

## Output And Employment in the Classical System

In the classical system, decision-making by economic agents such as firms and households was very important. Aggregation of output and employment over firms constituted total output and total employment. Similarly, aggregation of supply of labour by individuals constituted total labour supply in the economy.

Production Function:-

As you know from microeconomics, a production function gives the technological relationship between inputs and output. It can be written as-

$$Y = F(L, \bar{K})$$

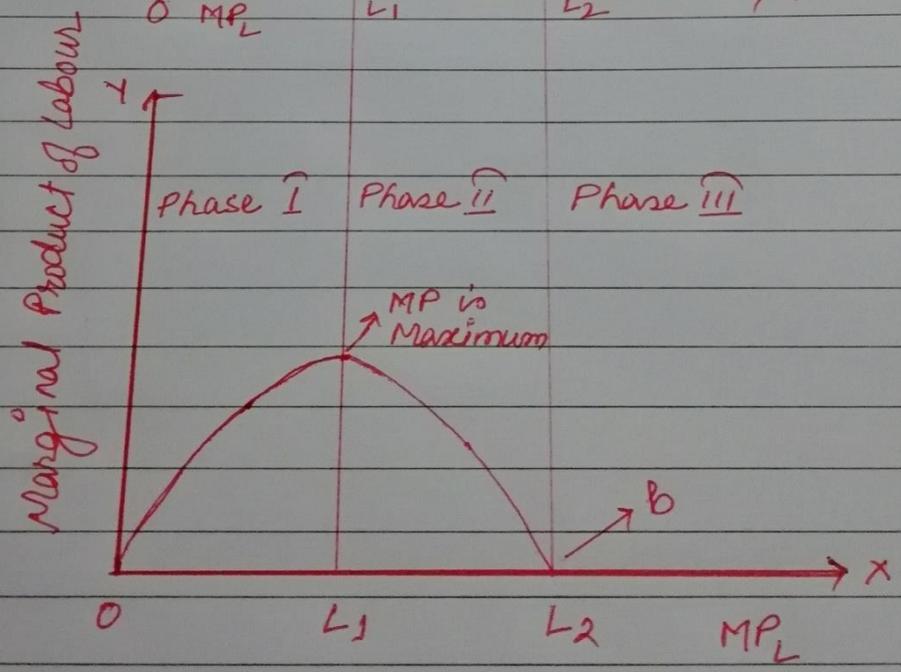
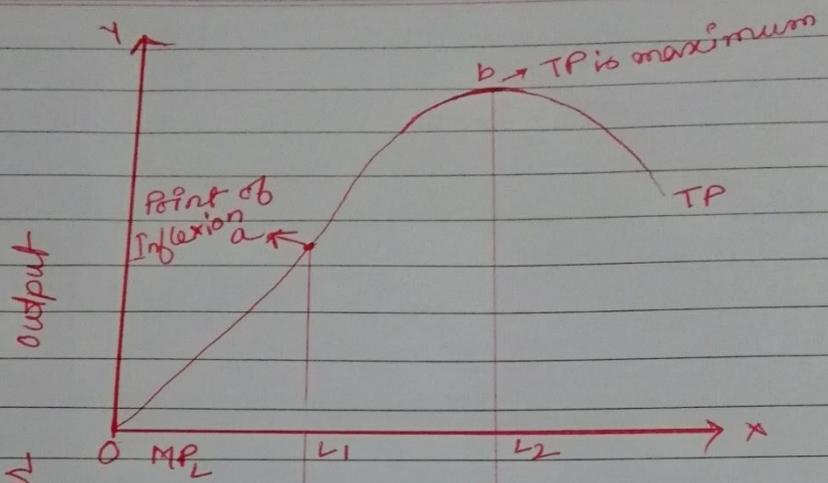
Where Y is the total production (TP) produced, L is the quantity of labour used in the production, and  $\bar{K}$  is the stock of capital (assumed to be fixed in the short run). It is assumed that in the short run the state of technology and capital stock cannot be changed; thus they are constant. Output varies according to the amount of labour employed. The change in output due to an additional unit of labour is known as Marginal Product of Labour ( $MP_L$ ) and it is given by the expression.

$$MP_L = \frac{\Delta Y}{\Delta L}$$

We present the relationship between TP (given by Y in the figure) and  $MP_L$  in the figure given below. We observe that Y increases at an increasing rate for certain initial units of labour employed. Subsequently the curvature changes and Y starts increasing at a decreasing rate (point a). at point b, TP is at its maximum level; at this level of output  $MP_L$  touches zero.

The underlying idea is that as the amount of labour increases,  $MP_L$  of the additional labour remains positive but is lower than that of the labour hired previously.

When the TP starts falling, i.e, beyond point b, the  $MP_L$  becomes negative. You should note that  $MP_L$  is the slope of the TP curve. Classical economists assumed that the quantity of labour employed would be dependent upon the demand for and supply of labour in the labour market.



Labour