

## Properties of Indifference Curve

### 1) Indifference curves are downward sloping.

The slope of an indifference curve is downward sloping. Because in order to get the same satisfaction or to be equally happy, if a consumer wants to increase the goods so he must have to decrease the consumption of other good.

### 2) Indifference curves are bowed inward (Convex Shape)

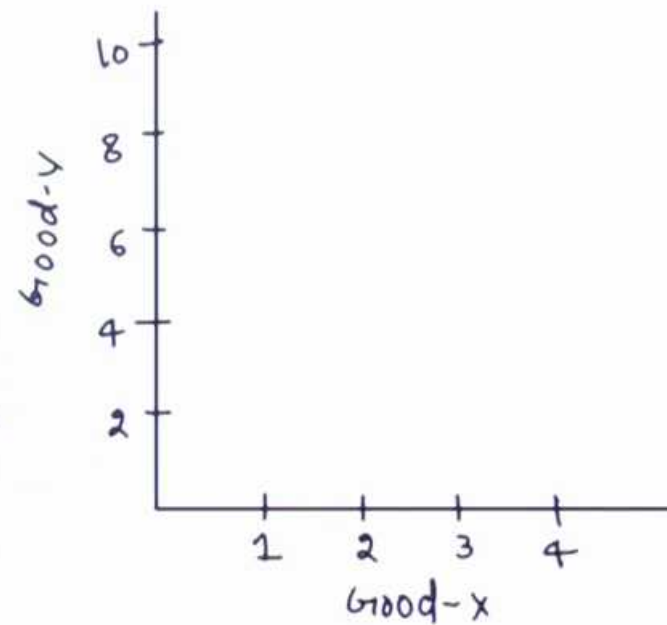
The shape of an indifference curve is depends upon the marginal rate of substitution—the rate at which the consumer is willing to trade off (sacrifice) one good for the other. The marginal rate of substitution between two goods is diminishing, therefore Shape of an Indifference curve is Convex.

If MRS increases – IC (Concave Shape)

If MRS Constant – IC (Straight line downward slope)

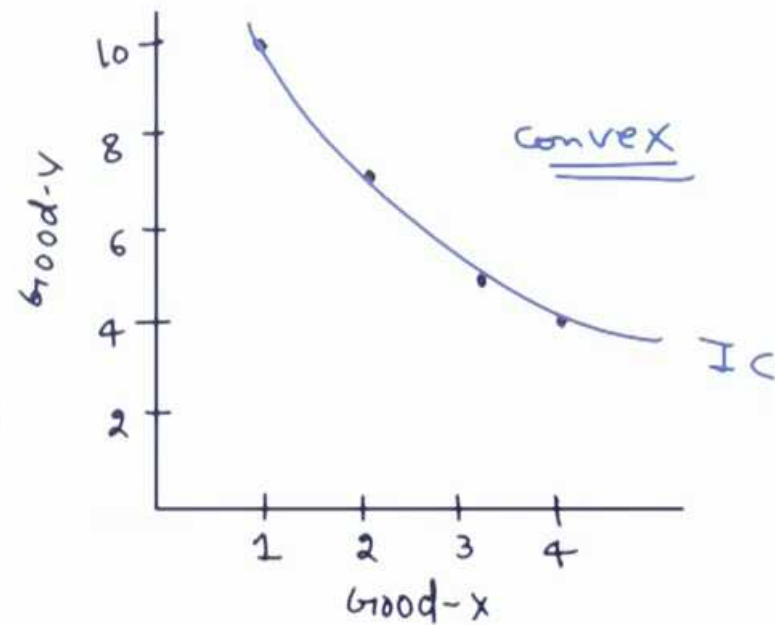
① Diminishing  $MRS_{xy}$

Comb.	Good-x	Good-y	$MRS = \frac{\Delta Y}{\Delta X}$
A	1	10	
B	2	7	$3/1 = 3$
C	3	5	$2/1 = 2$
D	4	4	$1/1 = 1$



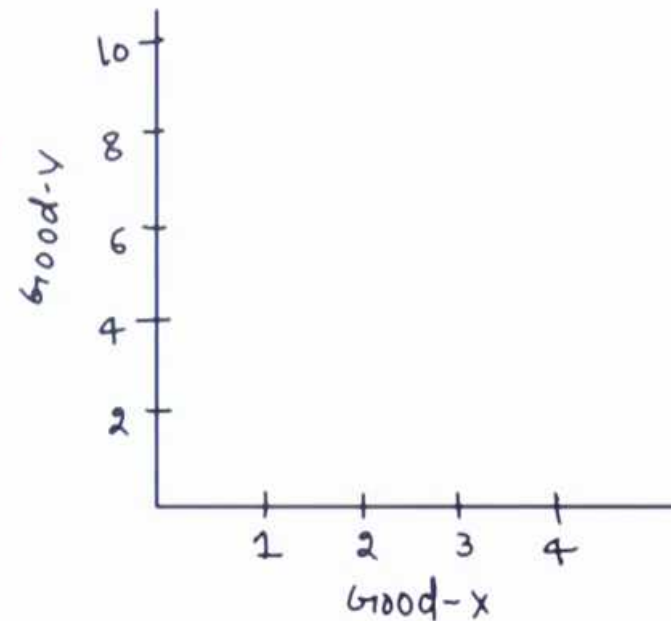
① Diminishing  $MRS_{xy}$

Comb.	Good-x	Good-y	$MRS = \frac{S}{G}$
A	1	10	
B	2	7	$3/1 = 3$
C	3	5	$2/1 = 2$
D	4	4	$1/1 = 1$



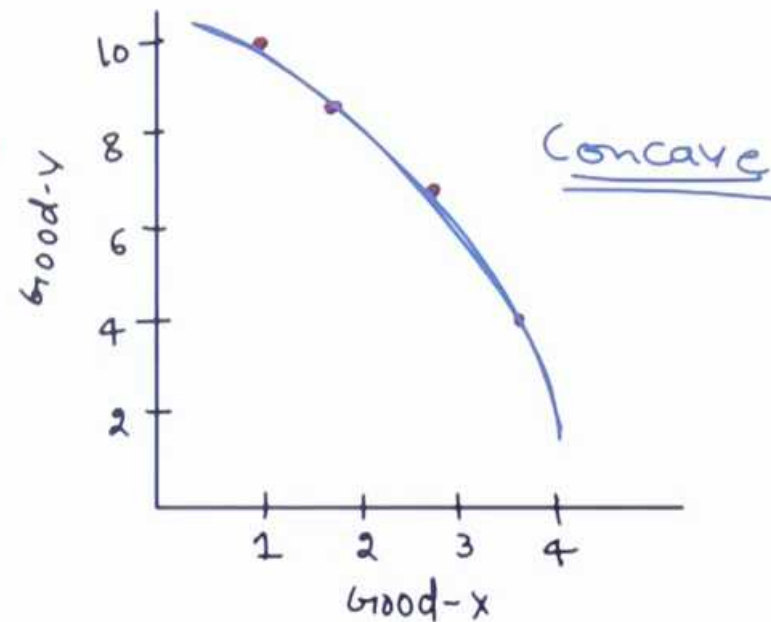
⑥ Increasing  $MRS_{xy}$

Comb.	Good-x	Good-y	$MRS = \frac{S}{U}$
A	1	10	—
B	2	9	$1/1 = 1$
C	3	7	$2/1 = 2$
D	4	4	$3/1 = 3$



⑥ Increasing  $MRS_{xy}$

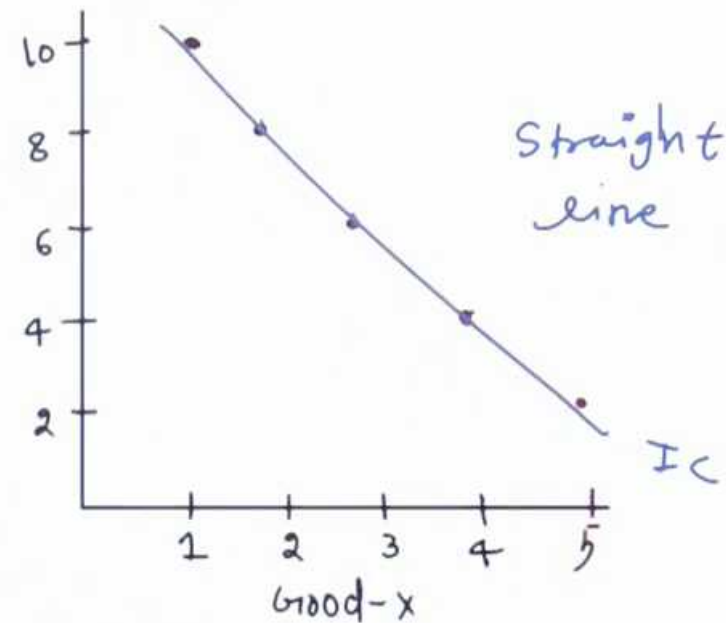
Comb.	Good-x	Good-y	$MRS = \frac{S}{U}$
A	1	10	—
B	2	9	$1/1 = 1$
C	3	7	$2/1 = 2$
D	4	4	$3/1 = 3$





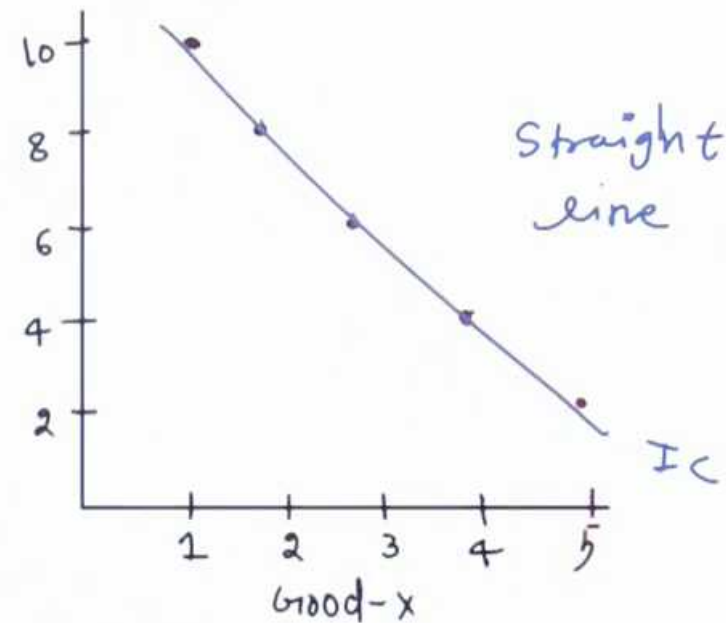
### ③ Constant $MRS_{xy}$

Comb.	Good-x	Good-y	$MRS = \frac{y}{x}$
A	1	10	—
B	2	8	$2/1 = 2$
C	3	6	$2/1 = 2$
D	4	4	$2/1 = 2$
E	5	2	$2/1 = 2$



### ③ Constant $MRS_{xy}$

Comb.	Good-x	Good-y	$MRS = \frac{y}{x}$
A	1	10	—
B	2	8	$2/1 = 2$
C	3	6	$2/1 = 2$
D	4	4	$2/1 = 2$
E	5	2	$2/1 = 2$



### 3) Higher indifference curve shows higher level of satisfaction

Higher indifference curve shows always higher level of satisfaction as compared to lower indifference curve. Combination on higher indifference curve will be preferred to the combination which lie on lower indifference curve. Because higher combination provide more of quantity of good than lower combination.

### 4) Indifference curves cannot intersect each other

Indifference curve cannot intersect each other, because two indifference curve never shows same level of satisfaction. Higher indifference curve shows always higher level of satisfaction as compared to lower indifference curve.



← → OneNote for Windows 10 pratham singh

Home Insert Draw View Help

The graph illustrates a shift from indifference curve  $I_{c1}$  to  $I_{c2}$ . The vertical axis is labeled 'Good-y' and the horizontal axis is labeled 'Good-x'. Point A is on  $I_{c1}$  at coordinates  $(x, y)$ , and Point B is on  $I_{c2}$  at coordinates  $(x_1, y_1)$ . The shift from  $I_{c1}$  to  $I_{c2}$  represents an increase in utility, with both quantities of goods increasing from  $x$  to  $x_1$  and  $y$  to  $y_1$ . The area under the curves is shaded in red and blue.

ECONOMICS BY PRATHAM SINGH FOR 11th, 12th, B.com, BA, BBA, CA, CS, CMA, UGC-NET

OneNote for Windows 10 pratham singh

Home Insert Draw View Help

Good-Y

Good-X

$I_{c1}$

$I_{c2}$

$I_{c3}$

A

B

C

$x$

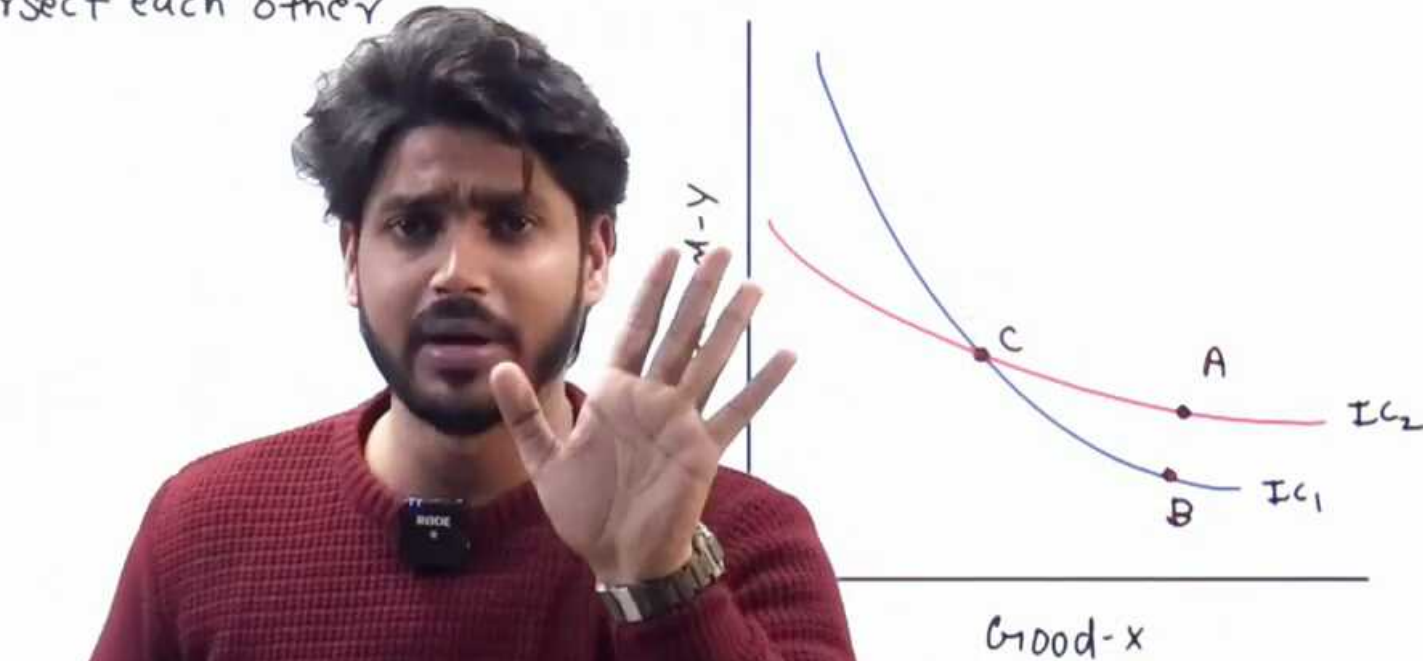
$x_1$

$y$

$y_1$

ECONOMICS BY PRATHAM SINGH FOR 11th, 12th, B.com, BA, BBA, CA, CS, CMA, UGC-NET

Two Indifference Curve never  
Intersect each other



Two Indifference Curve never  
Intersect each other

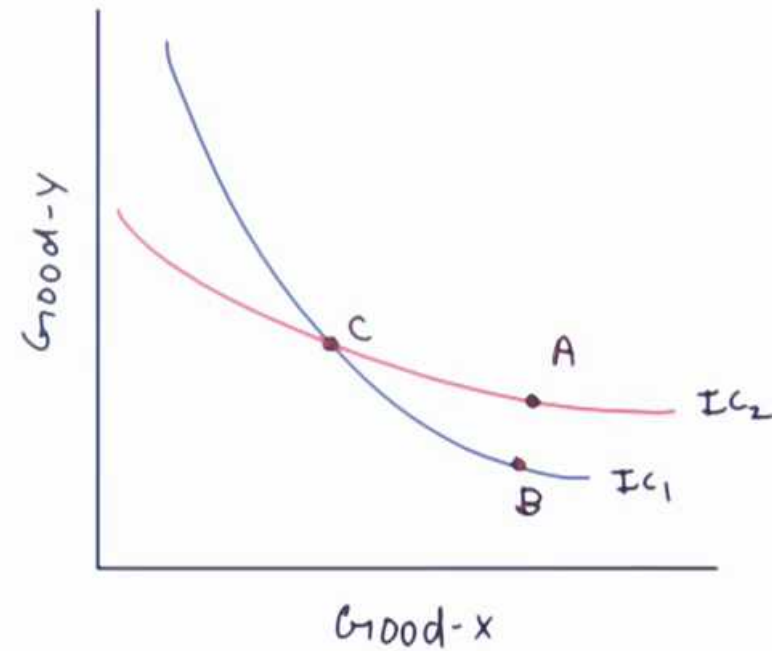
IC

eqn ①

$= C$

eqn ②

②





Two Indifference Curve never  
Intersect each other

$IC_1$   
 $B = C$  eqn (1)

$IC_2$   
 $A = C$  eqn (2)

from eqn (1) & (2)

$B = A$  Impossible

