QUIZ 6 VERSION 1

1) Average product is maximized when
A) total product is maximized.
B) the maximum quantity of the variable input is employed.
C) marginal product is maximized.
D) average product equals marginal product and marginal product is falling.
E) diminishing returns cease to operate.

2) Diminishing marginal product of labour occurs when there is
A) an increase in the division and specialization of labour.
B) a diminishing reduction in the level of labour input and output increases.
C) a diminishing increase in output with an increase in labour input.
D) technological advancement.
E) an increase in the capital available for each unit of labour.

3) When cost curves are drawn for a firm, all of the following are generally assumed EXCEPT that the
A) average fixed costs are constant.
B) firm is too small to influence factor prices.
C) average variable cost initially declines, then rises at higher output levels.
D) total fixed costs are constant.
E) marginal product of the variable factor eventually declines.

The following data show the total output for a firm when specified amounts of labour are combined with a fixed amount of capital. When answering the questions, you are to assume that the wage per unit of labour is $25 and the cost of the capital is $100.

Labour per unit of time	***Total Output***
0	0
1	25
2	75
3	175
4	250
5	305

TABLE 1

4) Refer to Table 1. Average fixed costs for 305 units of output is approximately
A) 33 cents.
B) 41 cents.
C) 45 cents.
D) 74 cents.
E) 82 cents.

5) Refer to Table 1. The total cost of producing 175 units of output is
A) $75.
B) $100.
C) $150.
D) $175.
E) $350.

6) Short-run cost curves rise eventually because of the effects of
A) increasing marginal productivity of the variable inputs.
B) increasing fixed costs.
C) diminishing marginal product.
D) the increasing price of variable inputs.
E) decreasing average product.

7) Assume a firm is using 10 units of capital and 10 units of labour to produce 10 widgets. Now it doubles both inputs resulting in 20 more widgets being produced. This firm is experiencing
A) increasing returns.
B) increasing costs.
C) diseconomies of scale.
D) decreasing returns.
E) constant returns.

8) We can predict that resources will move into an industry whenever
A) that industry becomes fashionable.
B) accounting profits for firms in that industry are greater than zero.
C) accounting profits for firms in that industry are zero.
D) economic profits for firms in that industry are greater than zero.
E) economic profits for firms in that industry are zero.

9) Average, marginal, and total product curves
A) relate the price of output to the quantity supplied.
B) demonstrate that in the short run, all inputs are variable.
C) express relationships between physical inputs and physical outputs.
D) demonstrate that each of these measures of output increase as more inputs are applied.
E) relate the prices of inputs (factors of production) to the prices of products.

10) In the short run, the firm's product curves show
A) *TP* is at its maximum when *MP* = O.
B) when the *MP* curve cuts the *AP* curve from below, the *AP* curve begins to fall.
C) *TP* begins to decrease when *AP* begins to decrease.
D) when *MP* > *AP*, *AP* is decreasing.
E) *AP* is at its minimum when *MP* = *AP*.

QUIZ 6 VERSION 2

1) If total product is at a maximum, then
A) average product must be rising and must lie above marginal product.
B) marginal product must be greater than zero and must be falling.
C) average product must equal marginal product.
D) average product must be falling and be equal to zero.
E) marginal product must be falling and be equal to zero.

2) The law of diminishing returns states that if increasing quantities of a variable factor are applied to a given quantity of fixed factors, then
A) the marginal product will eventually decrease with constant average product.
B) total product will eventually begin to fall.
C) the average product will eventually decrease with constant marginal product.
D) the marginal product and the average product of the variable factor will eventually decrease.
E) the average product will eventually decrease, but only if total product is held constant.

3) The firm's short-run cost curves, as conventionally drawn, show
A) *AFC* increases as output increases.
B) *ATC = FC + VC*.
C) *ATC* increases and then decreases as output increases.
D) the *MC* curve intersects the *AVC* and *ATC* curves at their minimum points.
E) *AVC* decreases as long as *MC > AVC*.

The following data show the total output for a firm when specified amounts of labour are combined with a fixed amount of capital. When answering the questions, you are to assume that the wage per unit of labour is $25 and the cost of the capital is $100.

Labour per unit of time	***Total Output***
0	0
1	25
2	75
3	175
4	250
5	305

TABLE 1

4) Refer to Table 1. Average variable costs for 175 units of output is approximately
A) 25 cents.
B) 32 cents.
C) 43 cents.
D) 57 cents.
E) $1.00.

5) Refer to Table 1. The total cost of producing 75 units of output is
A) $50.
B) $100.
C) $125.
D) $150.
E) $175.

6) Marginal cost can be defined as the
A) difference between average total cost and average variable cost.
B) cost per unit when the firm is operating at capacity.
C) change in fixed cost resulting from an additional unit of output.
D) cost of an additional unit of a variable factor of production.
E) change in total cost resulting from an additional unit of output.

7) Assume a firm is using 10 units of capital and 10 units of labour to produce 10 widgets. Now it doubles both inputs resulting in a doubling of output. This firm is experiencing
A) decreasing returns.
B) economies of scale.
C) constant returns.
D) diseconomies of scale.
E) increasing costs.

8) With regard to economic decision making for firms, the short run is
A) a period when the quantities of all factors of production and technology are variable.
B) a definite number of months.
C) a period when the quantity of at least one significant factor of production is fixed.
D) less than one year.
E) a period when the quantities of all factors of production are variable but technology is fixed.

9) Which of the following statements about the relationship between marginal product and average product is correct?
A) When marginal product is falling, average product is falling.
B) When average product exceeds marginal product, marginal product must be rising.
C) When marginal product exceeds average product, average product must be rising.
D) Average product equals marginal product when marginal product is at its maximum.
E) Average product equals marginal product at marginal product's lowest point.

10) In the short run, the firm's product curves show
A) *TP* begins to decrease when *AP* begins to decrease.
B) *AP* is at its minimum when $MP = AP$.
C) when the *MP* curve cuts the *AP* curve from above, the *AP* curve begins to fall.
D) *TP* is at its maximum when MP = maximum.
E) when $MP < AP$, *AP* is increasing.

QUIZ 6 VERSION 3

1) If the average-product curve is rising, then the marginal-product curve
A) must lie above the average-product curve over this range.
B) can be either above or below the average-product curve, although it must be rising over the entire range.
C) must be falling.
D) must lie above the average-product curve over this range and must also be rising.
E) must lie below the average-product curve over this range.

2) The point of diminishing marginal productivity is the point where
A) average product has reached a maximum.
B) the marginal product begins to fall at an increasing rate.
C) the total product begins to fall.
D) marginal product has reached a maximum.
E) the marginal product curve lies below the average product curve.

3) In the short run, if average total cost is decreasing, then
A) average variable cost is increasing.
B) average total cost is no longer equal to the sum of average variable cost and average fixed cost.
C) marginal cost is decreasing.
D) average fixed costs are decreasing.
E) total fixed costs are decreasing.

The following data show the total output for a firm when specified amounts of labour are combined with a fixed amount of capital. When answering the questions, you are to assume that the wage per unit of labour is $25 and the cost of the capital is $100.

Labour per unit of time	***Total Output***
0	0
1	25
2	75
3	175
4	250
5	305

TABLE 1

4) Refer to Table 1. The average total cost for 250 units of output is approximately
A) 33 cents.
B) 40 cents.
C) 63 cents.
D) 80 cents.
E) $1.00.

5) Refer to Table 1. The total variable cost of producing 305 units of output is
A) $100.
B) $125.
C) $225.
D) $305.
E) $325.

6) When marginal cost is rising, we know that
A) average variable cost must be rising.
B) average total cost must be rising.
C) marginal product must be falling.
D) marginal product must be zero.
E) average fixed cost must be rising.

7) Increasing returns to scale for a firm are shown graphically by
A) returns to scale have nothing to do with the shape of the long-run average cost curve.
B) a downward-sloping long-run average cost curve.
C) a horizontal long-run average cost curve.
D) a vertical long-run average cost curve.
E) an upward-sloping long-run average cost curve.

8) With regard to economic decision making for firms, the long run is a period in which
A) only capital is variable.
B) only some of the factors of production are variable.
C) technology may be variable, but some factors of production are fixed.
D) technology is variable.
E) all factors of production are variable.

9) Which of the following factors of production is most likely to be variable in the short run?
A) capital equipment
B) entrepreneurship
C) land
D) technology
E) labour

10) When one additional unit of labour is hired, total product increases from 100 to 110 units of output per unit of time. Marginal product must therefore be
A) zero.
B) increasing.
C) positive.
D) decreasing.
E) constant.

QUIZ 6 VERSION 4

1) If average product equals marginal product and both are positive, then total product
A) may be either increasing or decreasing as extra units of the variable factor are employed.
B) is increasing as extra units of the variable factor are employed.
C) is decreasing as extra units of the variable factor are employed.
D) is at its minimum.
E) is at a maximum.

2) Sport-fishermen on the Campbell River in British Columbia are catching fewer fish and are having to fish many more hours to catch them. However, the *total* number of fish caught on the river continues to increase. The river is experiencing
A) increasing marginal returns.
B) constant marginal returns.
C) increasing average returns.
D) diminishing marginal returns.
E) diminishing total returns.

3) Which one of the following types of cost declines over the whole range of output?
A) total variable cost
B) marginal cost
C) average variable cost
D) average fixed cost
E) total fixed cost

The following data show the total output for a firm when specified amounts of labour are combined with a fixed amount of capital. When answering the questions, you are to assume that the wage per unit of labour is $25 and the cost of the capital is $100.

Labour per unit of time	***Total Output***
0	0
1	25
2	75
3	175
4	250
5	305

TABLE 1

4) Refer to Table 1. The change in average total cost associated with changing output from 175 to 250 units is approximately
A) 20 cents.
B) 33 cents.
C) 57 cents.
D) 80 cents.
E) $1.00.

5) Refer to Table 1. The total fixed cost of producing 305 units of output is
A) $100.
B) $125.
C) $112.50.
D) $225
E) $305.

6) The firm's short-run marginal cost curve is decreasing when
A) total fixed cost is decreasing.
B) marginal product is decreasing.
C) marginal product is increasing.
D) average fixed cost is decreasing.
E) capacity is reached.

7) The long-run average cost curve shows
A) the lowest unit cost at which the firm can produce a given output.
B) the operation of the law of diminishing returns.
C) the highest unit costs of producing a given output.
D) the same as the short-run average cost curve.
E) what happens to the fixed costs in the long run.

8) Which of the following is most likely a long-run decision?
A) The price at which to sell the product.
B) The hours a store should stay open.
C) The number of workers to hire.
D) The amount of inventory to stock.
E) How many warehouses to build.

9) The relationship between factors of production used in the production process and outputs is called a(n)
A) consumption possibilities boundary.
B) economic function.
C) production boundary.
D) production function.
E) cost function.

10) If we know that capital is fixed and a basket-producing firm can produce 36 baskets per day with 3 workers and 44 baskets per day with 4 workers, then we know all of the following EXCEPT:
A) The average product of the fourth worker is 12.
B) The firm has passed the point of diminishing average productivity.
C) The marginal product is below the average product.
D) The firm has passed the point of diminishing marginal productivity.
E) The marginal product of the fourth worker is 8.

QUIZ 6 VERSION 1
Answer Section

1) D

2) C

3) A

4) A

5) D

6) C

7) A

8) D

9) C

10) A

QUIZ 6 VERSION 2
Answer Section

1) E

2) D

3) D

4) C

5) D

6) E

7) C

8) C

9) C

10) C

QUIZ 6 VERSION 3
Answer Section

1) A

2) D

3) D

4) D

5) B

6) C

7) B

8) E

9) E

10) C

QUIZ 6 VERSION 4
Answer Section

1) B

2) D

3) D

4) A

5) A

6) C

7) A

8) E

9) D

10) A