INDIAN SCHOOL AL WADI AL KABIR

Class: XI	Department: Commerce
Worksheet no: 1	Topic: Theory of Production and Cost

1. The marginal product of a variable input is best described as:
a) Total product divided by the number of units of variable input.
b) The additional output resulting from one unit increase in the variable input.
c) The additional output resulting from one unit increase in both the variable and fixed inputs.
d) The ratio of the amount of the variable input that is being used to the amount of the fixed input that is being used.
A: (b)

2. Diminishing marginal returns implies:
a) Decreasing average variable costs.
b) Decreasing marginal costs.
c) Increasing marginal costs.
d) Decreasing average fixed costs.
A: (c)

3. The short run, as economists use the phrase, is characterized by:
a) At least one fixed factor of production and firms neither leaving nor entering the industry.
b) A period where the law of diminishing returns does not hold.
c) No variable inputs that is all the factors of production are fixed.
d) All inputs being variable.
A: (a)

4. The marginal, average, and total product curves encountered by the firm producing in the short run exhibit all of the following relationships except:
a) When total product is rising, average and marginal product may be either rising or falling.
b) When marginal product is negative, total product and average product are falling.
c) When average product is at its maximum, marginal product equal**s average product, and** total product is rising.
d) When marginal product is at a maximum, average product equals marginal product, and total product is rising.
A: (d)

5. Which one of the following statements is the best definition of production function?
a) The relationship between market price and quantity supplied.

b) The relationship between the firm’s total revenue and the cost of production.
c) The relationship between the quantities of inputs needed to produce a given level of output.
d) The relationship between the quantity of inputs and the firm’s marginal cost of production.
A: (c)

6. Diminishing returns occur:
a) When units of a variable input are added to a fixed input and total product falls.
b) When units of a variable input are added to a fixed input and marginal product falls.
c) When the size of the plant is increased in the long run.
d) When the quantity of the fixed input, is increased and returns to the variable input falls.
A: (b)

7. If the marginal product of labour is below the average product of labour, it must be true that:
a) The marginal product of labour is negative.
b) The marginal product of labour is zero.
c) The average product of labour is falling.
d) The average product of labour is negative.
A: (c)

8. The average product of labour is maximized when marginal product of labour:
a) Equals the average product of labour.
b) Equals zero.
c) Is maximized.
d) None of these.
A: (a)

9. The law of variable proportions is drawn under all of the assumptions mentioned below except the assumption that:
a) The technology is changing.
b) There must be some inputs whose quantity is kept fixed.
c) We consider only physical inputs and not economically profitability in monetary terms.
d) The technology is given and stable.
A: (a)

10. Average product is defined as:
a) Total product divided by the total cost.
b) Total product divided by the marginal product.
c) Total product divided by the variable input.
d) Marginal product divided by the variable input.
A: (c)

11. The change in the total product resulting from a change in a variable input is:
a) Average cost
b) Average product
c) Marginal cost
d) Marginal product
A: (d)

12. Marginal product, mathematically, is the slope of the
  a) Total product curve
  b) Average product curve
  c) Marginal product curve
  d) Implicit product curve
     A:(a)

13. A production function states that there exists a technical relationship between:
   a. Input prices and output prices
   b. Input prices and quantity of output
   c. The quantity of inputs and the quantity of output.
   d. The quantity of inputs and input prices.
      A: C

14.The expenditure incurred on the factors of production supplied by the entrepreneur himself comes under:
   a. Implicit cost
   b. Explicit cost
   c. Fixed cost
   d. Variable cost
      A: A

15. The sum of Fixed cost and ---------- is Total cost. (Variable cost)

16. Whenever MP is less than AP, the AP must be:
   a. Rising
   b. Falling
   c. Equal to marginal product
   d. None of the above
      A: B

17. In the short run, when a firm produces zero output, its total cost is equal to::
   a. Zero
   b. Variable cost
   c. Fixed cost
   d. Marginal cost
      A: C

18. Rent, wages of permanent staff are the examples of ------------ (Total fixed cost)

19. -------- shows the functional relationship between physical inputs and physical output of a good. (Production function)

20. Whenever MR becomes negative, TR:

a. Becomes maximum
b. Starts increasing
c. Starts decreasing
d. Remains constant

A: C

21. Other things being constant, there exists ------ relationship between price and quantity supplied.

a. Direct
b. Negative
c. Proportionate
d. Cannot be explained

A: A

22. The cause of upward movement along a supply curve is -------- (Increase in price)

23. Which of the following does not cause shift of supply curve of a good?

a. Price of input
b. Price of the good
c. GST
d. Subsidy

A: B

24. Due to change in price, if there is more than proportionate change in quantity supplied of a good, the supply is considered to be:

a. Perfectly elastic
b. Relatively inelastic
c. Relatively elastic
d. Perfectly inelastic

A: C

25. Law of variable proportions must operate, even when all factors of production are variable. True or false? Justify with reason. (Refer notes)

26. Explain the effect of technological progress on supply of a good.

The supply of a commodity depends on the production technology used by the firm. On account of improvement in the production technology used by the firm, the cost of production declines. Lower cost of production means profits increases. This induces the producer to supply more, i.e: the supply of the given good increases.

27. What is the likely effect on the supply of a good if a unit tax is imposed on that good?

When there is an increase in excise duty on the production of a good by the government, the unit cost of production will rise and consequently the firm would supply less than before at the given price. The supply would decrease implying that the supply curve would shift to the left.

28. A producer starts a business by investing his own savings. He employs a manager to look after the business. Identify implicit and explicit costs from this information. Explain.

a. The salary paid to the manager for hiring his services is an explicit cost as it is paid-out.
b. The imputed value of the interest which a producer would have earned by investing his savings in some assets is an implicit cost.

29. A producer takes a building on rent for carrying out business. He looks after the business himself. Identify the implicit and explicit costs from this information. Explain.

a. Payment of rent for hiring a building is an explicit cost as it is a payment made to the owners of the buildings.
b. The imputed salary of the producer is an implicit cost as he looks after the business himself.

30. What does the positive sign in the formula $\frac{\Delta p}{\Delta q}$ indicate? Explain.

Positive sign in the formula indicates a positive or direct relationship between the price and quantity supplied of a commodity. It is well- known observation that as the price of a commodity increases normally more quantity is supplied and as its price decreases, less quantity is supplied.