

Chapter 5 – Production Function

Question 1

Define Production Function.

Ans: Production Function is an expression of the technological relation between physical inputs and output of a good.

Question 2

How is Production Function symbolically represented?

Ans: $O_X = f(i_1, i_2, i_3, \dots, i_n)$

Question 3

Define Variable Factors.

Ans: Variable factors refer to those factors, which can be changed in the short run.

Question 4

What is the concept of Product?

Ans: Product or output refers to the volume of goods produced by a firm or an industry during a specified period of time.

Question 5

Define Law of Diminishing Returns.

Ans: Law of Diminishing Returns states that when more and more units of variable factors are employed with a fixed factor, then marginal product of the variable factor must fall.

Question 6

Identify the different phases of the Law of Variable Proportions from the following schedule. Give reasons for your answer.

Variable Inputs (Units)	Total Physical Product (Units)
1	4
2	9
3	13
4	15
5	12

Solution:

Variable Input (Units)	Total Physical Product or TPP (Units)	Marginal Physical Product or MPP (Units)	Phase

		$MPP_n = TPP_n - TPP_{n-1}$						
1	4	4	1st Phase (IRF)	3	13	4	2nd Phase (DRF)	
2	9	5		4	15	2		
5	12	-3	3rd Phase (NRF)					

Question 7

Complete the following table.

Units of Labour (Units)	Average Product (Units)	Marginal Product (Units)
1	8	-
2	10	-
3	-	10
4	9	-
5	-	4
6	7	-

Solution:

Units of Labour Variable Factor (VF)	TP (in Units) ($TP = \sum MP$)	AP (in units) ($AP = TP/VF$)	MP (in Units)
1	8	8	8
2	20	10	12
3	30	10	10
4	36	9	6
5	40	8	4
6	42	7	2