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: $o_X = f(i_1, i_2, i_3 \cdots \cdots i_n)$

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 2	4 9	4 5	**1st Phase (IRF)**	3 4	13 15	4 2	**2nd Phase (DRF)**
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 = Σ 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**