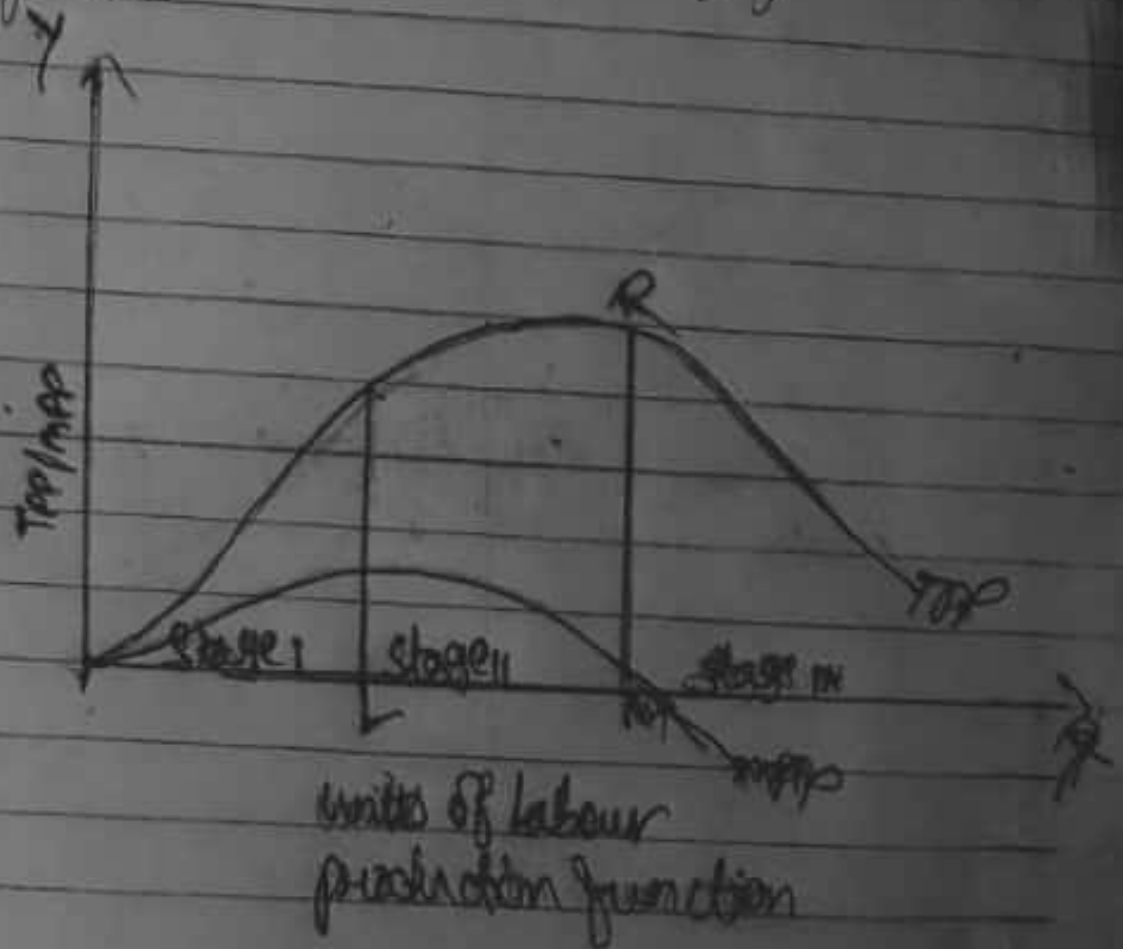


Q. What do you mean by return of a factor? Explain with help of a suitable diagram.

⇒ Return to a factor relate to the short period production function when one factor is varied keeping the other factor fixed in order to have more output. The marginal returns of the variable factor diminish. On the other hand, returns to scale relate to the long period production function when a firm changes its scale of production by changing one or more of its factors.



Production function 2

Q. Explain the law of variable proportion the help of suitable example and diagram.

⇒ This law exhibits the short-run production functions in which one factor varies while the others are fixed.

Also, when you obtain extra output on applying an extra unit of the input, then this output is either equal to or less than the output that you obtain from the previous unit.

**6** The law of variable proportions concerns itself with the way the output changes when you increase the number of units of a variable factor. Hence, it refers to the effect of the changing factor ratio on the output.

In this, example, the land is the fixed factor and labour is the variable factor. The table shows the different amounts of output when you apply different units of labour to one acre of land which needs fixing.

Fixed factor: Land (Acres)	Variable factor: Land (Units)	TPP (total physical product) (Quantity)	MPP (marginal physical product) (Quantity)
1	0	0	-
1	1	2	2
1	2	6	4
1	3	12	6
1	4	16	4
1	5	18	2
1	6	18	0
1	7	19	-4
1	8	8	-6

The following diagram explains the law of variable proportions. In order to make a simple presentation, we draw a total physical product (TPP) curve and a marginal physical product (MPP) curve as smooth curves against the variable input (labour).

