UNIT II

Meaning of Utility

- The simple meaning of 'utility' is 'usefulness'.
- In economics utility is the capacity of a commodity to satisfy human wants.
- Utility is the quality in goods to satisfy human wants.
- Thus, it is said that **"Wants satisfying capacity of goods or services is called Utility."**

Definition

Definition of Utility

According to Prof. Waugh:

"Utility is the power of commodity to satisfy human wants."

According to Fraser:

"On the whole in recent years the wider definition is preferred and utility is identified, with desireness rather than with satisfyingness."

UTILITY APPROACH

- **Definition**
  - **'Utility'** means the satisfaction obtained from consuming a commodity.
- **Two Types of Approach**
  - **Cardinal Approach**
    - The cardinal utility theory says that utility is **measurable** and by placing a number of alternatives so that the utility can be added.
    - The index used to measure utility is called **utils.**
  - **Ordinal Approach**
    - The ordinal utility theory says that utility is **not measurable** but it can be compared.
    - Ordinal approach uses the **ranking of alternatives** as first, second, third and so on.

TYPES

- Form utility
- Place utility
- Time utility
- Service utility

Law of diminishing marginal utility

LAW OF DIMINISHING MARGINAL UTILITY

- **Definition**

  The additional benefit which a person derives from a given increase of a stock of a thing diminishes, other things being equal, with every increase in the stock that he already has.

  OR

  Law of Diminishing Marginal Utility states that as consumption increases more and more, marginal utility will be less and less.

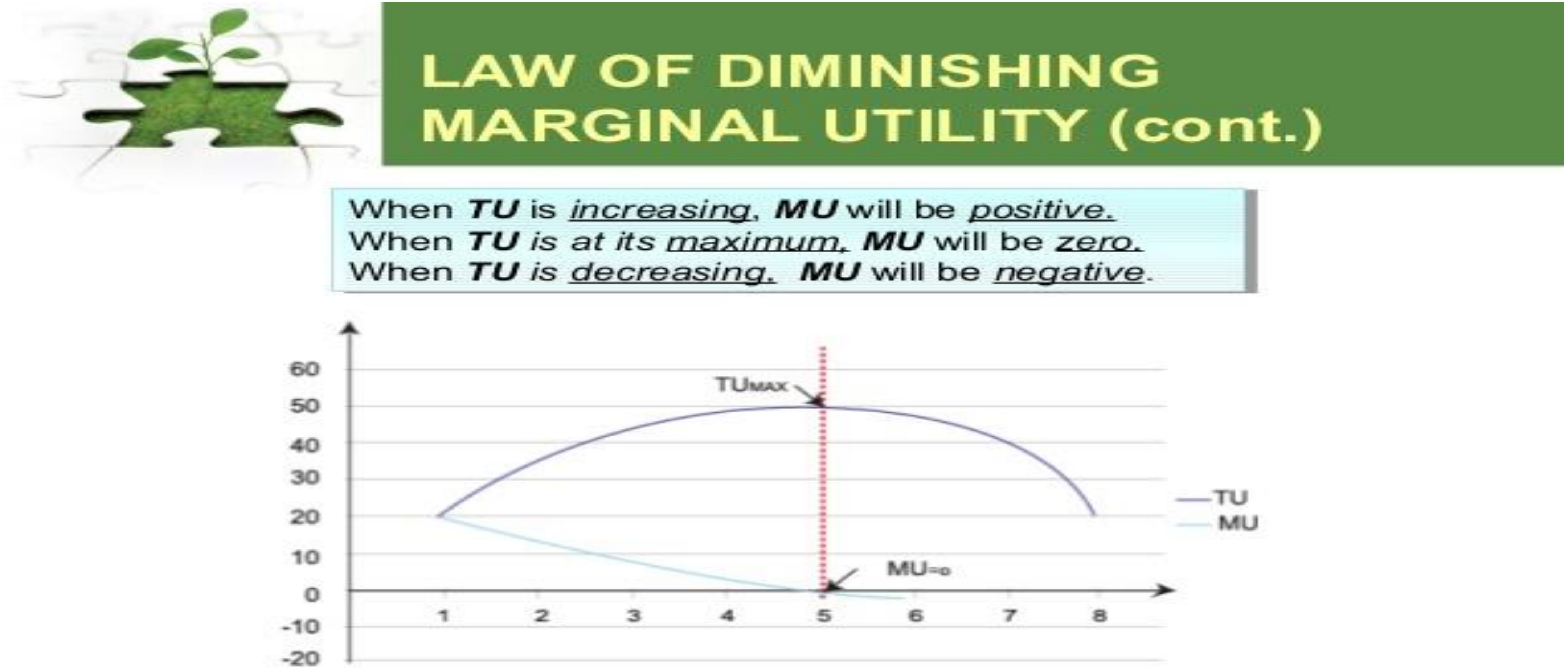
LAW OF DIMINISHING MARGINAL UTILITY (cont.)

TU increases from consumption of 1^{st} unit of apple until the 5^{th} unit of apples. After the 5^{th} unit of apples, TU will decrease.

Units of Apples	Total Utility	Marginal Utility
1	20	20
2	35	15
3	45	10
4	50	5
5	50	0
6	45	-5
7	35	-10
8	20	-15

MU will decrease and become zero at the 5^{th} unit of apples and further consumption of apples will not satisfy the consumer as the MU shows negative signs.

Law of diminishing marginal utility



Law of Equi-marginal ….

LAW OF EQUI-MARGINAL UTILITY (EMU)

- **Definition**

  *The **Law of Equi-Marginal Utility (EMU)** states that other things being equal, a consumer gets maximum satisfaction when he allocates his limited income to the purchase of different goods, where the marginal utility derived from the last unit of money spent on each item of expenditure tends to be equal.*

  – This is also known as *conditions for maximum utility or satisfaction.*

LAW OF EQUI-MARGINAL UTILITY (EMU) (cont.)

❑ Conditions for Equilibrium

For consumer equilibrium, this condition must be fulfilled.

Condition 1: Every Ruppee spent on every commodity must yield the same marginal utility.

$$\frac{\text{Marginal Utility of X}}{\text{Price of X}} = \frac{\text{Marginal Utility of Y}}{\text{Price of Y}}$$

Condition 2: Total expenditure of all goods must be equal to the total budget allocated to maximize utility.

$$P_1Q_1 + P_2Q_2 + \ldots + P_nQ_n = \text{Total budget}$$

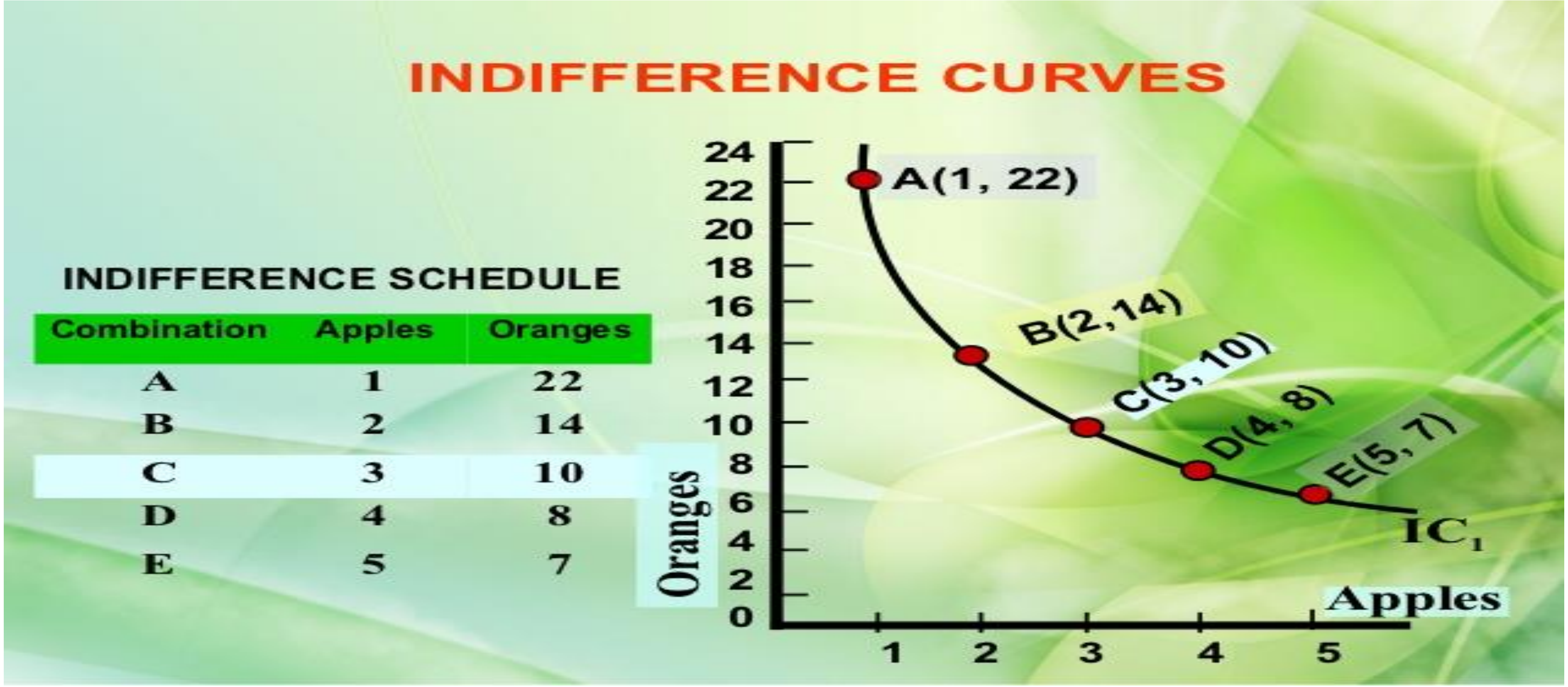
Indifference curve

DEFINITION: IC

An Indifference curve (IC) is the locus of all those combination of two goods which give the **same level of satisfaction** to the consumer.

Thus consumer is indifferent towards all the combinations lying on the same indifference curve. **In other words, consumer gives equal preference to all such combinations.**

IC ……



Combination	Apples	Oranges
A	1	22
B	2	14
C	3	10
D	4	8
E	5	7

MRS…

MARGINAL RATE OF SUBSTITUTION (MRS)

The marginal rate of substitution of X for Y (MRSxy) is defined as the amount of Y, the consumer is just willing to give up to get one more unit of X and maintain the same level of satisfaction.

$$MRS_{xy} = \frac{\text{Decrease in the Consumption of Y}}{\text{Increase in the Consumption of X}} = (-)\,\frac{\Delta Y}{\Delta X}$$

MRS...


LAW OF DIMINISHING MRS
MRS = -ΔO/ΔA = 8:1
MRS = 4:1
MRS = 2:1
MRS is measured by the slope of the indifference curve
A
B
C
D
E
IC1
Oranges
Apples
24
22
20
18
16
14
12
10
8
6
4
2
0
1
2
3
4
5

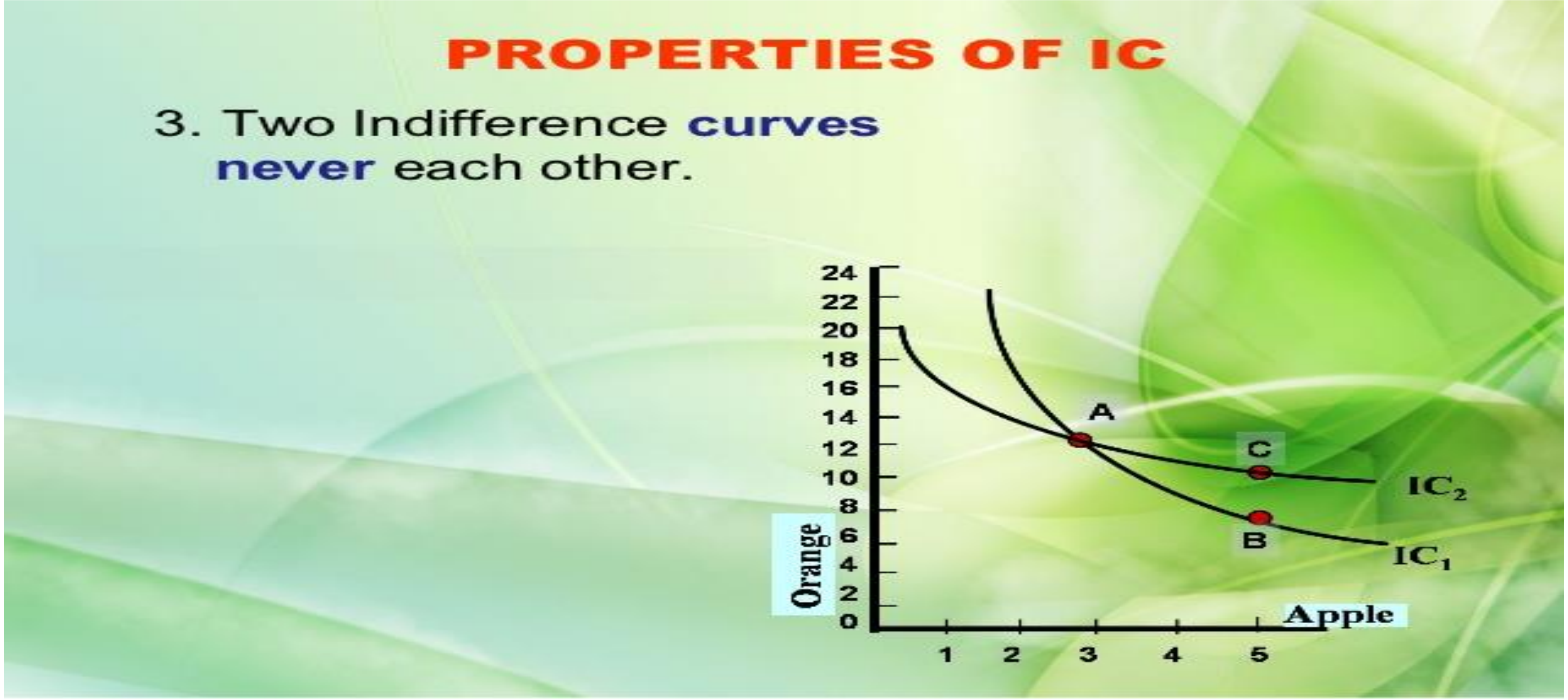
IC CURVE..

PROPERTIES OF IC

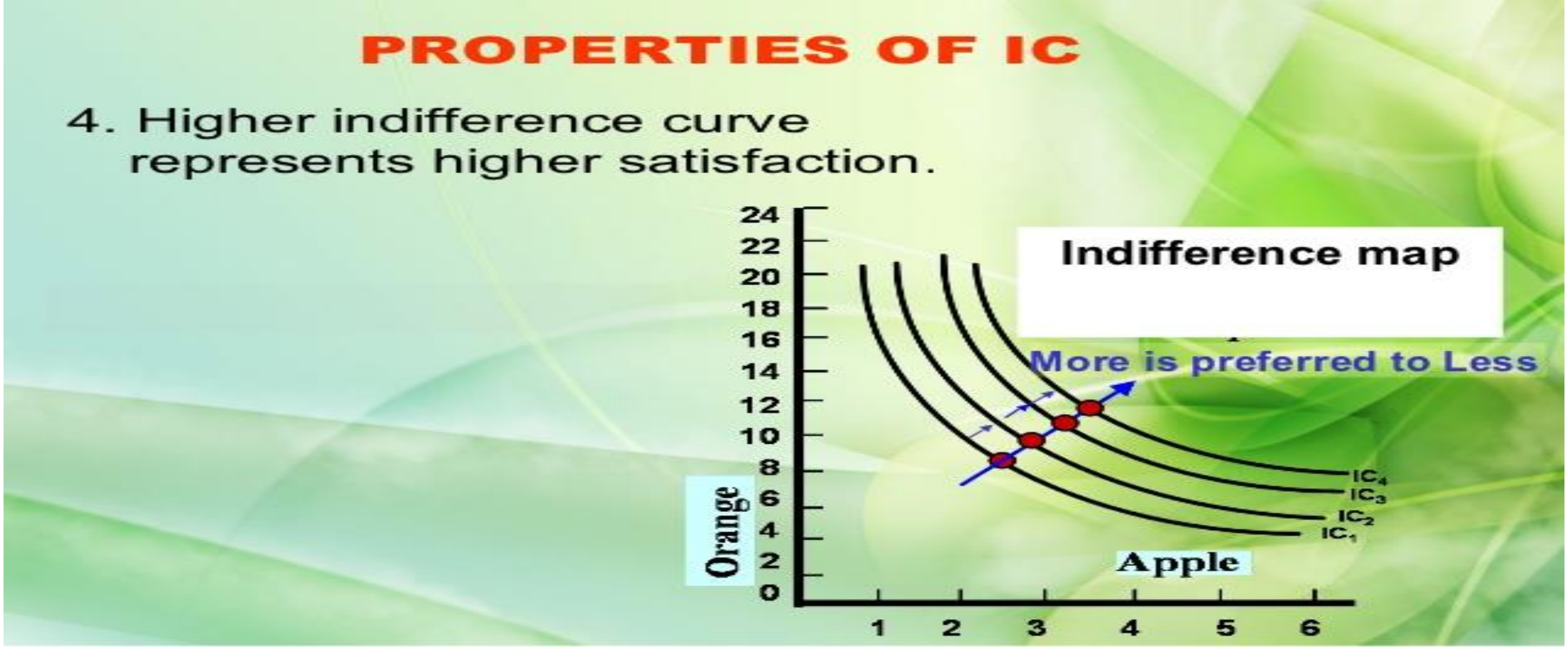
1. An Indifference curve has **negative slope** i.e. it slope downwards from left to right.

2. Indifference curve is always **convex to the origin**.

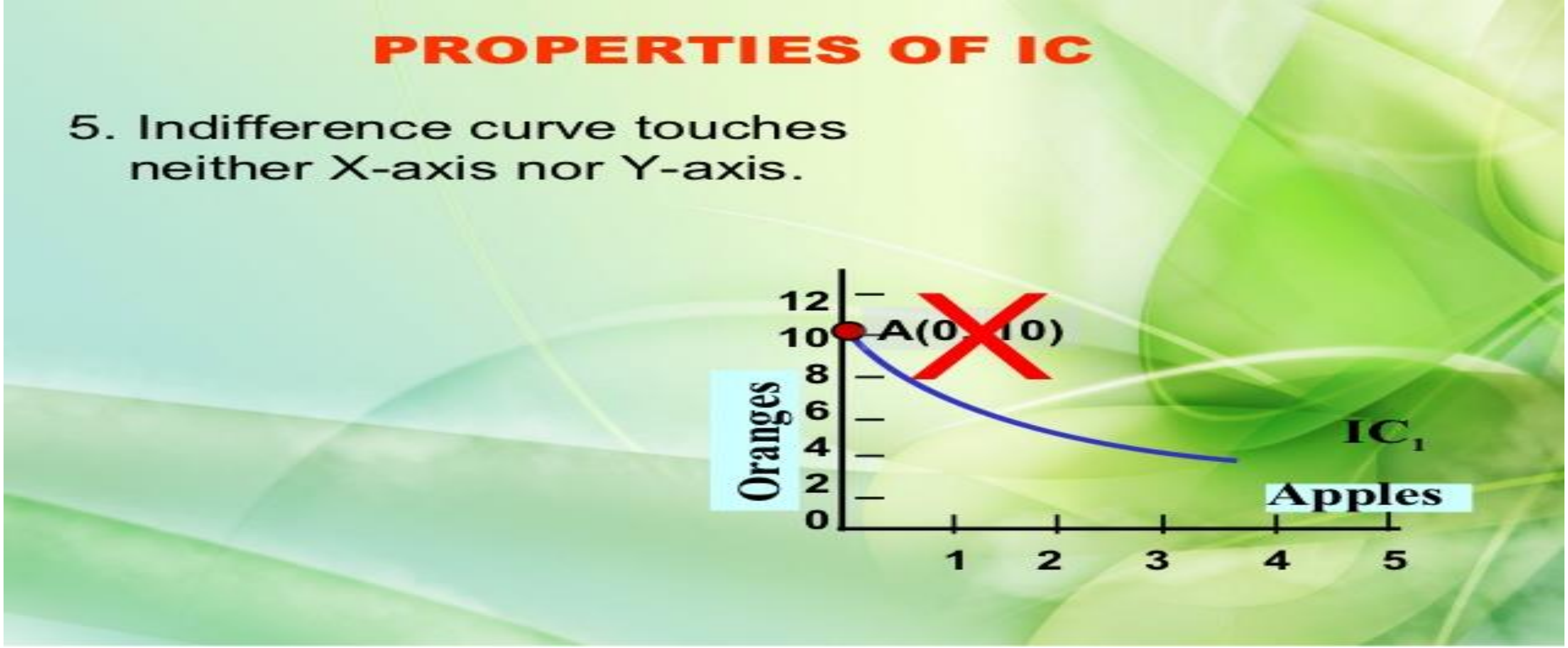
IC..


PROPERTIES OF IC
3. Two Indifference curves
never each other.
24
22
20
18
16
14
12
10
8
6
4
2
0
Orange
1
2
3
4
5
Apple
A
B
C
IC_2
IC_1

IC….


PROPERTIES OF IC
4. Higher indifference curve represents higher satisfaction.
Indifference map
More is preferred to Less
Orange
Apple
24
22
20
18
16
14
12
10
8
6
4
2
0
1
2
3
4
5
6
IC_4
IC_3
IC_2
IC_1

IC…


PROPERTIES OF IC
5. Indifference curve touches neither X-axis nor Y-axis.
12
10
8
6
4
2
0
A(0
10)
Oranges
IC_1
Apples
1
2
3
4
5

BUDGET LINE….

The Budget line shows all different combinations of the two commodities that a consumer can purchase given his money income and price of two commodities.

Slope of Price line = P_x/P_y

Here;
P_x= price of apples
P_y = price of oranges

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