Properties of Indifference Curve

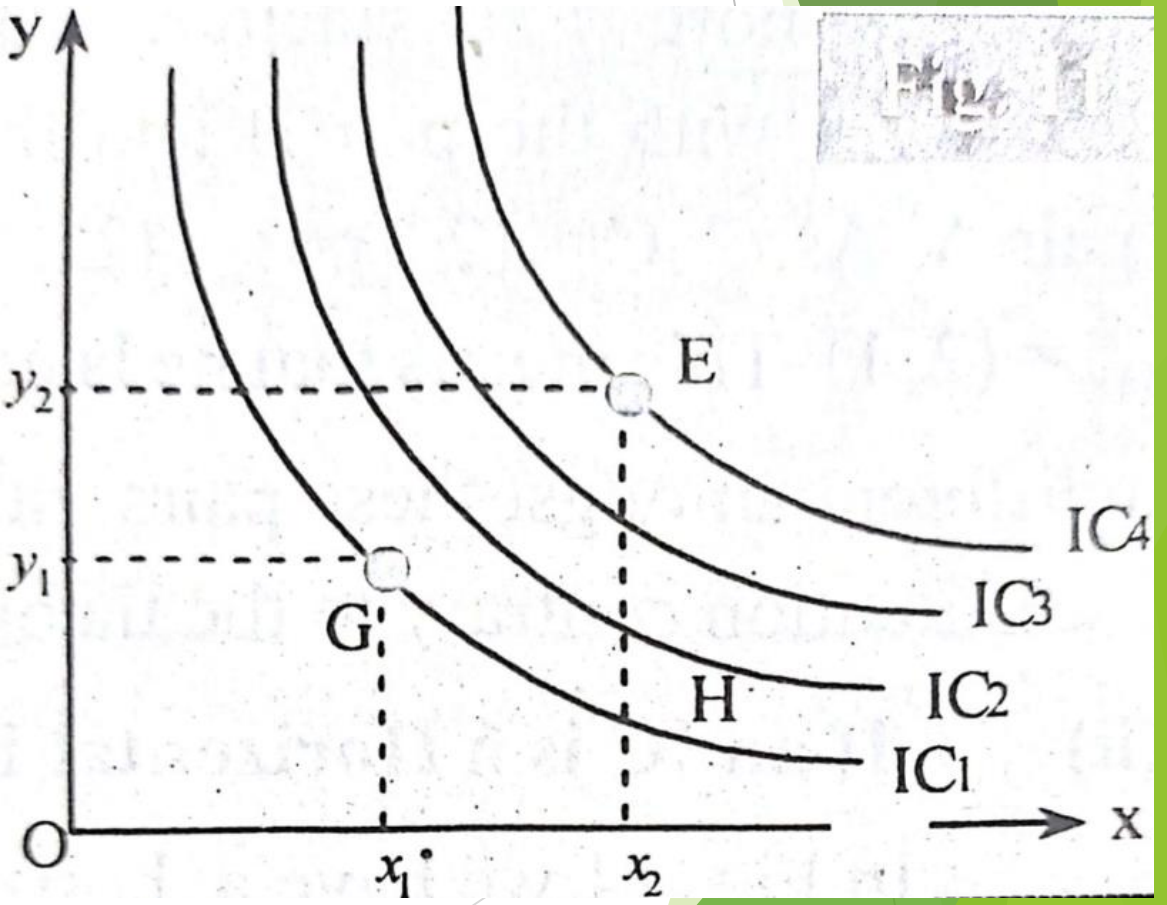
1. Infinite number of indifference curves
2. They are negatively sloped
3. They are convex to origin
4. Do not intersect each other
5. Do not touch either axis
6. They need not be parallel

Infinite Number of ICs

In a commodity space there can be a lot of indifference curves

A higher IC shows higher satisfaction because it represents larger quantities.

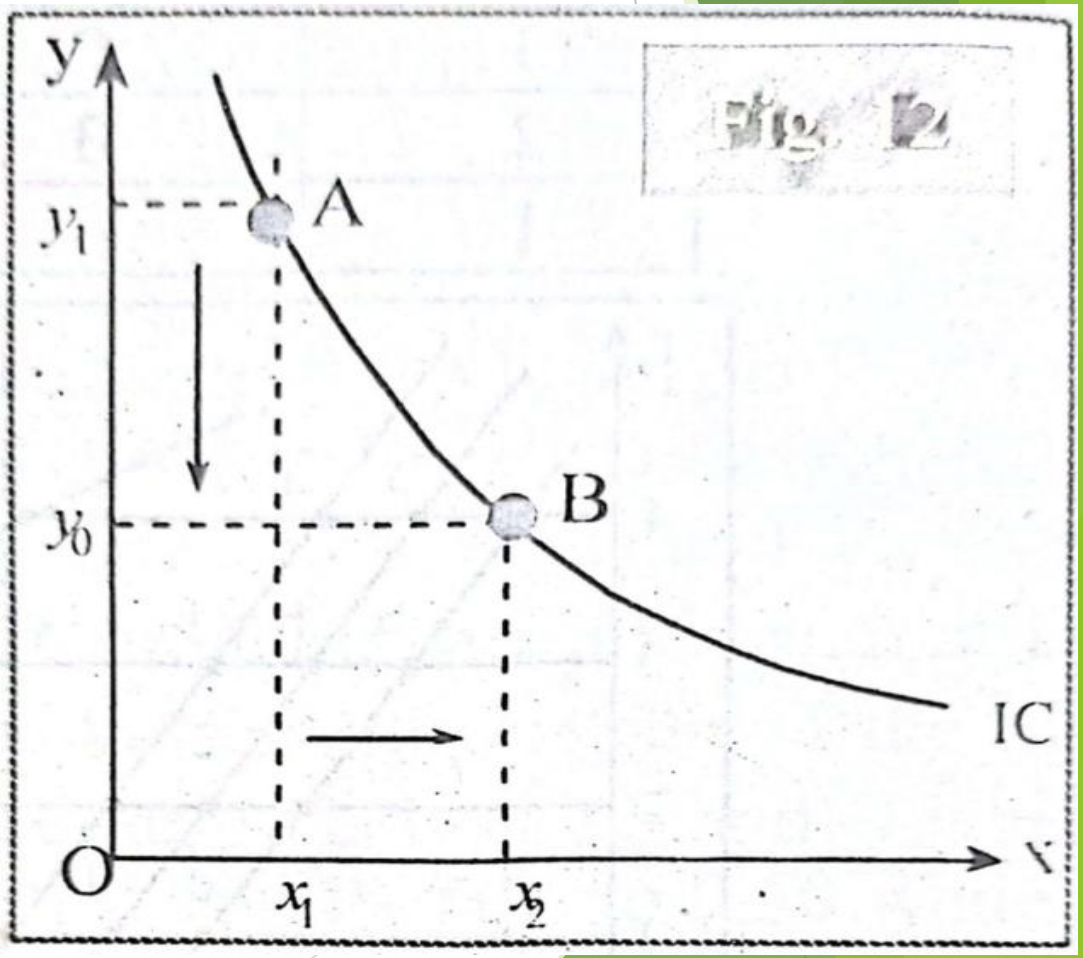
An lower indifference curve shows lower satisfaction, because it represents smaller quantities of x and y.



ICs have negative slope

The negative slope shows that that as the consumer increases the quantity of x, he will have to decrease the quantity of y to keep the utility constant.

Quantity of y ↑….Quantity of x ↓



Convex to origin

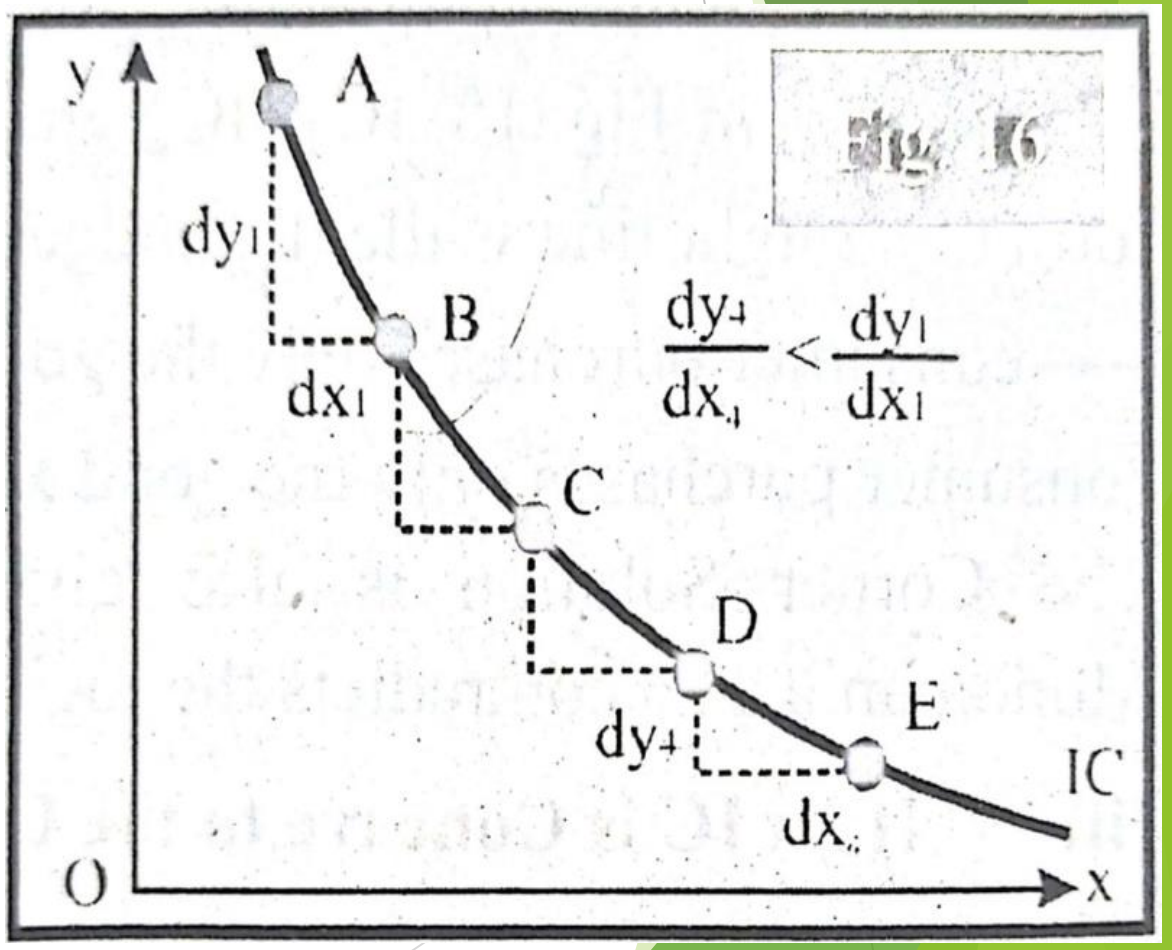
ICs are always convex to origin

Reason

As a consumer has more and more units of x, in order to get any more of x, he loses less and less of y.

Slope of IC … MRS falls along the IC

Commodity x and y are substitute, but not perfect



Do not intersect each other

IC_2 is higher IC and shows higher satisfaction

IC_1 is lower IC and shows lower satisfaction

M is preferred over N, being on higher IC, M >N

Suppose IC_1 and IC_2 intersect each other

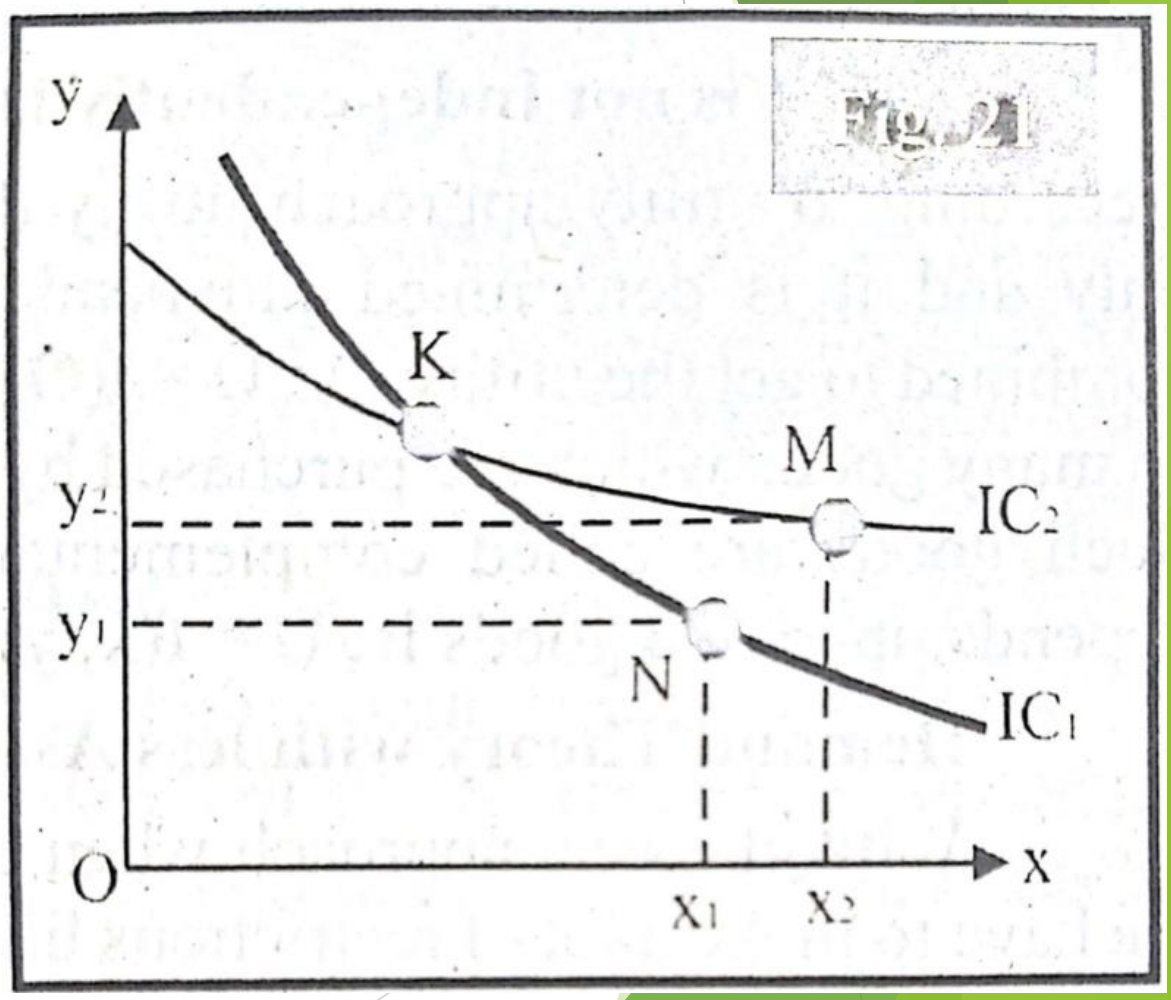
K = M…..being on the same IC

K = N…..being on the same IC

K can only be equal to M and N if M = N

But we have proved that M > N

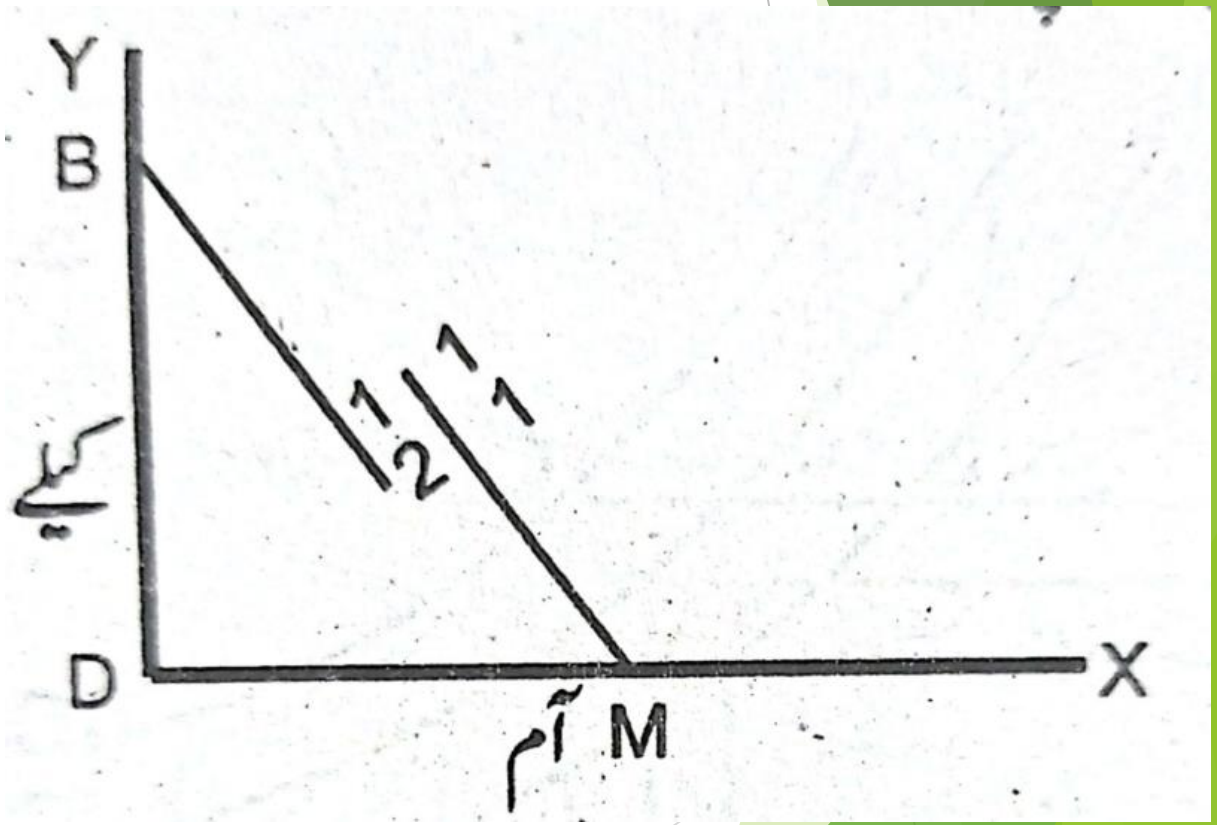
So two ICs can not intersect each other



Do not touch either axis

If an IC touches any axis, consumer purchases only one good, which is against the philosophy of indifference curve theory.

Definition of IC involves TWO goods



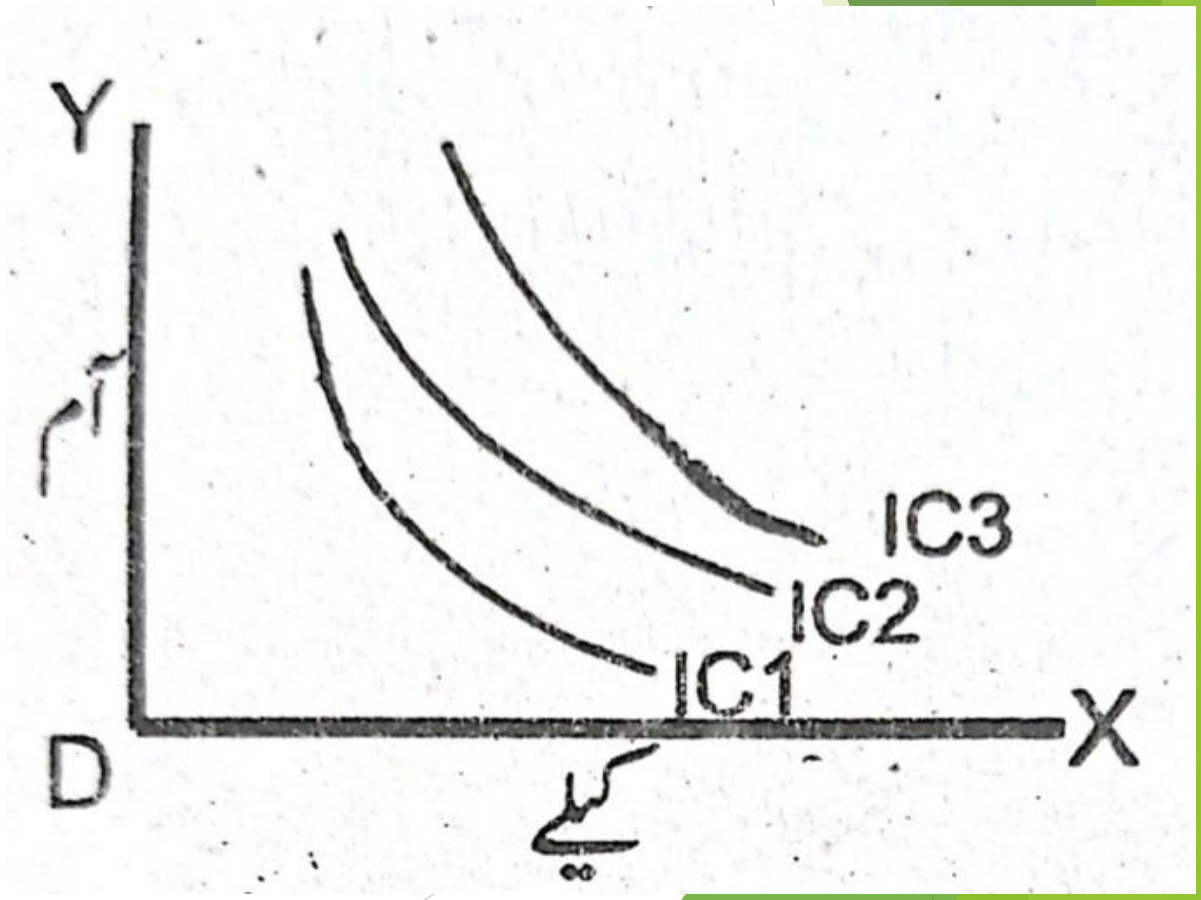
They need not be parallel

All the ICs are convex to origin

But their convexity depends upon MRS

Different ICs may have different MRS

So different ICs may be not be parallel



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