Exam

Name_____

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

1) With respect to production, the short run is best defined as a time period 1) _____
A) in which all inputs are fixed.
B) lasting about two years.
C) in which at least one input is fixed.
D) lasting about six months.

2) In the long run, all factors of production are 2) _____
A) materials.
B) variable.
C) fixed.
D) rented.

Labor	Output
1	10
2	18
3	24
4	28
5	30

3) The above figure shows the short-run production function for Albert's Pretzels. The marginal productivity of labor for the third worker is 3) _____
A) 6.
B) 24.
C) 8.
D) not known from the information provided.

4) The above figure shows the short-run production function for Albert's Pretzels. The marginal productivity of labor equals the average productivity of labor 4) _____
A) at none of the levels of labor.
B) only for the first worker.
C) for all levels of labor.
D) only for the fifth worker.

5) The above figure shows the short-run production function for Albert's Pretzels. The law of diminishing marginal productivity 5) _____
A) first appears with the fifth worker.
B) has not yet appeared for any of the levels of labor.
C) appears with the second worker.
D) is refuted by this evidence.

6) The above figure shows the short-run production function for Albert's Pretzels. The average product of labor 6) _____
A) decreases first and then increases.
B) increases throughout.
C) increases first and then decreases.
D) decreases throughout.

7) The Average Product of Labor is 7) _____
A) the change in total product resulting from an extra unit of labor, holding other factors constant.
B) the amount of output that can be produced by a given amount of labor.
C) the ratio of output to the number of workers used to produce that output.
D) equal to the marginal product of labor when the average product is increasing.

8) Total Product is 8) _____
A) the change in total product resulting from an extra unit of labor, holding other factors constant.
B) the ratio of output to the number of workers used to produce that output.
C) equal to the marginal product of labor when the average product is increasing.
D) the amount of output that can be produced by a given amount of labor.

9) The Marginal Product of Labor is 9) _____
A) the change in total product resulting from an extra unit of labor, holding other factors constant.
B) equal to the marginal product of labor when the average product is increasing.
C) the amount of output that can be produced by a given amount of labor.
D) the ratio of output to the number of workers used to produce that output.

10) Average productivity will fall as long as 10) _____
A) it exceeds marginal productivity.
B) marginal productivity is falling.
C) the number of workers is increasing.
D) it is less than marginal productivity.

11) Which of the following statements best summarizes the law of diminishing marginal returns? 11) _____
A) In the short run, as more labor is hired, output increases at a diminishing rate.
B) In the short run, as more labor is hired, output diminishes.
C) In the short run, the amount of labor a firm will hire diminishes as output increases.
D) As more labor is hired, the length of time that defines the short run diminishes.

12) Which situation is most likely to exhibit diminishing marginal returns to labor? 12) _____
A) a factory that obtains a new machine for every new worker hired
B) a factory that increases the amount of machinery and holds the number of worker constant
C) a factory that hires more workers and never increases the amount of machinery
D) None of these situations will result in diminishing marginal returns to labor.

13) To say that isoquants are convex is to say that 13) _____
A) capital and labor are perfect substitutes.
B) the marginal rate of technical substitution falls as labor increases.
C) labor, but not capital, is subject to the law of diminishing marginal returns.
D) there are constant returns to scale.

14) An isoquant represents levels of capital and labor that 14) _____
A) incur the same total cost.
B) have constant marginal productivity.
C) yield the same level of output.
D) All of the above.

15) The slope of an isoquant tells us 15) _____
A) the decrease in capital necessary to keep MPL constant when labor increases by one unit.
B) how much output increases when both inputs are increased.
C) the increase in MPL when capital increases.
D) the decrease in capital necessary to keep output constant when labor increases by one unit.

16) The marginal rate of technical substitution always equals 16) _____
A) the ratio of the marginal products of inputs.
B) the change in output due to a change in the amount of one input.
C) the distance between two isoquants.
D) the slope of the total product curve.

17) Returns to scale refers to the change in output when 17) _____
A) all inputs increase proportionately.
B) specialization improves.
C) labor increases holding all other inputs fixed.
D) capital equipment is doubled.

18) Decreasing returns to scale may occur as increasing the amount of inputs used 18) _____
A) increases specialization.
B) may cause coordination difficulties.
C) always increases the amount of output produced.
D) increases efficiency.

Q	K	L
100	3	6
200	5	10
300	7.5	15
400	10	20
500	12.5	25
600	15	30

19) The table in the above figure shows the levels of output resulting from different levels of inputs. Which of the following conclusions can be drawn from this information? 19) _____
A) Labor is subject to diminishing marginal productivity in the short run.
B) Constant returns to scale exist throughout all levels of production.
C) Increasing returns to scale exist between 100 and 200 units of output.
D) No firm conclusions can be drawn.

20) The table in the above figure shows the levels of output resulting from different levels of inputs. Returns to scale are greatest at which level of output? 20) _____

A) 400-600 units
B) 100-200 units
C) 200-400 units
D) There is insufficient information to answer the question.

21) The table in the above figure shows the levels of output resulting from different levels of inputs. At which level of input are there constant returns to scale? 21) _____

A) 400-600 units
B) Constant returns to scale exist throughout all levels of production.
C) Constant returns to scale do not exist at any level of production.
D) No firm conclusions can be drawn.

22) Let the production function be $q=AL^aK^b$. Returns to scale are equal to 22) _____

A) $L^a + K^b$ B) $a + b$ C) $a * b$ D) $A * L$

23) Let the production function be $q=AL^aK^b$. The function exhibits increasing returns to scale if 23) _____

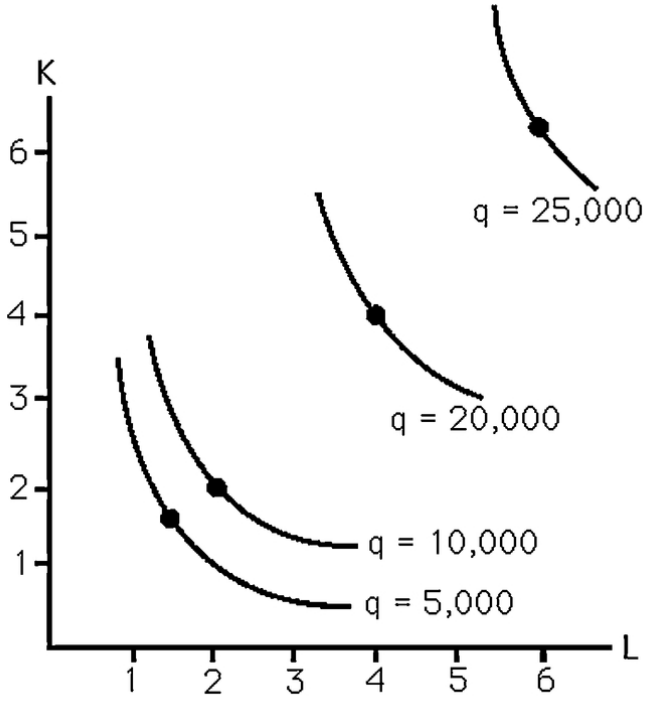
A) $a + b < 1$
B) $a + b > 1$
C) $a + b = 1$
D) Cannot be determined with the information given.

24) Let the production function be $q=AL^aK^b$. The function exhibits decreasing returns to scale if 24) _____

A) $a + b < 1$
B) $a+ b > 1$
C) $a + b = 1$
D) Cannot be determined with the information given.

25) Let the production function be $q=AL^aK^b$. The function exhibits constant returns to scale if 25) _____

A) $a + b < 1$
B) $a + b > 1$
C) $a + b = 1$
D) Cannot be determined with the information given.



26) The above figure shows the isoquants for producing steel. Increasing returns to scale are 26) _____
A) present when producing less than 30,000 tons.
B) present when producing less than 10,000 tons.
C) present when producing less than 20,000 tons.
D) never present.

27) The above figure shows the isoquants for producing steel. Decreasing returns to scale are 27) _____
A) present when producing more than 30,000 tons.
B) never present.
C) present when producing more than 10,000 tons.
D) present when producing more than 20,000 tons.

28) The above figure shows the isoquants for producing steel. Constant returns to scale are 28) _____
A) never present.
B) present when producing between 10,000 and 20,000 tons.
C) present when producing more than 20,000 tons.
D) present when producing less than 10,000 tons.