FRANKLIN'S LECTURES

INDUSTRIAL ECONOMICS & FOREIGN TRADE

Module 1

Part-2

HUT 300

CONCEPT OF UTILITY

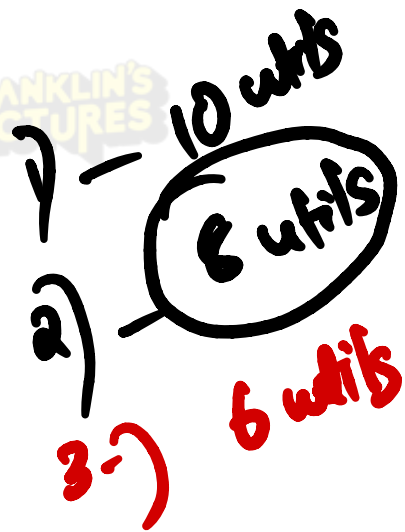
- **Utility** refers to the amount of satisfaction or pleasure a consumer derives from consuming a good or service.
- It is a subjective concept and varies from person to person.
- Utility is measured in imaginary units called **utils**, which help compare satisfaction levels but have no real unit
- Benham formulated the unit of measurement of utility as utils

TYPES OF UTILITY

- **Form Utility:** Created when the form or shape of a good is changed to make it more useful.
  - Example: Wood transformed into furniture increases its usability.
- **Place Utility:** Arises when goods are moved from a place where they are less needed to a place where they are in demand.
  - Example: Transporting vegetables from a village farm to a city market.
- **Time Utility:** Created by storing goods until they are needed, increasing their value at the right time.
  - Example: Storing umbrellas to sell during the rainy season.
- **Service Utility:** Generated through services rendered by people that satisfy human wants.
  - Example: A doctor's treatment or an engineer's technical expertise.

TOTAL UTILITY (TU) AND MARGINAL UTILITY (MU)

- **Total Utility (TU):** The total amount of satisfaction or benefit a person gets from consuming a certain number of units of a good or service.
  - Example: If you eat 3 chocolates and your total happiness is 24 utils, then 24 is your total utility.
- **Marginal Utility (MU):** The additional satisfaction a person gets from consuming one more unit of a good.
  - Example: If the satisfaction from the 1st chocolate is 10 utils, and from the 2nd is 8 utils, then the marginal utility of the 2nd chocolate is 8 utils
  - MU=TUn −TUn−1



Units Consumed	Total Utility (TU)	Marginal Utility (MU)
1	10	10
2	18	8
3	24	6
4	28	4
5	30	2

Law of Diminishing Marginal Utility/Theory of Consumer Behaviour

- **Law of Diminishing Marginal Utility** states that as a person consumes more units of a good, the additional satisfaction (marginal utility) from each successive unit decreases.

Explanation:

- The first unit of a good provides the highest satisfaction.
- As more units are consumed, the satisfaction gained from each additional unit (MU) decreases.
- Eventually, the consumer may reach a point where consuming more provides no satisfaction (MU = 0) or even dissatisfaction (MU < 0).

Real-life Example:

- Eating pizza:
  - 1st slice: Very satisfying (MU = 10)
  - 2nd slice: Still good, but slightly less (MU = 8)
  - 3rd slice: Okay, but less enjoyable (MU = 6)
  - 4th slice: Getting full (MU = 4)
  - 5th slice: Feeling stuffed (MU = 2)
  - 6th slice: Overeating (MU = 0 or negative)

ASSUMPTIONS OF LAW OF DIMINISHING MARGINAL UTILITY (DMU)

Homogeneous Units
Continuous Consumption
Rational Consumer
No Change in Taste or Preference
Constant Income and Price
Single Utility

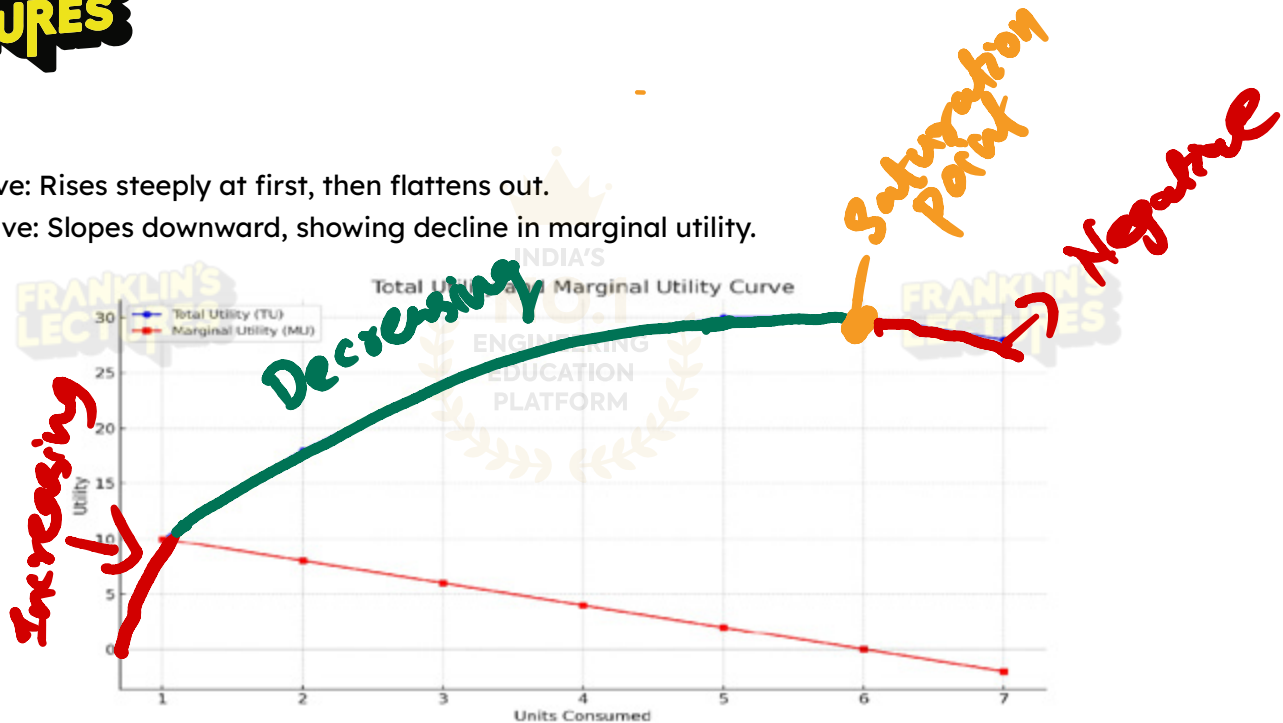
Units Consumed	Total Utility (TU)	Marginal Utility (MU)
1	10	10
2	18	8
3	24	6
4	28	4
5	30	2
6	30	0
7	28	-2

Saturation

- TU becomes maximum when MU is zero.
- TU may start decreasing if consumption continues and MU turns negative.

Graph:

- TU Curve: Rises steeply at first, then flattens out.
- MU Curve: Slopes downward, showing decline in marginal utility.



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CALCULATE THE MARGINAL UTILITY FROM THE FOLLOWING DATA

X	1	2	3	4	5	6	7	8
TU	11	19	26	31	34	36	36	30

MU 11 8 7 5 3 2 0 -6

RELATIONSHIP BETWEEN TU AND MU

- TU increases as long as MU is positive.
- TU is maximum when MU is zero.
- When MU becomes negative, TU starts to decline.

Q. What is the Law of Diminishing Marginal Utility? Explain with the help of an example. (2024, 7 marks)

Q. Draw TU and MU curves. Derive the three relationships between them (2022,7 marks)

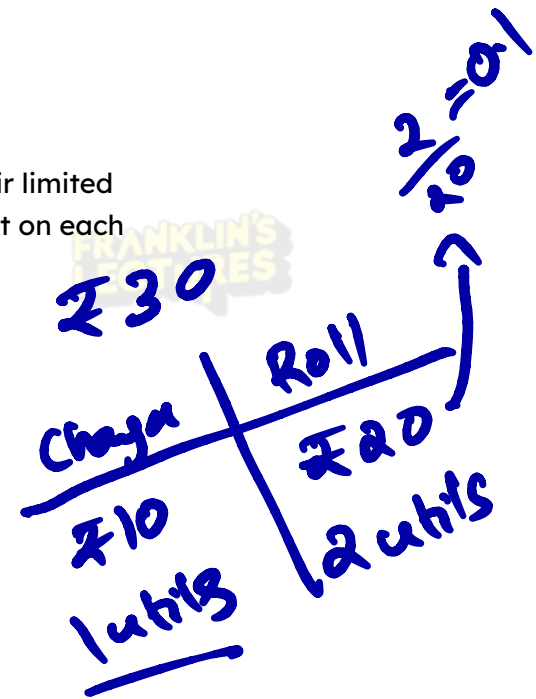
Law of Equi-Marginal Utility

Law of Equi-Marginal Utility states that a consumer will allocate their limited income among different goods in such a way that the last rupee spent on each good gives the same level of satisfaction.

Formula:

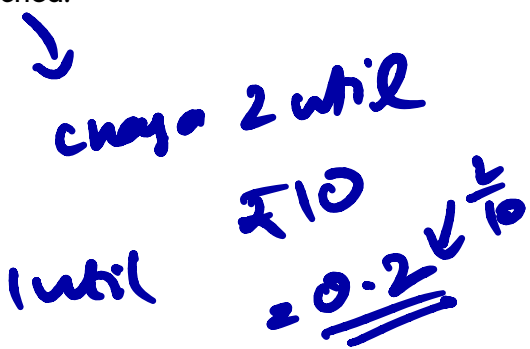
- MUx/Px = MUy/Py = MUz/Pz
  - Where MU = Marginal Utility, P = Price, x, y, z = goods

$$\frac{MU_{choy}}{P_{choy}} = \frac{MU_{roll}}{P_{roll}} = \frac{1}{10} = 0.1$$



Explanation:

- Consumers have a limited income and multiple needs.
- To get maximum satisfaction, they distribute income in a way that the utility gained per rupee is equal for all items.
- If the MU per rupee of one good is higher than another, the consumer will shift spending towards the more satisfying good until equality is reached.



Applications:

- Budget allocation between goods and services
- Optimizing spending in household or firm decisions
- Understanding consumer behavior in real markets
- Designing pricing strategies that match consumer utility levels

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THANK YOU