



Q8. What is the law of variable proportions?

Ans: Law of Variable Proportions:

According to the law of variable proportions, if more and more units of the variable factor (labour) are combined with the same quantity of the fixed factor (capital), then initially the total product will increase but gradually after a point, the total product will start diminishing.

Q9. When does a production function satisfy constant returns to scale?

Ans: Constant returns to scale will hold when a proportional increase in all the factors of production leads to an equal proportional increase in the output. For example, if both labour and capital are increased by 10% and if the output also increases by 10%, then we say that the production function exhibits constant returns to scale.

Algebraically, constant returns to scale exists when,

$$F(nL, nK) = n(L, K)$$

This implies that if both labour and capital are increased by 'n' times, then the production also increases by 'n' times.

Q10. When does a production function satisfy increasing returns to scale?

Ans: Increasing returns to scale (IRS) holds when a proportional increase in all the factors of production leads to an increase in the output by more than the proportion. For example, if both the labour and the capital are increased by 'n' times, and the resultant increase in the output is more than 'n' times, then we say that the production function exhibits IRS.

Algebraically, IRS exists when,

$$F(nL, nK) > n \cdot f(L, K)$$

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