishing returns.
 - D) unit costs decrease as production increases.
 - E) diseconomies of scale occur.

28. The term *minimum efficient scale* means
- A) the average point of the long-run minimum-cost curve.
 - B) the total of all efficient points along the long-run average-cost curve.
 - C) diseconomies of scale.
 - D) the minimum point of the long-run average-cost curve, or the output level at which the cost per unit of output is the lowest.
 - E) the maximum point of the long-run average-cost curve, or the output level at which the cost per unit of output is the highest.
29. Total costs are
- A) the costs of all variable resources.
 - B) the costs of all variable resources used to produce goods and services.
 - C) the costs of variable and fixed resources.
 - D) defined to be equal to the value of consumer surplus.
 - E) defined to be equal to dollars multiplied by the marginal physical product.
30. Average fixed cost is
- A) constant.
 - B) rising.
 - C) the distance between average total cost and average variable cost.
 - D) total cost minus total variable cost.
 - E) falling then rising.
31. If a firm is currently producing zero output in the short run, total cost equals
- A) zero.
 - B) marginal costs.
 - C) total variable cost.
 - D) total fixed cost.
 - E) average variable cost.
32. Suppose that for 20 bicycles, the total fixed cost is \$100 and total variable cost is \$300. Then the average total cost of 20 bicycles equals
- A) \$5.
 - B) \$10.
 - C) \$15.
 - D) \$20.
 - E) \$25.

33. When there are diminishing returns to labor,
- A) output will increase only if labor input increases.
 - B) additional labor input causes decreased output.
 - C) doubling labor input will less than double output.
 - D) average cost decreases as more labor is added.
 - E) doubling labor input will more than double output.
34. The profit-maximizing rule is:
- A) total costs = total revenue.
 - B) normal profit = economic profit.
 - C) marginal cost = marginal revenue.
 - D) marginal revenue = marginal profit.
 - E) total revenue = total costs.
35. If marginal cost is greater than marginal revenue,
- A) the firm should shut down.
 - B) the firm is maximizing profit.
 - C) the firm can increase profit by producing less.
 - D) the firm can increase profit by producing more.
 - E) the firm must be run by a bunch of idiots to be in that situation.

Use the following to answer questions 36-38:



36. In the figure above, what is the total cost of producing an output of 140?
- A) \$40
 - B) \$55
 - C) \$300
 - D) \$5,600
 - E) \$7,700
37. In the figure above, what is marginal cost at a quantity of 120?
- A) \$35
 - B) \$40
 - C) \$55
 - D) \$60
 - E) \$4,800
38. In the figure above, what is marginal revenue at a quantity of 120 if the firm maximizes profits at a quantity of 120?
- A) \$35
 - B) \$40
 - C) \$55
 - D) \$4,200
 - E) Cannot be determined from the information given.
39. In general, the two extreme cases of market structure models are represented by
- A) monopolistic competition and oligopoly.
 - B) oligopoly and monopoly.
 - C) oligopoly and perfect competition.
 - D) perfect competition and monopoly.
 - E) perfect monopoly and oligopolistic competition.
40. Which of the following would *not* be a useful characteristic for determining the market structure in which a firm produces and sells its product?
- A) Discovering who owns the firms in the market
 - B) Learning the number of firms in the market
 - C) Determining whether the products in the market are differentiated
 - D) Determining the ease with which new firms may enter the market and begin producing the good or service
 - E) Determining whether the products in the market are standardized

41. Which of the following products would most likely *not* be produced in a perfectly competitive market structure?
- A) Wheat
 - B) Scrap metal
 - C) Potatoes
 - D) Apples
 - E) Airplanes
42. Firms operating in a perfectly competitive market are price takers because
- A) they have a lot of market power.
 - B) they are unable to set a price that differs from the market price without losing profit.
 - C) they choose to set a price that differs from the market price but do not lose profit.
 - D) they choose to set a price that differs from the market price in order to gain market share.
 - E) in a perfectly competitive market, price is dictated through various government agencies.
43. If it is easy for a firm to get into or exit from a market, then a firm in that market will be able to earn positive economic profits
- A) only in a perfectly competitive or a monopoly market structure.
 - B) only in the short run.
 - C) only in an oligopolistic or a monopolistically competitive market structure.
 - D) only if it is a monopoly.
 - E) only if it is an oligopoly.
44. In a perfectly competitive market, the price of good A is \$2. If a firm decides to raise its price to \$2.50, it will
- A) realize an increase in profits of \$.50 per unit.
 - B) be able to increase the quantity sold.
 - C) be unable to sell any quantity of good A that is produced.
 - D) be unable to sell 20 percent of good A that it produces.
 - E) experience a decrease in profits of \$.50 per unit.
45. A zero economic profit
- A) describes a situation in which the owners, or shareholders, of a firm could not do better elsewhere.
 - B) describes a situation in which the resources of a firm are always underutilized.
 - C) means that a firm is paying an interest rate that is above the market rate.
 - D) is highly undesirable and cannot continue indefinitely.
 - E) means the firm is earning a negative accounting profit.

46. Generally, the profit figure reported in corporate annual reports is
- A) economic profit.
 - B) accounting profit.
 - C) statistical profit.
 - D) always positive.
 - E) always accurate.
47. Normal accounting profit
- A) is the same as negative accounting profit.
 - B) is the same as zero accounting profit.
 - C) is usually declining over time.
 - D) is the same as zero economic profit.
 - E) means the firm is making inefficient production decisions.

Use the following to answer questions 48-49:

Scenario 1

Suppose a dentist is organized as a sole proprietorship. Last year the dentist's total revenue was \$320,000 and total costs were \$250,000. The dentist left a job paying \$112,000 a year to start the sole proprietorship.

48. According to the information in the scenario above, how much accounting profit did the dentist make last year?
- A) \$112,000
 - B) \$70,000
 - C) -\$42,000
 - D) -\$28,000
 - E) \$182,000
49. According to the information in the scenario above, how much economic profit did the dentist make last year?
- A) \$112,000
 - B) \$70,000
 - C) -\$42,000
 - D) -\$28,000
 - E) \$182,000

50. The model of perfect competition best applies to markets with
- A) a few firms selling identical products.
 - B) a few firms selling differentiated products.
 - C) many firms selling differentiated products.
 - D) many firms selling identical products.
 - E) significant barriers to entry and exit.
51. In perfect competition, the firm faces a horizontal demand curve because
- A) the firm is a price taker.
 - B) the firm is a price maker.
 - C) the firm has the freedom to set any price it wants.
 - D) the firm's quantity is fixed by the market.
 - E) it is easier to draw that way.
52. The demand curve of an individual firm in a perfectly competitive market structure is always
- A) perfectly inelastic.
 - B) elastic.
 - C) unit-elastic.
 - D) perfectly elastic.
 - E) inelastic.
53. In the short run, a perfectly competitive firm maximizes profit where
- A) marginal revenue equals marginal cost.
 - B) price equals marginal cost.
 - C) the short-run average-total-cost curve reaches a minimum.
 - D) price equals marginal revenue.
 - E) Both a. and b.

Use the following to answer questions 54-57:

Output	Price	Marginal Cost
0	\$1	\$0
1	\$1	\$1.00
2	\$1	\$.80
3	\$1	\$.70
4	\$1	\$.50
5	\$1	\$.50
6	\$1	\$.70
7	\$1	\$.80
8	\$1	\$.86
9	\$1	\$1.00
10	\$1	\$1.09

54. According to the data in the table above, this firm
- A) is a monopolist.
 - B) is an oligopolist.
 - C) is a monopolistic competitor.
 - D) is a perfect competitor.
 - E) There is not enough information to be able to answer this question.
55. According to the data in the table above, the marginal revenue of this firm
- A) is the same as the marginal cost.
 - B) is equal to price times output.
 - C) is equal to price times marginal cost.
 - D) is a constant \$1.
 - E) decreases as output increases.
56. According to the data in the table above, this firm will maximize profit when total output is
- A) 9.
 - B) 8.
 - C) 7.
 - D) 6.
 - E) 5.

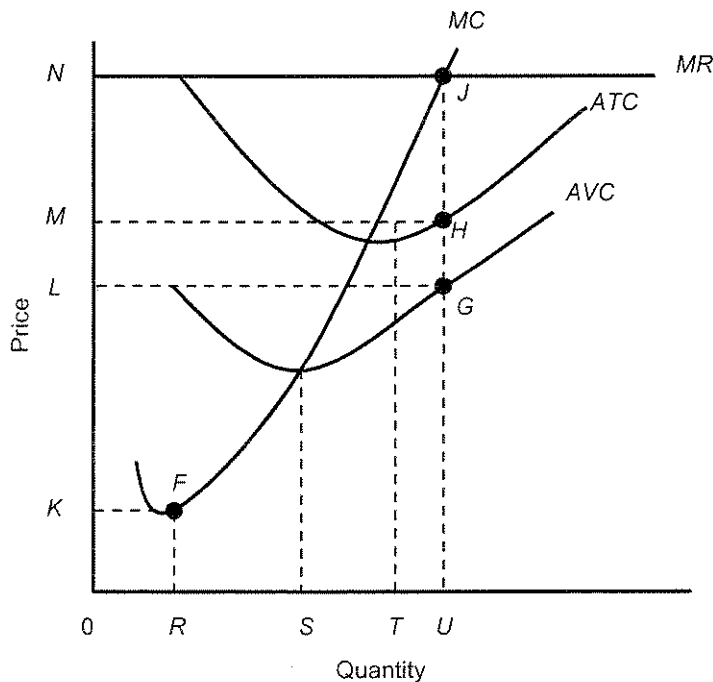
57. In the table above, suppose that the price falls to \$.80 per unit. How should the firm react?

- A) The firm should decrease its output to 2 units.
- B) The firm should decrease its output to 7 units.
- C) The firm should increase its output to 10 units to make up for the loss in revenue.
- D) The firm should produce 9 units.
- E) Not enough information is provided because the table is too small.

58. Graphically, a firm's profit can be shown by

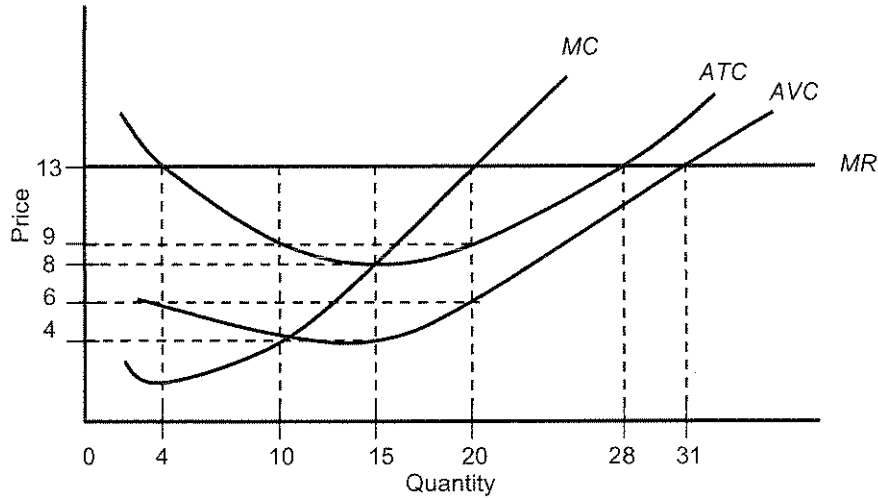
- A) the distance between the firm's demand curve and average-total-cost curve.
- B) the distance between the marginal-cost and marginal-revenue curve.
- C) the triangle formed between the demand curve and the price line.
- D) the rectangle formed between the marginal-revenue curve and the average-total-cost curve.
- E) the rectangle formed between the average-fixed-cost curve and the horizontal axis.

Use the following to answer questions 59-62:



59. In the figure above, the perfectly competitive firm maximizes its profit at
- A) output R .
 - B) output S .
 - C) output T .
 - D) output U .
 - E) Cannot be determined from the information given.
60. In the figure above, average fixed cost at the profit-maximizing output is
- A) RF .
 - B) HJ .
 - C) GH .
 - D) VG .
 - E) VJ .
61. In the figure above, the firm's profit is equal to
- A) the line segment HJ .
 - B) the line segment GJ .
 - C) the rectangle $NJGL$.
 - D) the rectangle $NJHM$.
 - E) the rectangle $LGUO$.
62. In the figure above, the perfectly competitive firm's short-run supply curve is
- A) AFC above point G .
 - B) ATC above point H .
 - C) the MC curve.
 - D) MC above AFC .
 - E) the entire MR curve.

Use the following to answer questions 63-67:



63. In the figure above, to maximize profits or minimize losses the firm should produce _____ units.
- A) 4
 - B) 10
 - C) 15
 - D) 20
 - E) 28
64. In the figure above, at the profit-maximizing level of output total revenue will be
- A) \$120.
 - B) \$180.
 - C) \$260.
 - D) \$280.
 - E) \$130.
65. In the figure above, at the profit-maximizing level of output *TFC* is
- A) \$7.
 - B) \$9.
 - C) \$13.
 - D) \$40.
 - E) the same as at every other level of output.

66. In the figure above, maximum profit is
- A) \$80.
 - B) \$75.
 - C) \$50.
 - D) \$260.
 - E) \$4.
67. In the figure above, at what price would the firm earn zero economic profits?
- A) \$12
 - B) \$9
 - C) \$8
 - D) \$6
 - E) \$4
68. In the short run, the shutdown point is the minimum point of the firm's
- A) demand curve.
 - B) average-total-cost curve.
 - C) average-variable-cost curve.
 - D) marginal-cost curve.
 - E) None of the above.
69. Economic profits are earned
- A) when price is less than average fixed cost.
 - B) when price exceeds average total cost.
 - C) by perfectly competitive firms in the long run.
 - D) when marginal revenue equals marginal cost.
 - E) when price equals average variable cost.

Use the following to answer questions 70-73:

Output	MR	MC	ATC	
0	\$.70	--	--	
1	\$.70	\$1.00	\$2.00	
2	\$.70	\$.80	\$1.40	
3	\$.70	\$.70	\$1.16	
4	\$.70	\$.50	\$1.00	
5	\$.70	\$.50	\$.90	
6	\$.70	\$.70	\$.86	
7	\$.70	\$.80	\$.85	
8	\$.70	\$.86	\$.86	
9	\$.70	\$1.00	\$.87	
10	\$.70	\$1.50	\$.94	

70. According to the table above, at a price of \$.70 this firm will produce
- 6 units because that maximizes profit.
 - 6 units because that minimizes losses.
 - 8 units because that maximizes profit.
 - 8 units because that minimizes losses.
 - This firm will not produce.
71. According to the table above, at a price less than the minimum point of the *AVC*, this firm will produce
- 6 units because that maximizes profit.
 - 6 units because that minimizes losses.
 - 8 units because that maximizes profit.
 - 8 units because that minimizes losses.
 - This firm will not produce.
72. According to the table above, the break-even price is
- \$.70.
 - \$.85.
 - \$1.00.
 - \$.50.
 - \$.60.

73. In the table above, the maximum profit the firm can earn is
- A) \$1.00
 - B) -\$1.398
 - C) -\$0.466
 - D) -\$0.96
 - E) The firm should shut down in the short run since there is no level of output with positive economic profits.
74. New firms will enter the market
- A) only in the long run.
 - B) only in the short run.
 - C) in either the short run or the long run.
 - D) any time price exceeds average variable cost.
 - E) whenever total costs are increasing.
75. In perfect competition, the firm's long-run supply curve is
- A) the *MC* curve above the *AVC* curve.
 - B) the *MC* curve above the *AFC* curve.
 - C) the *MC* curve above the *ATC* curve.
 - D) the *AVC* curve above the *MC* curve.
 - E) the *ATC* curve above the *MC* curve.
76. When firms leave a perfectly competitive market, then, other things equal,
- A) market supply will decrease and market price will rise.
 - B) market supply will decrease and market price will fall.
 - C) market demand will increase and market price will rise.
 - D) market demand will decrease and market price will fall.
 - E) market demand and market supply will both decrease.
77. In perfect competition in the long run, the entry of firms will lead to
- A) an increase in market supply.
 - B) a decrease in market supply.
 - C) no change in market supply.
 - D) an increase in each firm's marginal-cost curve.
 - E) an increase in market demand.

78. If, at the profit-maximizing level of output, a typical perfectly competitive firm's price is greater than its *ATC*, the firm
- A) should increase output.
 - B) should decrease output.
 - C) will find that new firms are attracted to this industry.
 - D) should lower the price.
 - E) should raise the price.
79. An increase in price facing a perfectly competitive firm means that in the short run
- A) the profit-maximizing output level will increase.
 - B) the demand curve facing the firm shifts down.
 - C) a parallel downward shift in its marginal-revenue curve occurs.
 - D) demand in the market decreased.
 - E) supply in the market increased.
80. There will be no entry or exit of firms in a perfectly competitive industry in the long run only when
- A) barriers to entry and exit are sufficiently high.
 - B) individual firms receive economic profits.
 - C) individual firms take economic losses.
 - D) individual firms receive a normal profit.
 - E) all firms have shut down.
81. What is a perfectly competitive firm's break-even price?
- A) The price that is just equal to the minimum point on the average-fixed-cost curve
 - B) The price that is just equal to the minimum point on the average-variable-cost curve
 - C) The price that is just equal to the minimum point on the average-total-cost curve
 - D) The price that is just equal to the maximum point on the average-variable-cost curve
 - E) The price that is just equal to the maximum point on the marginal-cost curve

Answer Key

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

- 45. A
- 46. B
- 47. D
- 48. B
- 49. C
- 50. D
- 51. A
- 52. D
- 53. E
- 54. D
- 55. D
- 56. A
- 57. B
- 58. D
- 59. D
- 60. C
- 61. D
- 62. D
- 63. D
- 64. C
- 65. E
- 66. A
- 67. C
- 68. C
- 69. B
- 70. B
- 71. E
- 72. B
- 73. D
- 74. A
- 75. C
- 76. A
- 77. A
- 78. C
- 79. A
- 80. D
- 81. C