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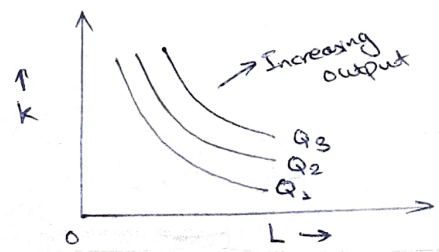
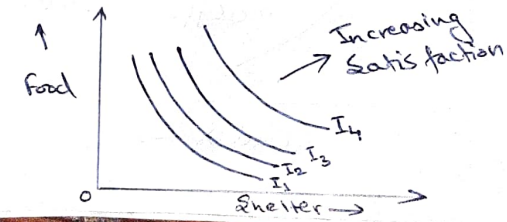
CSE, B.Tech, VIII th Semester

Q.1.: Difference between indifference Curve and Isoquant Curve.

→ An indifference curve shows different combinations of two goods that give equal satisfaction to a consumer. An isoquant curve shows different combinations of two factors that produce equal output for a producer.

Both curves have similar properties such as downward sloping, convex to origin and cannot intersect. However, they differ in their meaning, measurement and application.

Isoquant Curve	Indifference Curve
1. Related with production theory	1. Related with demand theory.
2. Shows various combination of two inputs on equal output.	2. Shows the various combination of two commodities.
3. Shows constant levels of output which can be measured.	3. Shows the constant level of satisfaction which cannot be measured.
4. Represents combination of two factors.	4. Represents combination of two goods or commodities.
5. Provides economic and uneconomic information region of production.	5. Provides no information about economic and uneconomic region of consumption of goods.
6. Slope influenced by the technical possibility of substitution between production	6. Slope influenced depends upon Marginal Rate of Substitution (MRS) between commodities consumed by the consumer.
7. 	7. 

Q.2. Difference between MRS and MRTS.

→ MRS stands for Marginal Rate of Substitution. It is the rate at which a consumer is willing to trade one good for another to maintain a constant level of utility. It is the slope of an indifference curve.

MRTS stands for Marginal Rate of Technical Substitution. It is the rate at which one factor must be decreased so that the same level of output can be maintained with an increase in another factor. It is the slope of an isoquant curve.

The main difference between MRS and MRTS is that MRS focuses on consumer equilibrium while MRTS focuses on producer equilibrium.

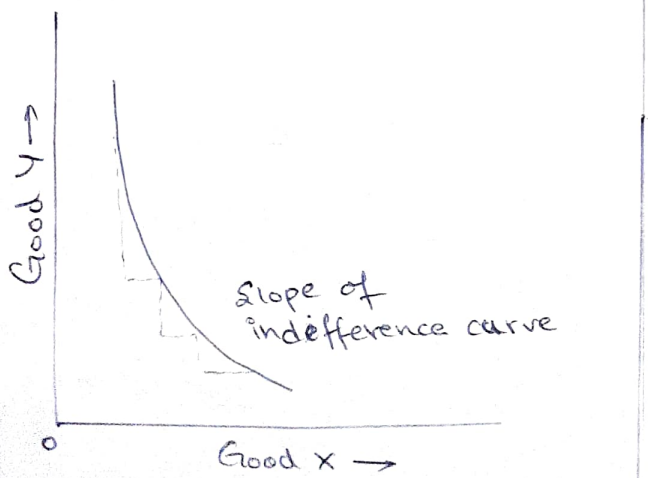
MRS

* Formula:

$$MRS(x, y) = \frac{-Y}{X} = \frac{MU_x}{MU_y}$$

X, Y → Goods

MU → Marginal Utility of goods X and Y.



MRTS

* Formula:

$$MRTS(L, K) = \frac{-\Delta K}{\Delta L} = \frac{MP_L}{MP_K}$$

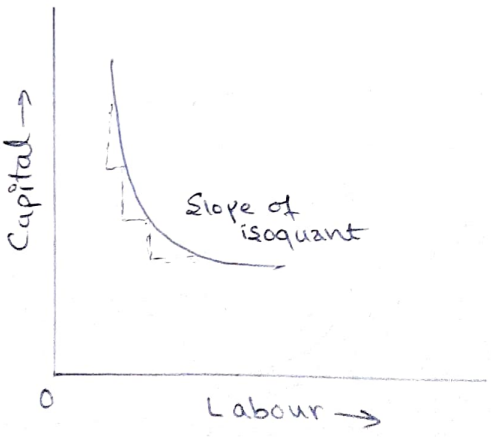
where,

K → capital

L → labour

MP → Marginal Products of each input

ΔK/ΔL → Amount of capital that can be reduced when labour is increased.



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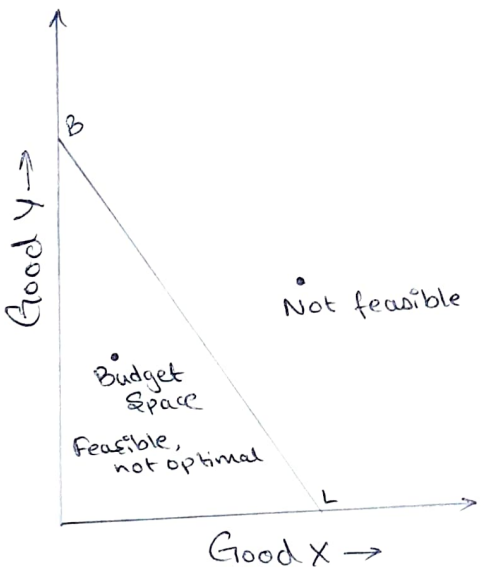
Q.3. Difference between Budget line and Iso-cost line.

→ A budget line shows different combinations of two goods that a consumer can afford with a given income and prices. An iso-cost line shows different combinations of two factors that a producer can purchase with a given cost and factor prices.

Both lines have similar properties such as downward sloping, linear and parallel to each other when prices are constant. However, they differ in their meaning, measurement and application.

Budget Line	Iso-cost line.
1. Represents all the different combinations of goods that a person can purchase with a fixed income.	1. Represents all the different costs which could arise from using different combinations of inputs.
2. 	2.