VIDYA BHAWAN BALIKA VIDYA PITH

शक्तिउत्थानआश्रमलखीसरायबिहार

Class 11 commerce   Sub. ECO/B Date 15.02.2021

Teacher name – Ajay Kumar Sharma

Notes

1. **Production Function :** It shows the functional relation between physical inputs and physical output of a good. It can be expressed as Q = (f1, f2, f3……… fn). Where Q = Physical output of a good; f1, f2, f3, …….fn= Physical inputs.
2. **Production is creation of utility.**
3. **Types of Production Function :**
   There are two types of Production Function.
   1. **Short-run Production Function :** In this production function one factor of production is variable and all others are fixed. So, law of return to a factor is applied. It is also called variable proportion type of production function.
   It is a time period which is not enough to make change in all inputs. In this level of production can be changed by changing the variable factors.
   2. Long-run Production Function : In this production function all the factors of production are variable. So, law of returns to scale is applied. It is also called constant proportion type of production function.
   It is a time period which is enough to make change in all inputs, all inputs are variable in the long run. In this level of production can be changed by changing all inputs.
4. **Total product or Total physical product** refers to total quantity of a goods and services produced by a firm in a given period of time.
   TP = ∑∑MP

5. **Average production** is the per unit production of variable factor.

6. Marginal product refers to the change in total product resulting from the employment of an additional unit of variable factor. In other words, it is the contribution of each additional unit of variable factor to output.

7. **Relation between Total, Average and Marginal Product**
   1. When TP increases at an increasing rate, MP also increases.
   2. When TP increases at a diminishing rate, MP declines.

3. When TP is maximum,MP=0.
4. When TP begins to decline, MP becomes negative.

Labour	**MP**	**TP**	**AP**
1	2	2	2
2	3	5	2.5
3	4	9	3
4	3	12	3
5	1	13	2.6
6	0	13	2.16
7	-2	11	1.6

8.
1. When MP > AP, AP rises.
2. When MP = AP, AP is maximum and constant.
3. When MP < AP, AP falls.
4. MP may be zero or negative, but AP continues to be positive.
5. AP increases, even when MP falls but MP should lie above AP.

9. **Returns to a factor :** It refers to the behaviour of output when only one variable factor of production in increased in short run and fixed factors remain constant.
10. **Law of variable proportion :** The law states that when more and more units of variable factors are employed to increase the output, initially output increases at an increasing rate and finally falls.

11. **Stage I (Stage of Increasing Return to factor):** TP Increases at increasing rate : In the initial phase as more and more units of variable factors are employed with fixed factor total physical production increases at increasing rate, MP increases.

12. **Cause for increasing return:** (a) Under utilisation of fixed factor (b) Indivisibility of factor (c) Increased efficiency of variable factor
13. **Stage II(Stage of Diminishing Return to factor) :** TP increases at decreasing rate :As more and more units of variable factors are employed with fixed factors then total product increases at diminishing rate, MP decreases but is positive. At the end of this phase TP maximum and MP becomes zero.
14. **Cause of diminishing return:** (a) optimal use of fixed factor (b) imperfect factor substitutability
15. **Stage III(Stage of negative return to factor) :** TP falls :As more and more units of variable factors are employed with fixed factors, total production starts decreasing and marginal product becomes negative.
16. **Cause of negative return:** (a) Poor co-ordination between fixed factor and variable factor. (b) Over utilisation of fixed factor
17. **Economic Cost :** It is the sum total of explicit and implicit cost.
18. **Explicit Cost :** Actual money expenditure incurred by a firm on the purchase and hiring the factor inputs for the production is called explicit cost. These are entered into books of accounts. For example-payment of wages, rent, interest, purchases of raw materials etc.
19. **Implicit cost** is the cost of self owned resources of the production used in production process. Or estimated value of inputs supplied by owner itself. These are not entered into books of accounts.
20. **Normal Profit** : It is the minimum amount required to keep the producers into business. In other words, it is the minimum supply price of the entrepreneur. It is also called the wage off an entrepreneur.

21. **Total cost** refers to total amount of money which is incurred by a firm on production of a given amount of a commodity.
    Total cost is the sum of total fixed cost and total variable cost.
    TC = TFC + TVC or TC = AC × Q
    Total fixed cost:- It is also called supplementary cost. It is the total expenditure incurred by the producer for employing fixed inputs. Ex- Rent of land and building, interest on capital,license fee etc.
    TFC = TC – TVC or TFC = AFC × Q
22. **Features of Total Fixed Cost:-** (a) It remains constant at all levels of output. ***It is not zero even at zero output level.*** Therefore, **TFC curve is parallel to X-axis**.
    (b) **Total cost at zero level of output is equal to total fixed cost.**

23. **Total variable cost** is the cost which vary with the quantity of output produced. It is zero at zero level of output. TVC curve is parallel to TC curve.Ex-cost of raw material,expenses on power etc.
    TVC = TC – TFC or TVC = AVC × Q

Features of Total variable cost:- (a) It is zero when output is zero. (b) It increases with increase in output. (c) Initially TVC increases at diminishing rate due to increasing returns and later it increases at an increasing rate due to diminishing return.

24. **Average cost** is per unit cost of production of a commodity. It is the sum of average fixed cost and average variable cost.

25. **Average fixed cost** is per unit fixed cost of production of a commodity.