Chapter 12
Production and Cost

12.1 Economic Cost and Profit

1) The primary goal of a business firm is to
   A) promote fairness.
   B) make a quality product.
   C) promote workforce job satisfaction.
   D) maximize profit.
   E) increase its production.

   Answer: D
   Topic: Firm’s goal
   Skill: Level 1: Definition
   Objective: Checkpoint 12.1
   Author: JC

2) The fundamental goal of a firm is
   A) different for each firm.
   B) to make a quality product.
   C) to maximize profit.
   D) to gain market share.
   E) decrease its employment of workers in order to cut its costs.

   Answer: C
   Topic: Firm’s goal
   Skill: Level 1: Definition
   Objective: Checkpoint 12.1
   Author: WM
3) Accountants calculate
   A) economic depreciation as part of the firm’s cost.
   B) depreciation using Internal Revenue Service rules.
   C) the opportunity cost of all the resources the firm uses.
   D) all the firm’s implicit costs but only a few of its explicit costs.
   E) All of the above answers are correct.
   Answer: B
   
   Topic: Accounting cost
   Skill: Level 2: Using definitions
   Objective: Checkpoint 12.1
   Author: SA

4) Lauren runs a chili restaurant in San Francisco. Her total revenue last year equaled
   $111,983. The rent on her restaurant totaled $48,000. Her labor costs totaled $43,000. Her
   materials, food and other variable costs totaled $19,000. To Lauren’s accountant, Lauren
   A) incurred a loss of $1,983.
   B) earned a profit of $1,983.
   C) incurred a loss of $111,983.
   D) earned a profit of $111,983.
   E) had a total cost equal to $91,000.
   Answer: B
   
   Topic: Accounting cost
   Skill: Level 3: Using models
   Objective: Checkpoint 12.1
   Author: JC

5) Lauren runs a chili restaurant in San Francisco. Her total revenue last year was $110,000.
   The rent on her restaurant was $48,000, her labor costs were $42,000, and her materials, food
   and other variable costs were $20,000. Lauren could have worked as a biologist and earned
   $50,000 per year. An economist calculates her implicit costs as
   A) $150,000.
   B) $63,000.
   C) $50,000.
   D) $110,000.
   E) $0 because Lauren did not work as a biologist.
   Answer: C
   
   Topic: Opportunity cost
   Skill: Level 3: Using models
   Objective: Checkpoint 12.1
   Author: JC
6) When an economist uses the term "cost" referring to a firm, the economist refers to the
   A) price of the good to the consumer.
   B) explicit cost of producing a good or service.
   C) implicit cost of producing a good or service.
   D) opportunity cost of producing a good or service, which includes both implicit and
      explicit cost.
   E) cost that can be actually verified and measured.

Answer: D

Topic: Opportunity cost
Skill: Level 1: Definition
Objective: Checkpoint 12.1
Author: PH

7) The cost that a firm pays in money to hire a resource is referred to as a ____ cost.
   A) minimized
   B) maximized
   C) explicit
   D) implicit
   E) total

Answer: C

Topic: Explicit cost
Skill: Level 1: Definition
Objective: Checkpoint 12.1
Author: PH

8) Which of the following is(are) an explicit cost in Jim's business venture?
   A) the salary Jim could have earned at another job
   B) the interest Jim does not earn because he invested his savings in his business
   C) the wages Jim pays his workers
   D) Jim's normal profit
   E) Answer A, answer B, and answer D are correct.

Answer: C

Topic: Explicit cost
Skill: Level 2: Using definitions
Objective: Checkpoint 12.1
Author: SA
9) Darryl runs a ranch in Jackson, Wyoming. The interest on the debt he incurred to buy his ranch totals $3,000 per year. For Darryl, the interest is
   A) an implicit cost.
   B) an explicit cost.
   C) his normal cost.
   D) his normal profit.
   E) part of his economic profit.
   Answer: B
   Topic: Explicit cost
   Skill: Level 2: Using definitions
   Objective: Checkpoint 12.1
   Author: JC

10) A cost incurred in the production of a good or service and for which the firm does not need to make a direct monetary payment, is referred to as ____ cost.
   A) a minimized
   B) a maximized
   C) an explicit
   D) an implicit
   E) an invisible
   Answer: D
   Topic: Implicit cost
   Skill: Level 1: Definition
   Objective: Checkpoint 12.1
   Author: PH

11) ____ cost is defined as a cost of production that does not entail a direct money payment.
   A) An explicit
   B) An implicit
   C) A total
   D) A fixed
   E) A marginal
   Answer: B
   Topic: Implicit cost
   Skill: Level 1: Definition
   Objective: Checkpoint 12.1
   Author: JC
12) An implicit cost is
   A) when a money payment is made only because a factor of production is used.
   B) when a factor of production is used but a money payment is not made.
   C) when a money payment is made.
   D) not relevant to an entrepreneur's decision making.
   E) considered part of the owner's economic profit.

   Answer: B
   Topic: Implicit cost
   Skill: Level 1: Definition
   Objective: Checkpoint 12.1
   Author: WM

13) Which of the following is an example of an implicit cost?
   A) rent on a building
   B) the cost of fertilizer for a farmer
   C) the economic depreciation of capital equipment the business owns
   D) the cost of fuel and materials.
   E) wages paid to workers

   Answer: C
   Topic: Implicit cost
   Skill: Level 2: Using definitions
   Objective: Checkpoint 12.1
   Author: JC

14) Which of the following is(are) implicit costs in Jim's business venture?
   A) the salary Jim could have earned at another job
   B) the interest Jim must pay on the loan he incurred to open his business
   C) Jim's economic profit
   D) Both answers A and B are correct.
   E) Both answers A and C are correct.

   Answer: A
   Topic: Implicit cost
   Skill: Level 2: Using definitions
   Objective: Checkpoint 12.1
   Author: SA
15) The opportunity cost of owning and using a firm's capital is defined as the capital's
A) variable cost.
B) fixed cost.
C) economic depreciation.
D) nonpayment depreciation.
E) explicit cost.
Answer: C

Topic: Economic depreciation
Skill: Level 1: Definition
Objective: Checkpoint 12.1
Author: JC

16) Economic depreciation equals the
A) market price of the capital at the beginning of the period minus market price of the capital at the end of the period.
B) market price of the capital at the end of the period minus market price of the capital at the end of the period.
C) price of the good being produced at the beginning of the period minus the cost at the end of the period.
D) price of the good being produced at the end of the period minus the cost at the beginning of the period.
E) price of the good being produced at the end of the period minus the price at the beginning of the period.
Answer: A

Topic: Economic depreciation
Skill: Level 1: Definition
Objective: Checkpoint 12.1
Author: PH

17) Suppose Billy owns a hair salon in Dallas. He has one large hair dryer for which he paid $1,000. If he can sell the dryer one year later for $800, his total economic depreciation equals
A) $1,000.
B) $200.
C) $800.
D) $500.
E) None of the above answers are correct.
Answer: B

Topic: Economic depreciation
Skill: Level 2: Using definitions
Objective: Checkpoint 12.1
Author: JC
18) In economics, a "normal profit" is the return to
   A) labor.
   B) capital.
   C) land.
   D) entrepreneurship.
   E) Answer B and answer D are correct.
   Answer: D
   Topic: Normal profit
   Skill: Level 1: Definition
   Objective: Checkpoint 12.1
   Author: PH

19) The return to entrepreneurship is known as
   A) economic profit.
   B) normal profit.
   C) opportunity revenue.
   D) normal revenue.
   E) explicit profit.
   Answer: B
   Topic: Normal profit
   Skill: Level 1: Definition
   Objective: Checkpoint 12.1
   Author: JC

20) A normal profit is defined as
   A) total revenue minus explicit costs.
   B) the same thing as accounting profit.
   C) the return to entrepreneurship.
   D) total revenue minus implicit costs.
   E) the economic profit minus the implicit costs.
   Answer: C
   Topic: Normal profit
   Skill: Level 1: Definition
   Objective: Checkpoint 12.1
   Author: WM
21) Normal profits
A) are part of the firm’s opportunity costs.
B) are the same as economic profits.
C) are part of the firm’s explicit costs.
D) Answer A and answer B are correct.
E) Answer A and answer C are correct.
Answer: A
Topic: Normal profit
Skill: Level 2: Using definitions
Objective: Checkpoint 12.1
Author: SA

22) Which of the following is true?
A) Profit as calculated by accountants and economic profit are not necessarily equal.
B) Profit as calculated by accountants is always smaller than economic profit.
C) Economic profit ignores implicit costs.
D) The Internal Revenue Service taxes the firm’s economic profit but not its normal profit.
E) The Internal Revenue Service taxes the firm’s normal profit but not its economic profit.
Answer: A
Topic: Economic profit
Skill: Level 2: Using definitions
Objective: Checkpoint 12.1
Author: SA

23) April quit her job as an accountant at Ernst and Young, where she was paid $45,000 per year. She started her own landscaping business. She rents machines and tools for $50,000 and pays $10,000 as wages to her help. These are her only costs. April earned total revenue of $100,000.
A) Her accountant calculates her profit as $40,000.
B) She has an economic loss.
C) Her explicit cost is $105,000.
D) Both answers A and B are correct.
E) Both answers A and C are correct.
Answer: D
Topic: Economic profit
Skill: Level 3: Using models
Objective: Checkpoint 12.1
Author: SA
24) Jennifer owns a pig farm near Salina, Kansas. Last year she earned $39,000 in total revenue while incurring $38,000 in explicit costs. She could have earned $27,000 as a teacher in Salina. These are all her revenue and costs. Therefore Jennifer earned an

A) accounting profit of $1,000 but incurred an economic loss of $26,000.
B) accounting profit of $1,000 but incurred an economic loss of $65,000.
C) accounting profit of $1,000 but incurred an economic loss of $38,000.
D) economic profit of $1,000.
E) None of the above answers is correct.

Answer: A
Topic: Economic profit
Skill: Level 3: Using models
Objective: Checkpoint 12.1
Author: JC

25) Suppose a firm’s total revenue is $1,000,000. The firm has incurred explicit costs of $750,000. There is also $50,000 of forgone wages by the owner, $10,000 of forgone interest by the owner, $3,000 worth of economic depreciation, and $20,000 worth of normal profit. What is the firm’s economic profit?

A) $250,000
B) $200,000
C) $190,000
D) $167,000
E) $180,000

Answer: D
Topic: Economic profit
Skill: Level 3: Using models
Objective: Checkpoint 12.1
Author: PH
26) Dr. Khan starts his own dental practice after quitting his $150,000 job at The Mall Dental Clinic. His revenues for the first year are $500,000. He paid $90,000 in rent for the dental office, $60,000 for his office manager’s salary, $24,000 for the dental hygienist, $150,000 for insurance, and $6,000 for other miscellaneous costs. The normal profit from running his business is $20,000.

A) His accounting profit is $350,000.
B) His economic profit is $150,000.
C) His economic profit is zero.
D) His accounting profit is zero.
E) None of the above answers are correct.

Answer: C

Topic: Economic profit
Skill: Level 3: Using models
Objective: Checkpoint 12.1
Author: SA

27) Dr. Khan starts his own dental practice after quitting his $150,000 job at The Mall Dental Clinic. His revenues for the first year are $500,000. He paid $90,000 in rent for the dental office, $60,000 for his office manager’s salary, $24,000 for the dental hygienist, $150,000 for insurance, and $6,000 for other miscellaneous costs. The normal profit from running his business is $20,000.

A) His explicit costs are $330,000.
B) His implicit costs are $170,000.
C) His economic profit is zero.
D) Only answer A and answer C are correct.
E) Answer A, answer B, and answer C are correct.

Answer: E

Topic: Economic profit
Skill: Level 3: Using models
Objective: Checkpoint 12.1
Author: SA
28) Bill is an economics professor who earns $40,000 teaching but decides to leave and fulfill his dream of catering barbecues. During his first year of barbecuing he earned total revenue of $60,000. He spent $30,000 on food and supplies. He also paid his wife $10,000 to help serve food. The normal profit for an entrepreneur running a barbecue business is $3,000. He also rented an industrial grill/fry truck for $12,000. An accountant would conclude that Bill's profit was
   A) $30,000.
   B) $20,000.
   C) $8,000.
   D) $2,000.
   E) $40,000

Answer: C

Topic: Accounting profit
Skill: Level 3: Using models
Objective: Checkpoint 12.1
Author: WM

29) Bill is an economics professor who earns $37,000 teaching but decides to leave and fulfill his dream of catering barbecues. During his year of barbecuing he earned total revenue of $60,000. He spent $30,000 on food and supplies. He also paid his wife $10,000 to help serve food. The normal profit for an entrepreneur running a barbecue business is $3,000. Bill also rented an industrial grill/fry truck for $12,000. Bill had an economic
   A) profit of $20,000.
   B) loss of $32,000.
   C) loss of $42,000.
   D) profit of $28,000.
   E) profit of zero.

Answer: B

Topic: Economic loss
Skill: Level 3: Using models
Objective: Checkpoint 12.1
Author: WM
12.2 Short-Run Production

1) The long run is a time period in which
   A) some of the firm’s resources are fixed.
   B) all of the firm’s resources are fixed.
   C) all of the firm’s resources are variable.
   D) the firm cannot increase its output.
   E) all costs become explicit costs.

Answer: C
Topic: Short run
Skill: Level 1: Definition
Objective: Checkpoint 12.2
Author: PH

2) The short run is the time frame
   A) during which the quantities of all resources are fixed.
   B) that is less than a year.
   C) during which the quantities of some resources are fixed.
   D) during which the quantities of all resources are variable.
   E) during which all costs are implicit costs.

Answer: C
Topic: Short run
Skill: Level 1: Definition
Objective: Checkpoint 12.2
Author: SA

3) The short run is
   A) less than one year.
   B) the time frame in which all resources are fixed.
   C) the time frame in which some resources are fixed.
   D) the time frame in which output is fixed.
   E) a time frame short enough so that some costs are explicit costs.

Answer: C
Topic: Short run
Skill: Level 1: Definition
Objective: Checkpoint 12.2
Author: WM
4) Which of the following is a long-run and not a short-run decision for a firm?
   A) hiring fewer people
   B) increasing plant capacity by fifty percent
   C) hiring more people
   D) Answer A and answer B are correct.
   E) Answer B and answer C are correct.
   Answer: B

5) Short-run decisions ____ easily reversed; long-run decisions ____ easily reversed.
   A) are; are
   B) are; are not
   C) are not; are
   D) are not; are not
   E) are not; might be
   Answer: B

6) In the long run, the firm ____ change the number of workers it employs and ____ change the size of its plant.
   A) can; can
   B) can; cannot
   C) cannot; can
   D) cannot; cannot
   E) In order to answer the question more information is needed about how long is the long run.
   Answer: B
7) The total product curve shows the relationship between total product and
   A) cost.
   B) the quantity of labor.
   C) the average product.
   D) the marginal product.
   E) the marginal cost.

   Answer: B
   Topic: Total product
   Skill: Level 1: Definition
   Objective: Checkpoint 12.2
   Author: SA

8) A firm’s total product is the
   A) change in output from adding one more unit of labor.
   B) change in average product from employing one more unit of labor.
   C) total quantity of a good the firm produced in a given time period.
   D) cost of all of the units of output the firm produced in a given time period.
   E) change in quantity produced by changing the quantity of labor employed.

   Answer: C
   Topic: Total product
   Skill: Level 1: Definition
   Objective: Checkpoint 12.2
   Author: PH

9) Total product is equal to the
   A) additional quantity produced by an additional unit of labor.
   B) total quantity produced divided by the quantity of labor.
   C) total quantity produced in a given time period.
   D) total amount of labor used to produce a certain amount of product.
   E) sum of all the firm’s costs.

   Answer: C
   Topic: Total product
   Skill: Level 1: Definition
   Objective: Checkpoint 12.2
   Author: WM
10) The marginal product of labor
   A) equals the total product divided by quantity of labor.
   B) equals the increase in cost when another worker is hired.
   C) always decreases as more workers are hired.
   D) equals the change in total product divided by the increase in the quantity of labor.
   E) equals total product divided by the wage rate.
   Answer: D
   Topic: Marginal product
   Skill: Level 1: Definition
   Objective: Checkpoint 12.2
   Author: SA

11) Marginal product of labor is defined as the change in
   A) total cost from employing one more worker.
   B) total revenue from employing one more worker.
   C) average product from employing one more worker.
   D) total output from employing one more worker.
   E) total output divided by the change in cost from employing one more worker.
   Answer: D
   Topic: Marginal product
   Skill: Level 1: Definition
   Objective: Checkpoint 12.2
   Author: PH

12) The marginal product of labor equals the change in ____ from a one-unit increase in the
    quantity of labor.
    A) total product
    B) average product
    C) total cost
    D) the slope of the average product curve
    E) the wage rate
    Answer: A
    Topic: Marginal product
    Skill: Level 1: Definition
    Objective: Checkpoint 12.2
    Author: SA
13) The change in the total product that results from a one-unit increase in the quantity of labor employed is known as
   A) changed total product.
   B) marginal product.
   C) average product.
   D) total product.
   E) None of the above answers is correct.

   Answer: B

   Topic: Marginal product
   Skill: Level 1: Definition
   Objective: Checkpoint 12.2
   Author: JC

14) Which of the following statements is correct?
   A) When the marginal product is decreasing, the slope of the total product curve is negative.
   B) When the marginal product of an additional worker is less than that of the previous worker, the firm has increasing returns.
   C) When the marginal product of an additional worker is less than that of the previous worker, the firm has decreasing returns to labor.
   D) When the marginal product exceeds the average product, the slope of the average product curve must be negative.
   E) The marginal product equals the average product when the marginal product is at its maximum.

   Answer: C

   Topic: Marginal product
   Skill: Level 2: Using definitions
   Objective: Checkpoint 12.2
   Author: SA
15) At the Punjab Bakery, two workers can decorate 14 cakes in an hour and three workers can decorate 18 cakes in an hour. The marginal product of the third worker is
   A) 18 cakes and the average product for three workers is 6 cakes.
   B) 9 cakes and is equal to the average product.
   C) 4 cakes and the average product for three workers is 6 cakes.
   D) 32 cakes and the average product for three workers is 9 cakes.
   E) 6 cakes and the average product for three workers is also 6 cakes.
   Answer: C  
   Topic: Marginal product  
   Skill: Level 2: Using definitions  
   Objective: Checkpoint 12.2  
   Author: SA

16) Jill runs a factory that makes lie detectors in Little Rock, Arkansas. This month, Jill's 34 workers produced 690 machines. Suppose Jill adds one more worker and, as a result, her factory's output increases to 700. Jill's marginal product of labor from the last worker hired equals ____.
   A) 10
   B) 20
   C) 690
   D) 700
   E) None of the above answers is correct.
   Answer: A  
   Topic: Marginal product  
   Skill: Level 2: Using definitions  
   Objective: Checkpoint 12.2  
   Author: JC
17) Increasing marginal returns always occurs when the
   A) marginal product of an additional worker exceeds the marginal product of the
       previous worker.
   B) average product of an additional worker exceeds the average product of the previous
       worker.
   C) marginal product of an additional worker is less than the marginal product of the
       previous worker.
   D) average product of an additional worker is less than the average product of the
       previous worker.
   E) marginal product of an additional worker exceeds the average product of the previous
       worker.

   Answer: A

   Topic: Increasing marginal returns
   Skill: Level 2: Using definitions
   Objective: Checkpoint 12.2
   Author: PH

18) Jeremiah runs a bullfrog farm in Frogville, Oklahoma. Jeremiah notices that each additional
    worker he employs adds more to the total output than does the previous worker. Jeremiah must be
    A) experiencing increasing marginal returns to labor.
    B) producing at a point where the average product of labor decreases as more workers are
       employed.
    C) producing at a point below his total product curve.
    D) mistaken because the law of decreasing returns points out that it cannot be the case
       that the marginal product increases as more workers are employed.
    E) producing at a point where the average product of labor exceeds the marginal product
       of labor.

   Answer: A

   Topic: Increasing marginal returns
   Skill: Level 2: Using definitions
   Objective: Checkpoint 12.2
   Author: JC
19) When the marginal product of an additional worker is less than the marginal product of the previous worker, there are ____ returns to labor.
   A) increasing total
   B) decreasing total
   C) increasing marginal
   D) decreasing marginal
   E) constant average
   Answer: D
   Topic: Decreasing marginal returns
   Skill: Level 1: Definition
   Objective: Checkpoint 12.2
   Author: JC

20) Decreasing marginal returns
   A) can be avoided if a firm watches costs.
   B) affect all firms, but at different production levels.
   C) affect all firms at the same level of production.
   D) disappear when the firm produces a large enough level of output.
   E) mean that the average product of labor starts as a negative number and then becomes positive.
   Answer: B
   Topic: Decreasing marginal returns
   Skill: Level 2: Using definitions
   Objective: Checkpoint 12.2
   Author: WM

21) The law of decreasing returns states that as a firm uses more of a
   A) fixed input, with a given quantity of variable inputs, the marginal product of the fixed input eventually decreases.
   B) variable input, total output will increase indefinitely.
   C) variable input, with a given quantity of fixed inputs, the marginal product of the variable input eventually decreases.
   D) variable input, output will begin to fall immediately.
   E) fixed input and a variable input, the marginal product of the fixed input and the marginal product of the variable input both decrease.
   Answer: C
   Topic: Law of decreasing returns
   Skill: Level 1: Definition
   Objective: Checkpoint 12.2
   Author: JC
22) Average product is defined as
   A) marginal product + total product.
   B) total product + marginal product.
   C) total product × quantity of labor.
   D) total product × quantity of labor.
   E) marginal product × quantity of labor.

   Answer: C
   Topic: Average product
   Skill: Level 1: Definition
   Objective: Checkpoint 12.2
   Author: JC

23) Jill runs a factory that makes lie detectors in Little Rock, Arkansas. This month, Jill’s 34
    workers produced 680 machines. Jill’s average product of labor equaled ____ lie detectors
    per worker.

    A) 680
    B) 34
    C) 23
    D) 20
    E) None of the above answers is correct.

    Answer: D
    Topic: Average product
    Skill: Level 2: Using definitions
    Objective: Checkpoint 12.2
    Author: JC

24) Denise owns a plant that produces watch parts in Ohio. Denise noticed that when she hired
    the last worker, that worker’s marginal product exceeded the marginal product of the
    previous worker. As a result, when the last worker was hired, Denise’s average product of
    labor

    A) decreased.
    B) increased.
    C) did not change.
    D) perhaps changed, but there is not enough information to determine whether or not it
       did change.
    E) equals the marginal product of labor.

    Answer: B
    Topic: Average product
    Skill: Level 2: Using definitions
    Objective: Checkpoint 12.2
    Author: JC
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<th>Quantity of labor (workers)</th>
<th>Total product (lawns mowed per week)</th>
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25) Kenya owns a lawn mowing company. His total product schedule is in the above table. The marginal product of the fourth worker is ____ lawns mowed per week.
   A) 80
   B) 25
   C) 20
   D) 5
   E) 320
   Answer: D
   Topic: Marginal product
   Skill: Level 3: Using models
   Objective: Checkpoint 12.2
   Author: PH

26) Kenya owns a lawn mowing company. His total product schedule is in the above table. When 4 workers are employed, the average product is ____ lawns mowed per week.
   A) 80
   B) 25
   C) 20
   D) 5
   E) 320
   Answer: C
   Topic: Average product
   Skill: Level 3: Using models
   Objective: Checkpoint 12.2
   Author: PH
27) Kenya owns a lawn mowing company. His total product schedule is in the above table. Decreasing marginal returns first occur with the
   A) first worker.
   B) second worker.
   C) third worker.
   D) fourth worker.
   E) fifth worker

Answer: B

Topic: Decreasing marginal returns
Skill: Level 3: Using models
Objective: Checkpoint 12.2
Author: PH

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<th>Total product (hair stylings per day)</th>
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28) The above table shows the total product schedule for Hair Today, a hair styling salon. Based on the table, the marginal product for Hair Today
   A) never reaches a maximum.
   B) decreases after the 1st worker.
   C) reaches a maximum with the 4th worker.
   D) reaches a maximum with the 3rd worker.
   E) reaches a maximum with the 5th worker.

Answer: D

Topic: Marginal product
Skill: Level 3: Using models
Objective: Checkpoint 12.2
Author: WM
29) The above table shows the total product schedule for Hair Today, a hair styling salon. The average product when four workers are hired is
   A) 10 hair stylings.
   B) 15 hair stylings.
   C) 20 hair stylings.
   D) 240 hair stylings.
   E) the same as when five workers are hired.
   Answer: B
   Topic: Average product
   Skill: Level 3: Using models
   Objective: Checkpoint 12.2
   Author: WM

30) Which of the following is correct about marginal and average products?
   A) When the marginal product is increasing, the average product must be increasing.
   B) When the marginal product exceeds the average product, the average product must be increasing.
   C) When the average product is increasing, the marginal product must be decreasing.
   D) When the marginal product is decreasing, the average product must be decreasing.
   E) When the marginal product is increasing, the average product must be decreasing.
   Answer: B
   Topic: Marginal and average product
   Skill: Level 2: Using definitions
   Objective: Checkpoint 12.2
   Author: WM

12.3 Short-Run Cost

1) The cost of all the factors of production the firm uses is called the ____ cost.
   A) complete
   B) fixed
   C) total
   D) explicit
   E) marginal total
   Answer: C
   Topic: Total cost
   Skill: Level 1: Definition
   Objective: Checkpoint 12.3
   Author: JC
2) Total cost is defined as the
   A) cost of using labor.
   B) cost of all the factors of production.
   C) cost that is incurred in depreciation.
   D) costs of using fixed factors of production but not variable factors of production.
   E) costs of using variable factors of production but not fixed factors of production.

   Answer: B
   Topic: Total cost
   Skill: Level 1: Definition
   Objective: Checkpoint 12.3
   Author: WM

3) Chuck owns a factory that produces leather footballs. His total fixed cost equaled $86,000 last year. His total cost equaled $286,000 last year. Hence Chuck’s
   A) total variable cost was zero.
   B) incurred an economic loss.
   C) total variable cost equaled $200,000.
   D) total variable cost equaled $372,000.
   E) None of the above answers is correct.

   Answer: C
   Topic: Total cost
   Skill: Level 3: Using models
   Objective: Checkpoint 12.3
   Author: JC

4) If Melissa owns a software company that incurs no fixed costs, then
   A) her total cost equals her total variable cost.
   B) she will earn an economic profit.
   C) her total variable cost is less than her total cost.
   D) her total cost equals zero.
   E) her marginal cost must equal zero.

   Answer: A
   Topic: Total cost
   Skill: Level 2: Using definitions
   Objective: Checkpoint 12.3
   Author: JC
5) In the short run, a firm cannot change the amount of capital it uses. Therefore the cost of capital is a
A) short-run cost.
B) variable cost.
C) productivity cost.
D) fixed cost.
E) marginal cost.
Answer: D
Topic: Total fixed cost
Skill: Level 1: Definition
Objective: Checkpoint 12.3
Author: JC

6) The cost that does not change as output changes is
A) total fixed cost.
B) average fixed cost.
C) total variable cost.
D) average variable cost.
E) marginal cost.
Answer: A
Topic: Total fixed cost
Skill: Level 1: Definition
Objective: Checkpoint 12.3
Author: SA

7) Because the amount of labor a firm employs can be changed, the cost of labor is known as
A) minimum cost.
B) variable cost.
C) maximum cost.
D) fixed cost.
E) an unavoidable cost.
Answer: B
Topic: Total variable cost
Skill: Level 1: Definition
Objective: Checkpoint 12.3
Author: JC
8) If a firm does not produce any output, its
   A) total fixed cost must be zero.
   B) economic profit must be positive.
   C) total variable cost must be zero.
   D) total costs must be zero.
   E) marginal cost must be zero.

   Answer: C

   Topic: Total variable cost
   Skill: Level 2: Using definitions
   Objective: Checkpoint 12.3
   Author: SA

9) Marginal cost equals
   A) total cost minus total variable cost.
   B) total fixed cost divided by total output.
   C) total variable cost divided by total output.
   D) the change in total cost that results from a one-unit increase in output.
   E) the change in fixed cost that results from a one-unit increase in output.

   Answer: D

   Topic: Marginal cost
   Skill: Level 1: Definition
   Objective: Checkpoint 12.3
   Author: JC

10) The change in cost that results from a one-unit increase in output is called the
    A) average fixed cost.
    B) per-unit variable cost.
    C) per-unit total cost.
    D) marginal cost.
    E) average cost change.

    Answer: D

   Topic: Marginal cost
   Skill: Level 1: Definition
   Objective: Checkpoint 12.3
   Author: SA
11) As a typical firm increases its output, its marginal cost
   A) is constant.
   B) decreases at first and then increases.
   C) increases at first and then decreases.
   D) decreases.
   E) is negative at first and then positive.

Answer: B

Topic: Marginal cost
Skill: Level 2: Using definitions
Objective: Checkpoint 12.3
Author: WM

12) Scott owns a law-enforcement training operation in Boise, Idaho. He employs three
    trainers. The last trainer Scott hired increased Scott's total cost by $466 per week even
    though the trainer brought in only one new client. Hence Scott's
    A) total variable cost equals $466.
    B) marginal cost of the last client equals $466.
    C) marginal cost of the last worker equals $233.
    D) total variable cost equals $233.
    E) total fixed cost of the last client equals $466.

Answer: B

Topic: Marginal cost
Skill: Level 2: Using definitions
Objective: Checkpoint 12.3
Author: JC
Output  
(gallons of ice cream per hour) | Total cost  
(dollars)  
---|---
0 | 1  
1 | 2  
2 | 3  
3 | 5  
4 | 8  
5 | 11  

13) The Jerry-Berry Ice Cream Shoppe’s total cost schedule is in the above table. Based on the table, which of the following is correct?

A) The total fixed cost is $1.
B) The average fixed cost of 1 gallon is $1.00.
C) The average variable cost of 2 gallons of ice cream is $1.00 per gallon.
D) Only answer A and answer B are correct.
E) Answer A, answer B, and answer C are correct.

Answer: E

Topic: Costs  
Skill: Level 1: Definition  
Objective: Checkpoint 12.3  
Author: SA

14) The Jerry-Berry Ice Cream Shoppe’s total cost schedule is in the above table. Based on the table, the marginal cost of producing the fourth gallon of ice cream is

A) $2.
B) $3.
C) $5.
D) $8.
E) $32.

Answer: B

Topic: Marginal cost  
Skill: Level 1: Definition  
Objective: Checkpoint 12.3  
Author: SA
15) Paulette owns a pizza parlor. Her total cost schedule is in the above table. Her total fixed cost is equal to
   A) $20.
   B) $35.
   C) $79.
   D) $85.
   E) Some amount but more information is needed to determine her fixed cost.

   Answer: A
   Topic: Total fixed cost
   Skill: Level 3: Using models
   Objective: Checkpoint 12.3
   Author: PH

16) Paulette owns a pizza parlor. Her total cost schedule is in the above table. Her total variable cost of producing four pizzas per hour is
   A) $20.
   B) $49.
   C) $51.
   D) $71.
   E) Some amount but more information is needed to determine this total variable cost.

   Answer: C
   Topic: Total fixed cost
   Skill: Level 3: Using models
   Objective: Checkpoint 12.3
   Author: PH
17) Paulette owns a pizza parlor. Her total cost schedule is in the above table. Her marginal cost of producing the fifth pizza is
   A) $8.
   B) between $8.01 and $10.00.
   C) between $10.01 and $14.00.
   D) between $14.01 and $78.00.
   E) more than $78.01.

Answer: A

Topic: Marginal cost
Skill: Level 3: Using models
Objective: Checkpoint 12.3
Author: PH
18) In the above figure, curve $A$ is the ____ curve and curve $B$ is the ____ curve.
   A) total variable cost; total fixed cost
   B) total cost; total fixed cost
   C) total fixed cost; total variable cost
   D) total cost; total variable cost
   E) total variable cost; total cost

Answer: D

*Topic: Total cost*

*Skill: Level 3: Using models*

*Objective: Checkpoint 12.3*

*Author: SA*
19) In the above figure, curve A is the ____ curve and curve C is the ____ curve.
   A) total variable cost; total fixed cost
   B) total cost; total fixed cost
   C) total fixed cost; total variable cost
   D) total cost; total variable cost
   E) total variable cost; total cost
   Answer: B

Topic: Total cost
Skill: Level 3: Using models
Objective: Checkpoint 12.3
Author: SA

20) The total fixed cost per unit of output is defined as
   A) average total cost.
   B) total fixed cost.
   C) marginal fixed cost.
   D) average fixed cost.
   E) marginal cost.
   Answer: D

Topic: Average fixed cost
Skill: Level 1: Definition
Objective: Checkpoint 12.3
Author: JC

21) Average variable cost equals
   A) fixed cost divided by output.
   B) total variable cost divided by output.
   C) marginal cost divided by output.
   D) marginal cost plus fixed cost.
   E) marginal cost multiplied by output.
   Answer: B

Topic: Average variable cost
Skill: Level 1: Definition
Objective: Checkpoint 12.3
Author: JC
22) Average total cost is equal to
   A) average fixed cost + average variable cost.
   B) total cost / quantity.
   C) the change in total cost when output changes by one unit.
   D) Answer A and answer B are correct.
   E) Answer A and answer C are correct.

   Answer: D
   Topic: Average total cost
   Skill: Level 1: Definition
   Objective: Checkpoint 12.3
   Author: SA

23) The cost that always falls as output increases is
   A) only the total fixed cost.
   B) only the average fixed cost.
   C) both the total fixed cost and the average fixed cost.
   D) neither the total fixed cost nor the average fixed cost.
   E) only the marginal cost.

   Answer: B
   Topic: Average fixed cost
   Skill: Level 2: Using definitions
   Objective: Checkpoint 12.3
   Author: SA

24) An insurance agent rents a building and has a three–year lease. An increase in the rent for the building increases the agent’s
   A) total cost and average variable cost.
   B) total variable cost and average variable cost.
   C) total fixed cost and total variable cost.
   D) total fixed cost and average fixed cost.
   E) total variable cost and total cost.

   Answer: D
   Topic: Average costs
   Skill: Level 3: Using models
   Objective: Checkpoint 12.3
   Author: SA
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<th>Quantity of labor (workers)</th>
<th>Total product (dogs groomed per week)</th>
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<td>1</td>
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<td>5</td>
<td>220</td>
</tr>
<tr>
<td>6</td>
<td>240</td>
</tr>
</tbody>
</table>

25) Anna owns a dog grooming salon in Brunswick, Georgia. The above table has Anna's total product schedule. Anna pays each worker $300 per week and she pays rent of $600 a week for her salon. These are her only costs. When Anna has a staff of 2 workers, her total cost equals

A) $1,200.
B) $300.
C) $10.00.
D) $12.00.
E) $600.

Answer: A

*Topic: Total cost*

*Skill: Level 3: Using models*

*Objective: Checkpoint 12.3*

*Author: MR*

26) Anna owns a dog grooming salon in Brunswick, Georgia. The above table has Anna’s total product schedule. Anna pays each worker $300 per week and she pays rent of $600 a week for her salon. These are her only costs. When Anna has a staff of 2 workers, her average total cost equals

A) $2,400.
B) $300.
C) $10.00.
D) $12.00.
E) $1,200.

Answer: D

*Topic: Average total cost*

*Skill: Level 3: Using models*

*Objective: Checkpoint 12.3*

*Author: MR*
27) Anna owns a dog grooming salon in Brunswick, Georgia. The above table has Anna's total product schedule. Anna pays each worker $300 per week and she pays rent of $600 a week for her salon. These are her only costs. When Anna has a staff of 2 workers, her average variable cost equals
A) $2,400.
B) $300.
C) $6.00.
D) $10.00.
E) $600.
Answer: C
*Topic: Average variable cost*
*Skill: Level 3: Using models*
*Objective: Checkpoint 12.3*
*Author: MR*

28) Anna owns a dog grooming salon in Brunswick, Georgia. The above table has Anna's total product schedule. Anna pays each worker $300 per week and she pays rent of $600 a week for her salon. These are her only costs. When Anna has a staff of 2 workers, her average fixed cost equals
A) $600.
B) $6.00.
C) $7.50.
D) $10.00.
E) $2,400.
Answer: B
*Topic: Average fixed cost*
*Skill: Level 3: Using models*
*Objective: Checkpoint 12.3*
*Author: MR*
29) Anna owns a dog grooming salon in Brunswick, Georgia. The above table has Anna’s total product schedule. Anna pays each worker $300 per week and she pays rent of $600 a week for her salon. These are her only costs. When Anna has a staff of 6 workers, her total cost equals
   A) $2,400.
   B) $300.
   C) $7.50.
   D) $10.00.
   E) $1,800

   Answer: A
   
   Topic: Total cost
   
   Skill: Level 3: Using models
   
   Objective: Checkpoint 12.3
   
   Author: JC

30) Anna owns a dog grooming salon in Brunswick, Georgia. The above table has Anna’s total product schedule. Anna pays each worker $300 per week and she pays rent of $600 a week for her salon. These are her only costs. When Anna has a staff of 6 workers, her average total cost equals
   A) $2,400.
   B) $300.
   C) $7.50.
   D) $10.00.
   E) $4,200.

   Answer: D
   
   Topic: Average total cost
   
   Skill: Level 3: Using models
   
   Objective: Checkpoint 12.3
   
   Author: JC
31) Anna owns a dog grooming salon in Brunswick, Georgia. The above table has Anna's total product schedule. Anna pays each worker $300 per week and she pays rent of $600 a week for her salon. These are her only costs. When Anna has a staff of 6 workers, her average variable cost equals
   A) $2,400.
   B) $300.
   C) $7.50.
   D) $10.00.
   E) $1,800.
Answer: C
   Topic: Average variable cost
   Skill: Level 3: Using models
   Objective: Checkpoint 12.3
   Author: JC

32) Anna owns a dog grooming salon in Brunswick, Georgia. The above table has Anna's total product schedule. Anna pays each worker $300 per week and she pays rent of $600 a week for her salon. These are her only costs. When Anna has a staff of 6 workers, her average fixed cost equals
   A) $600.
   B) $2.50.
   C) $7.50.
   D) $10.00.
   E) $6.00.
Answer: B
   Topic: Average fixed cost
   Skill: Level 3: Using models
   Objective: Checkpoint 12.3
   Author: MR

33) The vertical distance between total cost curve and total variable cost curve is equal to
   A) average fixed cost.
   B) total fixed cost.
   C) average variable cost.
   D) average total cost.
   E) marginal cost.
Answer: B
   Topic: Cost curves
   Skill: Level 1: Definition
   Objective: Checkpoint 12.3
   Author: SA
34) The U-shaped average total cost curve is
   A) a result of firms' wanting to find the output level where cost is at its minimum.
   B) unrealistic because average total cost always increases as output increases.
   C) the result of average fixed cost falling and decreasing marginal returns as output
      increases.
   D) a result of constant marginal returns.
   E) a result of increasing marginal returns.

Answer: C

Topic: Cost curves
Skill: Level 3: Using models
Objective: Checkpoint 12.3
Author: SA

35) The U-shape of the average variable, average total, and marginal cost curves reflects
   A) increasing marginal returns.
   B) decreasing marginal returns.
   C) both increasing and decreasing marginal returns.
   D) decreasing marginal product.
   E) the point that implicit costs become a smaller fraction of total cost as output increases.

Answer: C

Topic: Cost curves
Skill: Level 2: Using definitions
Objective: Checkpoint 12.3
Author: PH

36) In a graph of a typical firm's AFC, ATC, and AVC curves, the
   A) AVC curve lies above the ATC curve.
   B) ATC curve lies below the AFC curve.
   C) distance between the ATC curve and the AVC curve equals the AFC.
   D) distance between the AVC curve and the AFC curve equals the ATC.
   E) AVC curve crosses the MC curve at the point where the MC is at its minimum.

Answer: C

Topic: Cost curves
Skill: Level 3: Using models
Objective: Checkpoint 12.3
Author: WM
37) As we observe the cost curves’ graph, we see that the
   A) MC curve intersects the ATC curve at its maximum.
   B) MC curve can not be U-shaped.
   C) ATC curve always has a negative slope.
   D) MC curve intersects the AVC curve and ATC curve at their minimums.
   E) MC constantly falls as output increases.

   Answer: D
   Topic: Cost curves
   Skill: Level 3: Using models
   Objective: Checkpoint 12.3
   Author: WM

38) In a figure showing the average total cost curve and the average variable cost curve, the vertical distance between the two curves is equal to the
   A) marginal cost.
   B) average fixed cost.
   C) total fixed cost.
   D) total variable cost.
   E) average marginal cost.

   Answer: B
   Topic: Cost curves
   Skill: Level 2: Using definitions
   Objective: Checkpoint 12.3
   Author: SA

39) The vertical distance between the total cost curve and the total variable cost curve ____ as output increases and the vertical distance between the average total cost curve and average variable cost curve ____ as output increases.
   A) is constant; decreases
   B) decreases; is constant
   C) increases; decreases
   D) decreases; increases
   E) decreases; decreases

   Answer: A
   Topic: Cost curves
   Skill: Level 2: Using definitions
   Objective: Checkpoint 12.3
   Author: SA
40) The marginal cost curve is U-shaped. Over the range of output for which the marginal cost is falling as output increases, the marginal product is
   A) increasing.
   B) decreasing.
   C) constant.
   D) probably changing, but there is no stable relationship between the marginal cost and the marginal product.
   E) not defined.
   Answer: A

   Topic: MC and MP
   Skill: Level 2: Using definitions
   Objective: Checkpoint 12.3
   Author: SA

41) The relationship between the MP and MC curves is
   A) over the range where the MP curve has a negative slope, the MC curve also has a negative slope.
   B) there is no predictable relationship.
   C) over the range where the MC curve has a positive slope, the MP curve also has a positive slope.
   D) over the range where the MP curve has a positive slope, the MC curve has a negative slope.
   E) that the MP is not defined when the MC curve has a negative slope.
   Answer: D

   Topic: MC and MP
   Skill: Level 2: Using definitions
   Objective: Checkpoint 12.3
   Author: WM
12.4 Long-Run Cost

1) A firm has economies of scale when its average total cost of production ____ as the size of its plant and its labor force ____.
   A) decreases; increase by the same percentage
   B) does not change; increase by the same percentage
   C) increases; increase by the same percentage
   D) decreases; do not change
   E) decreases; decrease by the same percentage

Answer: A

Topic: Economies of scale
Skill: Level 1: Definition
Objective: Checkpoint 12.4
Author: JC

2) The main sources of economies of scale are
   A) increasing marginal cost and decreasing marginal product.
   B) specialization of resources such as labor and capital.
   C) caused by the difficulty of coordinating and controlling large enterprises.
   D) decreasing marginal cost and increasing marginal product.
   E) an increase in a firm’s bargaining power to lower the wage rate and the cost of capital as the firm’s output increases.

Answer: B

Topic: Economies of scale
Skill: Level 2: Using definitions
Objective: Checkpoint 12.4
Author: PH

3) Economies of scale occur when, as output increases, the
   A) long-run average cost increases.
   B) long-run average cost decreases.
   C) short-run average total cost decreases.
   D) long-run average cost stays constant.
   E) long-run fixed cost decreases.

Answer: B

Topic: Economies of scale
Skill: Level 2: Using definitions
Objective: Checkpoint 12.4
Author: SA
4) Diseconomies of scale is
   A) a short run phenomenon.
   B) the result of decreasing marginal returns.
   C) a long run phenomenon.
   D) the result of increasing marginal returns.
   E) possible only when the firm’s plant size is fixed.

Answer: C

5) Diseconomies of scale occurs when the average total cost of production ____ as the size of a plant and its labor force ____.
   A) decreases; increase by the same percentage
   B) does not change; increase by the same percentage
   C) increases; increase by the same percentage
   D) decreases; do not change
   E) increases; do not change

Answer: C

6) When a firm ____ the size of its plant and labor force by the same percentage and, as a result, its average total cost ____ then the firm experiences diseconomies of scale.
   A) increases; increases
   B) increases; does not change
   C) increases; decreases
   D) None of the above answers are correct because diseconomies of scale occur when the firm only changes its fixed inputs and leaves the variable inputs constant.
   E) None of the above answers are correct because diseconomies of scale occur when the firm only changes its variable inputs and leaves the fixed inputs constant.

Answer: A
7) Diseconomies of scale is a result of
   A) mismanagement.
   B) difficulties of coordinating and controlling a large enterprise.
   C) specialization of labor, capital, and management.
   D) technological progress.
   E) larger fixed costs as the firm's production increases.

   Answer: B

   Topic: Diseconomies of scale
   Skill: Level 1: Definition
   Objective: Checkpoint 12.4
   Author: PH

8) The long-run average cost curve is U-shaped because of which of the following?
   A) decreasing marginal returns as more labor is hired
   B) constant fixed costs as output is increased
   C) economies and diseconomies of scale
   D) increasing marginal returns as more labor is hired
   E) decreasing average fixed costs as output is increased

   Answer: C

   Topic: Long-run average cost curve
   Skill: Level 3: Using models
   Objective: Checkpoint 12.4
   Author: TS

9) The long-run average cost curve
   A) is an upside down U-shape.
   B) is constructed using the short-run marginal cost curves.
   C) shows economies and diseconomies of scale.
   D) Both answer A and answer B are correct.
   E) Both answer A and answer C are correct.

   Answer: C

   Topic: Long-run average cost curve
   Skill: Level 2: Using definitions
   Objective: Checkpoint 12.4
   Author: SA
10) The portion of the long-run average cost curve in which economies of scale are experienced shows that as plant size increases, the
   A) average total cost decreases.
   B) average total cost increases.
   C) marginal cost increases.
   D) marginal cost decreases.
   E) average variable cost is constant and the average fixed cost decreases.

Answer: A
Topic: Long-run average cost curve
Skill: Level 2: Using definitions
Objective: Checkpoint 12.4
Author: PH

11) If a company triples its plant size and its average cost decreases, then the firm is definitely experiencing
   A) diseconomies of scale.
   B) decreasing marginal returns.
   C) increasing marginal returns.
   D) economies of scale.
   E) Both answer C and answer D are correct.

Answer: D
Topic: Long-run average cost curve
Skill: Level 3: Using models
Objective: Checkpoint 12.4
Author: PH
12.5 Integrative Questions

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<th>Quantity of labor (workers)</th>
<th>Total product (rolls of film processed per hour)</th>
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<tr>
<td>7</td>
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</table>

1) The table above shows
   A) a total product schedule.
   B) the market for labor.
   C) a production possibility frontier.
   D) a supply schedule.
   E) a demand for labor schedule.

Answer: A

Topic: Integrative
Skill: Level 1: Definition
Objective: Integrative
Author: CD

2) Which of the following variables do you need to know to calculate marginal cost?
   i) change in total cost
   ii) marginal product of labor
   iii) change in quantity of labor used
   iv) change in output

A) i and ii
B) i and iv
C) ii and iv
D) i, iii, and iv
E) Only ii

Answer: B

Topic: Integrative
Skill: Level 2: Using definitions
Objective: Integrative
Author: CD
3) The average product curve
   A) initially falls then rises.
   B) rises as average variable cost increases.
   C) initially rises and then falls.
   D) shows how productivity changes as output changes.
   E) intersects the marginal cost curve when the average product curve is at its maximum.

   Answer: C
   Topic: Integrative
   Skill: Level 2: Using definitions
   Objective: Integrative
   Author: CD

4) Which of the following contributes to increasing marginal returns?
   A) decreasing implicit costs
   B) increasing explicit costs
   C) specialization of labor
   D) Both answer A and answer B are correct.
   E) Both answer A and answer C are correct.

   Answer: C
   Topic: Integrative
   Skill: Level 2: Using definitions
   Objective: Integrative
   Author: CD

5) The law of decreasing returns applies to
   A) the long-run average cost curve.
   B) average total cost.
   C) diseconomies of scale.
   D) changes in a variable input with a given quantity of fixed inputs.
   E) changes in a fixed input with a given quantity of variable inputs.

   Answer: D
   Topic: Integrative
   Skill: Level 2: Using definitions
   Objective: Integrative
   Author: CD
6) Once production has reached the maximum average product of labor, if production increases then
   A) average fixed cost rises.
   B) total costs decrease.
   C) total product decreases.
   D) decreasing marginal returns occur.
   E) the plant size must be increased.
   Answer: D
   Topic: Integrative
   Skill: Level 3: Using models
   Objective: Integrative
   Author: CD

7) As output increases, average total cost decreases
   A) constantly.
   B) as the average product of labor decreases.
   C) initially and then starts to increase.
   D) in the long run and the short run.
   E) as long as average fixed cost decreases.
   Answer: C
   Topic: Integrative
   Skill: Level 2: Using definitions
   Objective: Integrative
   Author: CD

8) Marginal cost
   A) is the difference between total cost and total fixed cost.
   B) increases as the marginal product of labor increases.
   C) decreases as the average product of labor increases.
   D) is the change in total cost arising from a one-unit increase in output.
   E) equals the change in variable cost divided by the change in fixed cost when output increases by one unit.
   Answer: D
   Topic: Integrative
   Skill: Level 2: Using definitions
   Objective: Integrative
   Author: CD
9) Which of the following curves are U-shaped?
   i) average variable cost curve
   ii) average fixed cost curve
   iii) average total cost curve
   A) i and ii
   B) i and iii
   C) ii and iii
   D) i, ii, and iii
   E) Only ii
   Answer: B
   Topic: Integrative
   Skill: Level 2: Using definitions
   Objective: Integrative
   Author: CD

10) The marginal cost curve intersects the ____ curves at their ____ points.
    A) average total cost and average fixed cost; minimum
    B) average product and marginal product; maximum
    C) average variable cost and total variable cost; maximum
    D) average total cost and average variable cost; minimum
    E) average product and marginal product; minimum
    Answer: D
    Topic: Integrative
    Skill: Level 2: Using definitions
    Objective: Integrative
    Author: CD

11) If the average product of labor curve is rising,
    i) the average variable cost curve is falling.
    ii) the marginal cost curve is definitely falling.
    iii) the marginal product curve has reached its maximum.
    A) i and iii
    B) i only
    C) ii and iii
    D) i, ii, and iii
    E) ii only
    Answer: B
    Topic: Integrative
    Skill: Level 3: Using models
    Objective: Integrative
    Author: CD
12) Suppose one week Mike's Bikes uses 10 units of labor and 10 units of capital to make 20 bikes. The next year Mike hires 1 extra unit of labor and buys 1 extra unit of capital and produces 21 bikes. Mike's Bikes has experienced
   A) increasing returns to scale.
   B) decreasing returns to scale.
   C) decreasing marginal product of labor.
   D) an upward shift of its cost curves.
   E) a decrease in its variable costs.

Answer: B

Topic: Integrative
Skill: Level 3: Using models
Objective: Integrative
Author: CD

13) Suppose one week Fresh Cuts Lawn Service hires 10 units of labor and 10 units of capital, and cuts 50 yards. The next week, Fresh Cuts increases its labor and its capital by 10 percent, and cuts 60 yards. Fresh Cuts definitely has experienced
   A) increasing marginal returns.
   B) increasing returns to scale.
   C) decreasing marginal returns.
   D) decreasing returns to scale.
   E) an increase in its marginal cost.

Answer: B

Topic: Integrative
Skill: Level 3: Using models
Objective: Integrative
Author: CD
14) Suppose one week Fresh Cuts Lawn Service hires 10 units of labor and 10 units of capital, and cuts 50 yards. The next week, Fresh Cuts increases its labor hired and its capital by 10 percent, and cuts 55 yards. Which of the following statements correctly describes Fresh Cuts?

i) Fresh Cuts has increased its explicit costs.
ii) Fresh Cuts has definitely experienced increasing marginal costs.
iii) Fresh Cuts has experienced economies of scale.

A) i only
B) i and ii
C) ii and iii
D) i, ii, and iii
E) Only iii

Answer: A

Topic: Integrative
Skill: Level 3: Using models
Objective: Integrative
Author: CD