



PRESIDENCY COLLEGE
(Autonomous)



*Reaccredited by
NAAC with A+*

Microeconomics

Law of Returns to Scale

Presidency
Group

OVER
40
YEARS
OF ACADEMIC
WISDOM



PRESIDENCY COLLEGE

(AUTONOMOUS)

AFFILIATED TO BENGALURU CITY UNIVERSITY, APPROVED BY AICTE, DELHI & RECOGNISED BY THE GOVT. OF KARNATAKA

RE-ACCREDITED BY NAAC WITH 'A+' GRADE



Production Function

Process through which a firm transforms inputs into output.

-Factors of production

$$Q = f(L, K, T)$$

Fixed factors vs Variable factors

Variable factors refers to those factors which can be changed in the short run. they can vary with output.

E.g. raw material, labour, power, fuel, etc



Production Function

$$Q_x = f(L, K)$$

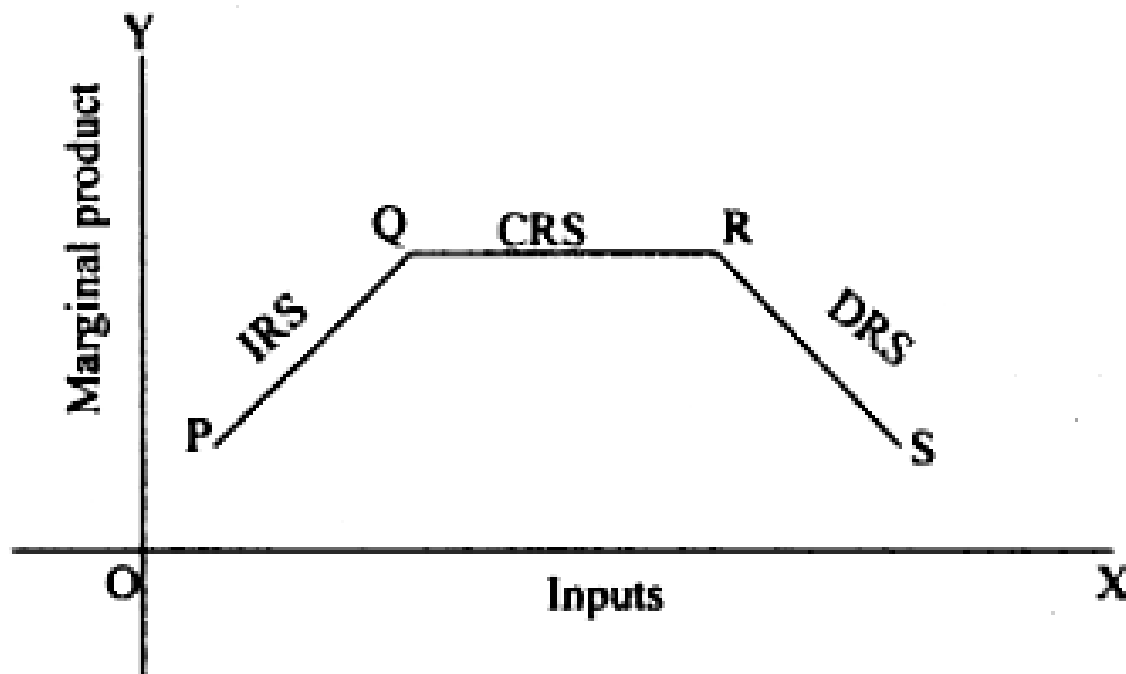
Where,

Q_x is the quantity of output of commodity x ,
 f is the function,

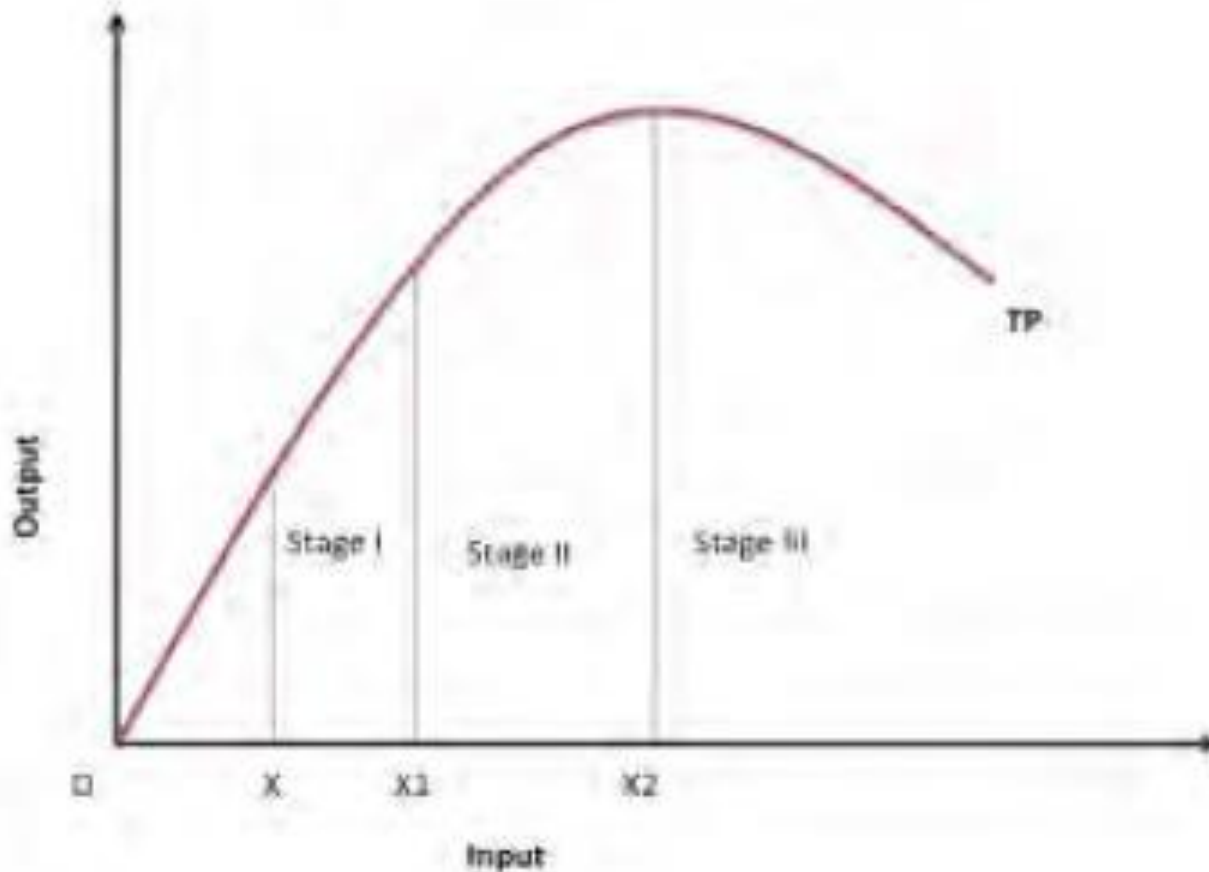
L and K are the units of labour and capital



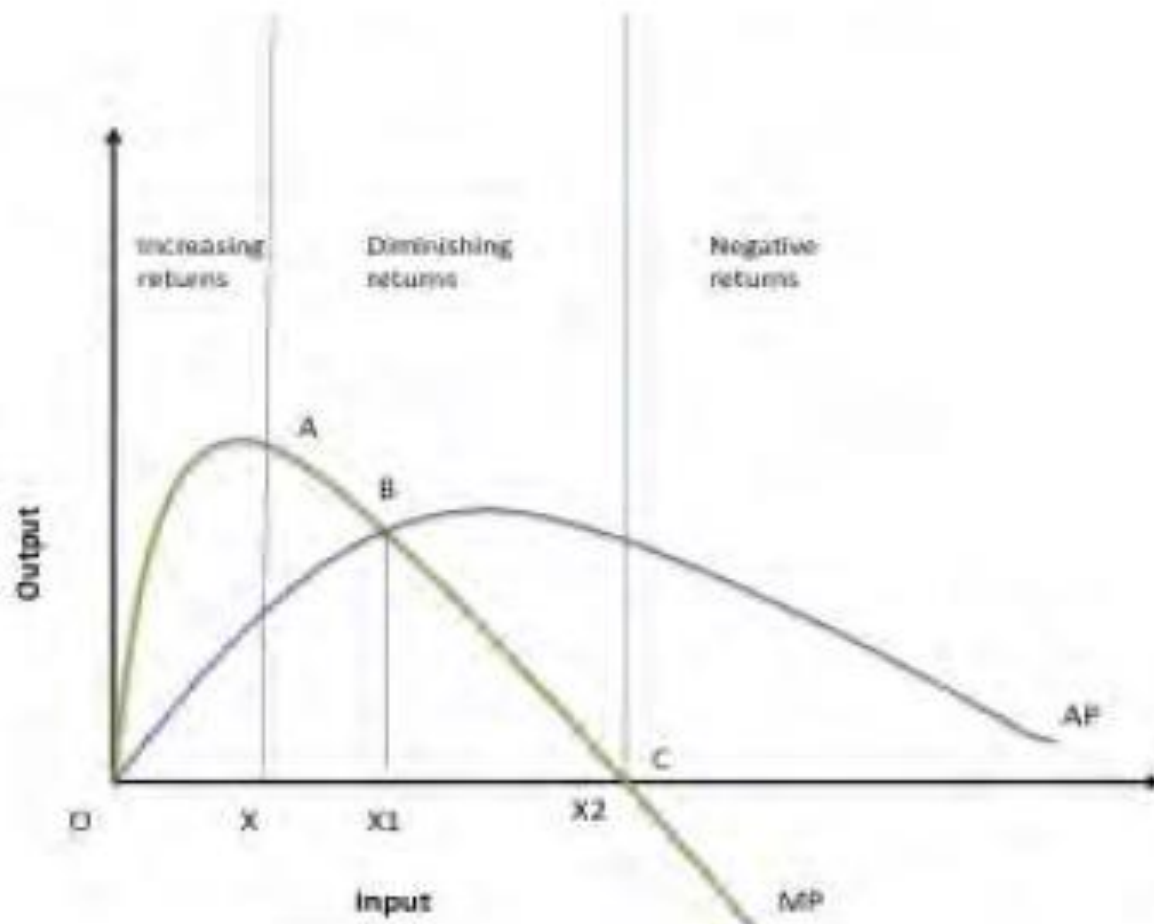
Marginal Product Vs Variable factor



Production Function – Total Product



Average Product & Marginal Product



Quiz

Changes in Output for an increase in Input.

1 Unit of Input: Marginal Analysis

Changes can be made only to variable factor.

Increase in variable Input -> Increase in Output

$$Q = 5 * L * K$$



Analysing the Equations

1. $Q = 5 * L * K$
2. $Q = 0.8 * L * K$
3. $Q = 5 * L^2 * K^2$
4. $Q = 5 * L^{0.5} * K^{0.5}$
5. $Q = 5 * L^{0.8} * K^{0.2}$

COBB – DOUGLAS PRODUCTION FUNCTION

