

## Chapter 04 Firm Production, Cost, and Revenue

### Multiple Choice Questions

1. A key assumption about the way firms behave is that they
  - a. Minimize costs
  - B.** Maximize profit
  - c. Maximize market share
  - d. Maximize revenue
  
2. A graph that maps output against the input required to make that output is called a/an
  - a. Average cost function
  - B.** A production function
  - c. A cost function
  - d. A marginal cost function
  
3. A graph which maps the total costs of production against the amount made is called the
  - a. Average cost function
  - b. A production function
  - C.** A cost function
  - d. A marginal cost function
  
4. If an input must be increased for output to increase it is called a
  - a. Fixed input
  - b. Changeable input
  - C.** Variable input
  - d. Unchangeable input

5. If the level of an input cannot be increased because there is insufficient time to put them in place, they are called

- A. Fixed input
- b. Changeable input
- c. Variable input
- d. Unchangeable input

6. When workers subdivide the tasks of a job in such a way so as to become more efficient economists refer to this as

- A. The division of labor
- b. The separation of powers
- c. The division of tasks
- d. The degrees of freedom

Use the following to answer questions 7-9:

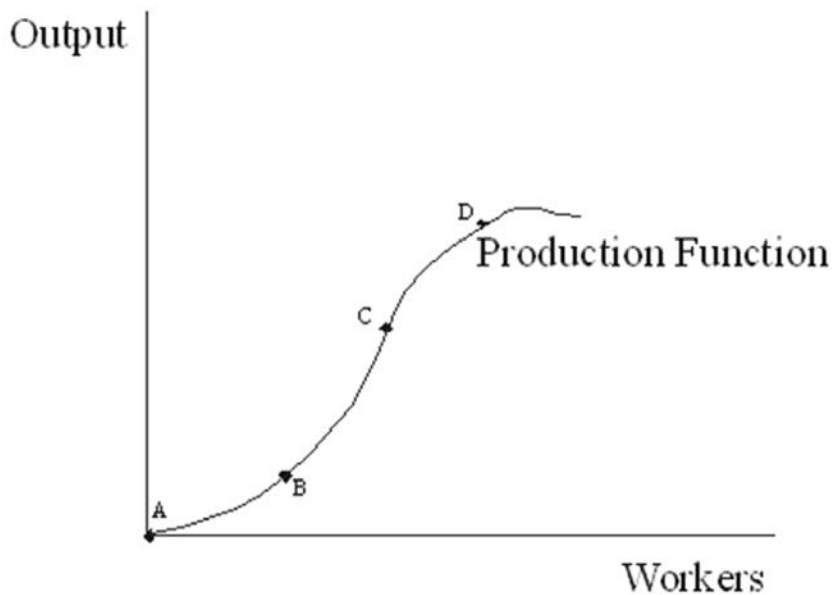


Figure 4.1

7. Referring to Figure 4.1 above, the increase in output from point A to B is less than the increase in output from point B to C because

- a. More workers always produce more
- b. Better workers are usually hired after the earlier ones
- C.** A small number of workers cannot take as good advantage of the division of labor as a larger number
- d. Eventually workers are up against the fact that there are fixed inputs and more workers do not add as much

8. Referring to Figure 4.1 above, the increase in output from point B to C is greater than the increase in output from point C to D because

- a. More workers always produce more
- b. Better workers are usually hired after the earlier ones
- c. A small number of workers cannot take as good advantage of the division of labor as a larger number
- D.** Eventually workers are up against the fact that there are fixed inputs and more workers do not add as much

9. Referring to Figure 4.1 above, the increase in output from point A to B and from point B to C happens because

- A.** More workers will produce more
- b. Better workers are usually hired after the earlier ones
- c. A small number of workers cannot take as good advantage of the division of labor as a larger number
- d. Eventually workers are up against the fact that there are fixed inputs and more workers do not add as much

10. When firms add workers and get more efficient they are benefiting from

- A.** The division of labor
- b. The law of large numbers
- c. Diminishing returns
- d. Diminishing marginal utility

11. When firms add workers and find that the additional workers add less to output than their predecessors did, they are experiencing

- a. The division of labor
- b. The law of large numbers
- C. Diminishing returns
- d. Diminishing marginal utility

12. Costs which increase with an increase in output are called

- a. Fixed costs
- b. Changeable costs
- C. Variable costs
- d. Unchangeable costs

13. Costs which do not increase with an increase in output are called

- A. Fixed costs
- b. Changeable costs
- c. Variable costs
- d. Unchangeable costs

Use the following to answer questions 14-17:

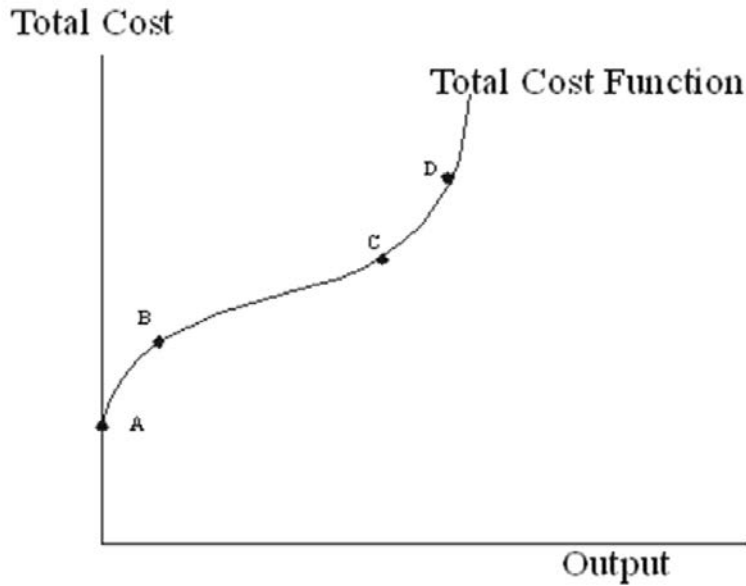


Figure 4.2

14. In Figure 4.2 above, the reason that point A is not through the origin but starts up on the vertical axis is that

- a. There are fixed outputs
- B.** There are fixed costs
- c. There is no cost associated with producing no output
- d. There is waste

15. In Figure 4.2 above, the reason that point D is higher than point C and C is higher than B is that

- A.** It always costs more money to increase output
- b. Small levels of production are often inefficient and that significant increases in production can occur thereafter at only a small additional cost
- c. It is very difficult and very expensive to increase output once the capacity of the machinery has been reached
- d. There is waste

16. In Figure 4.2 above, the reason that the increase in output from point A to B is much less than the increase in output from point B to C is that

- a. It always costs more money to increase output
- B.** Small levels of production are often inefficient and that significant increases in production can occur thereafter at only a small additional cost
- c. It is very difficult and very expensive to increase output once the capacity of the machinery has been reached
- d. There is waste

17. In Figure 4.2 above the reason that the increase in output from point B to C is much greater than the increase in output from point C to D is that

- a. It always costs more money to increase output
- b. Small levels of production are often inefficient and that significant increases in production can occur thereafter at only a small additional cost
- C.** It is very difficult and very expensive to increase output once the capacity of the machinery has been reached
- d. There is waste

18. The Total Cost Function in the book

- a. Is an up-ward sloping straight line
- b. Is U-shaped
- c. Is shaped as an upside down U
- D.** Begins by sharply rising, flattens out then sharply rises again

19. Marginal Cost is

- A.** The addition to cost associated with one additional unit of output
- b. The per unit cost of production
- c. The per unit variable cost of production
- d. The per unit fixed cost of production

20. Average Total Cost is

- a. The addition to cost associated with one additional unit of output
- B.** The per unit cost of production
- c. The per unit variable cost of production
- d. The per unit fixed cost of production

21. Average Variable Cost is

- a. The addition to cost associated with one additional unit of output
- b. The per unit cost of production
- C.** The per unit variable cost of production
- d. The per unit fixed cost of production

22. Average Fixed Cost is

- a. The addition to cost associated with one additional unit of output
- b. The per unit cost of production
- c. The per unit variable cost of production
- D.** The per unit fixed cost of production

23. Suppose a firm has \$1,000,000 in fixed costs and variable costs equal to \$100 for every unit they produce,

- a. Their marginal costs are decreasing
- B.** Their average costs are decreasing
- c. Their fixed costs are decreasing
- d. The marginal costs are increasing

24. The Average Total Cost curve will be cut by the Marginal Cost curve from below as long as

- a. Fixed costs are rising
- B.** Marginal costs eventually increase
- c. Average costs are decreasing
- d. Marginal costs continually decrease

25. Which of the following is true

- a. The average total cost curve is U-shaped
- b. The average variable cost curve is U-shaped
- c. Neither A nor B
- D.** Both A and B

26. The Marginal Cost curve usually

- a. Is J-shaped
- b. Cuts through the minimum of the average variable cost curve
- c. Cuts through the minimum of the average total cost curve
- D.** All of the above

27. Given the production function and total cost function shown in Chapter 4, as production increases, marginal costs

- a. Decrease constantly
- B.** Decrease for a while and then increase
- c. Increase constantly
- d. Increase for a while and then decrease

28. Given the production function and total cost function shown in Chapter 4, as production increases, average fixed costs

- A.** Decrease constantly
- b. Decrease for a while and then increase
- c. Increase constantly
- d. Increase for a while and then decrease

29. Given the production function and total cost function shown in Chapter 4, as production increases, average variable costs

- a. Decrease constantly
- B.** Decrease for a while and then increase
- c. Increase constantly
- d. Increase for a while and then decrease



30. Given the production function and total cost function shown in Chapter 4, as production increases, average total costs

- a. Decrease constantly
- B.** Decrease for a while and then increase
- c. Increase constantly
- d. Increase for a while and then decrease

31. Given the production function and total cost function shown in Chapter 4, as production increases, total costs

- a. Decrease constantly
- b. Decrease for a while and then increase
- C.** Increase constantly
- d. Increase for a while and then decrease

32. Given the production function and total cost function shown in Chapter 4, as production increases, total variable costs

- a. Decrease constantly
- b. Decrease for a while and then increase
- C.** Increase constantly
- d. Increase for a while and then decrease

33. Given the production function and total cost function shown in Chapter 4, as production increases, total fixed costs

- a. Decrease constantly
- B.** Remain constant
- c. Increase constantly
- d. Increase for a while and then decrease

Use the following to answer questions 34-42:

Output	Total Fixed Costs	Total Variable Cost	Total Cost
0	\$100	\$0	Box E
1	Box A	\$10	Box F
2	Box B	\$15	Box G
3	Box C	\$25	Box H
4	Box D	\$50	Box I

Table 4.1

34. Referring to Table 4.1 above, Box A should be filled with

- a. \$0
- b. \$10
- C. \$100**
- d. \$200

35. Referring to Table 4.1 above, Box B should be filled with

- a. \$0
- b. \$1
- C. \$100**
- d. \$200

36. Referring to Table 4.1 above, Box C should be filled with

- a. \$0
- b. \$2
- C. \$100**
- d. \$200

37. Referring to Table 4.1 above, Box D should be filled with

- a. \$0
- b. \$1
- C. \$100**
- d. \$200

38. Referring to Table 4.1 above, Box E should be filled with

- a. \$0
- b. \$10
- C.** \$100
- d. \$200

39. Referring to Table 4.1 above, Box F should be filled with

- a. \$0
- b. \$10
- c. \$100
- D.** \$110

40. Referring to Table 4.1 above, Box G should be filled with

- a. \$0
- b. \$110
- C.** \$115
- d. \$125

41. Referring to Table 4.1 above, Box H should be filled with

- a. \$0
- b. \$110
- C.** \$125
- d. \$150

42. Referring to Table 4.1 above, Box I should be filled with

- a. \$0
- b. \$115
- C.** \$150
- d. \$200

Use the following to answer questions 43-60:

Output	Total Variable Cost	Total Cost	Marginal Cost	Average Variable Cost	Average Total Cost
0	\$0	\$10	Box A	Box G	Box M
1	\$10	\$20	Box B	Box H	Box N
2	\$15	\$25	Box C	Box I	Box O
3	\$17	\$27	Box D	Box J	Box P
4	\$20	\$30	Box E	Box K	Box Q
5	\$30	\$40	Box F	Box L	Box R

Table 4.2

43. Referring to Table 4.2 above, Box A should be filled with

- a. \$0
- b. \$10
- c. \$20
- D.** Nothing

44. Referring to Table 4.2 above, Box B should be filled with

- a. \$0
- B.** \$10
- c. \$20
- d. \$30

45. Referring to Table 4.2 above, Box C should be filled with

- a. \$0
- B.** \$5
- c. \$1
- d. \$2

46. Referring to Table 4.2 above, Box D should be filled with

- a. \$0
- B.** \$2
- c. \$17
- d. \$27

47. Referring to Table 4.2 above, Box E should be filled with

- a. \$0
- B.** \$3
- c. \$20
- d. \$30

48. Referring to Table 4.2 above, Box F should be filled with

- a. \$0
- B.** \$10
- c. \$30
- d. \$40

49. Referring to Table 4.2 above, Box G should be filled with

- a. \$0
- b. \$10
- c. \$20
- D.** Undefined

50. Referring to Table 4.2 above, Box H should be filled with

- a. \$0
- B.** \$10
- c. \$20
- d. \$30

51. Referring to Table 4.2 above, Box I should be filled with

- a. \$0
- B.** \$7.50
- c. \$12.50
- d. \$2

52. Referring to Table 4.2 above, Box J should be filled with

- a. \$0
- B.** \$5.67
- c. \$9.00
- d. \$17

53. Referring to Table 4.2 above, Box K should be filled with

- A.** \$5.00
- b. \$7.50
- c. \$12.50
- d. \$2

54. Referring to Table 4.2 above, Box L should be filled with

- A.** \$6.00
- b. \$8.00
- c. \$12.50
- d. \$30

55. Referring to Table 4.2 above, Box M should be filled with

- a. \$0
- b. \$10
- c. \$20
- D.** Undefined

56. Referring to Table 4.2 above, Box N should be filled with

- a. \$0
- b. \$10
- C.** \$20
- d. \$30

57. Referring to Table 4.2 above, Box O should be filled with

- a. \$0
- b. \$7.50
- C.** \$12.50
- d. \$2

58. Referring to Table 4.2 above, Box P should be filled with

- a. \$0
- b. \$67
- C.** \$9.00
- d. \$17

59. Referring to Table 4.2 above, Box Q should be filled with

- a. \$00
- B.** \$7.50
- c. \$12.50
- d. \$2

60. Referring to Table 4.2 above, Box R should be filled with

- a. \$6.00
- B.** \$8.00
- c. \$12.50
- d. \$30

61. The shape of the firm's marginal revenue curve depends ultimately on whether the firm is

- A. A monopolist or a perfect competitor
- b. A revenue maximizer or a profit maximizer
- c. A market share maximizer or a sales maximizer
- d. Owned by a man or a woman

62. The shape of the firm's marginal revenue curve depends on

- a. How high its costs are
- b. How high production is
- C. How many competitors it has
- d. Whether the firm is a profit maximizer

63. Whether marginal revenue is constant or decreasing depends on

- a. Whether the firm is benefiting from the division of labor
- b. Whether the firm is dealing with diminishing returns
- c. How much the firm sells
- D. Whether the firm faces competition

64. The assumption we usually make about all firms is that they wish to

- a. Maximize market share
- b. Minimize costs
- c. Maximize sales
- D. Maximize profits

65. If the firm has no competitors, the marginal revenue curve is

- a. Flat (horizontal)
- b. Vertical
- c. Upward sloping
- D. Downward sloping



66. If the firm has many competitors, the marginal revenue curve is

- A. Flat (horizontal)
- b. Vertical
- c. Upward sloping
- d. Downward sloping

67. Marginal Revenue is

- A. The extra revenue associated with one additional unit of sales
- b. The extra cost associated with one additional unit of output
- c. The revenue associated with the first unit of sales
- d. The revenue associated with the sale of the average unit

68. An increase in the demand for a good that is produced by many firms will

- a. Increase all of their respective marginal cost curves
- B. Increase all of their respective marginal revenue curves
- c. Decrease all of their respective marginal cost curves
- d. Decrease all of their respective marginal revenue curves

69. A decrease in the demand for a good that is produced by many firms will

- a. Increase all of their respective marginal cost curves
- b. Increase all of their respective marginal revenue curves
- c. Decrease all of their respective marginal cost curves
- D. Decrease all of their respective marginal revenue curves

70. If price is greater than average variable cost, a profit maximizing firm will always

- a. Produce where Marginal Cost is minimized
- b. Produce where Average Total Cost is minimized
- c. Where Total Revenue is maximized
- D. Produce where Marginal Cost equals Marginal Revenue

71. The shutdown condition for a firm is to

- a. Shutdown if losses are made
- b. Shutdown if price is less than Average Total Cost
- c. Shutdown if price is less than marginal revenue
- D.** Shutdown if price is less than Average Variable Cost

72. When a firm chooses to shutdown, it is

- a. Making a poor decision because it should always produce where marginal cost equals marginal revenue
- b. Making a poor decision because it should always produce where average costs exceed average revenue
- c. Making a good decision as long as the price it is getting is less than its average total costs
- D.** Making a good decision as long as the price it is getting is less than its average variable costs

73. The result that a firm should produce where  $MC=MR$  except when the shutdown condition is met is based on the assumption that it is attempting to

- A.** Maximize profit
- b. Minimize marginal costs
- c. Maximize market share
- d. Minimize average costs

74. When a firm has many competitors selling the same good, in order to sell more of the good

- A.** It only need produce more of the good
- b. It must, ironically, increase prices
- c. It must reduce the price it charges
- d. It must advertise

75. If a firm can increase output by hiring more workers then
- a. It will always do so
  - b. It will never do so
  - C.** It will do so only if the cost of hiring the workers (and purchasing the materials) is less than the increase in revenues associated with the increase in sales
  - d. It will do so only if the cost of hiring the workers (and purchasing the materials) is more than the increase in revenues associated with the increase in sales
76. When a firm has no competitors, in order to sell more of the good
- a. It only need produce more of the good
  - b. It must, ironically, increase prices
  - C.** It must reduce the price it charges
  - d. It must keep prices steady
77. When a firm shuts down because the market price of its product is less than its average variable cost of producing that product, it suffers a loss equal to
- a. Its total revenue
  - b. Its total variable cost
  - C.** Its total fixed cost
  - d. All of the above
78. When a firm shuts down because the market price of its product is less than the average variable cost of producing that product, the loss it suffers is
- a. Equal to its total revenue
  - b. Equal to its total variable cost
  - c. Equal to zero
  - D.** Less than the loss it would earn from continuing to operate
79. When a firm shuts down because the market price of its product is less than the average variable cost of producing that product, the shut-down decision is
- a. Made for the long run
  - B.** Made only for the short run
  - c. Followed by declaration of bankruptcy
  - d. Made just before it sells all of its fixed assets

80. If a firm's marginal cost is greater than its average total cost, its average total cost is

- A. Increasing
- b. Constant
- c. Decreasing
- d. Not U-shaped