Economics

MODULE - I

Demand: All desires to have a commodity turns into demand if one has the ability and willingness to pay for that certain commodity.

Demand Function: Factors on which demand of product/goods depends on

$$Q_x = f(P_x, P_y, I, T, P_z, L, G, A)$$

where,

P_x = price of good x
P_y = price of substituted good y
I = income of consumer
T = availability
P_z = price of complementary good z.
L = population
G = government policies
A = Advance made by producers

*** Law of Demand**

It states that if the price of a certain commodity decreases, demand for the commodity will increase and vice versa all factors remaining constant.

→ establishes a relationship b/w the price & quantity demanded.
→ Inverse relationship b/w price & quantity.

$$P_x \propto \frac{1}{Q_x}$$

Assumption

1. Income of consumer remains constant
2. Taste & preference remains constant
3. Price of related goods remain constant

• Real purchasing power depends on
① Income effect
② Substitution effect
③ Price effect

① Income Effect : Change in quantity demanded due to change in real money of a consumer

② Substitution Effect : Quantity demanded change of the substituted goods due to change in price of a good.

③ Price Effect : Change in quantity demanded due to change in price of a good.

* Exceptions to the Law of Demand
① Giffen Goods
↳ Given by Sir Robert Giffen
↳ Consumer spent greater portion of income to maintain same level of consumption, when prices rise / increase.
Ex: bread, rice, kerosene. etc.

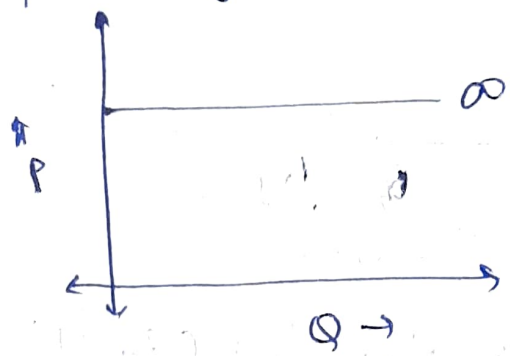
② Status Goods (Veblen Effect)
↳ Given by T. Veblen
↳ When utility is measured by its price i.e. greater the price of the commodities, greater is its utility.

③ Change in expectation of the people.
④ Change in taste / preference of consumer
⑤ Necessaries of life.

* Elasticity of Demand
→ percentage change of quantity demanded due to percentage change in price.

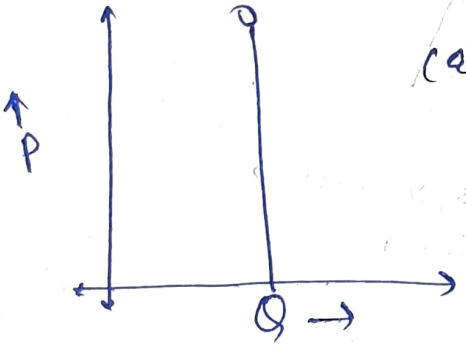
• Degree of Elasticity of Demand

1) Perfectly elastic demand ($\epsilon_d = \infty$)
→ when little change in price leads to an infinite change in quantity.



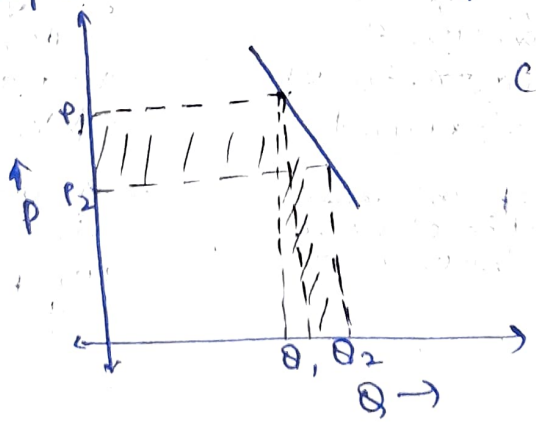
($\epsilon_d = \infty$)

2) Perfectly inelastic demand ($\epsilon_d = 0$)
→ under any rise or fall of price, of a commodity, quantity demanded remain the same.



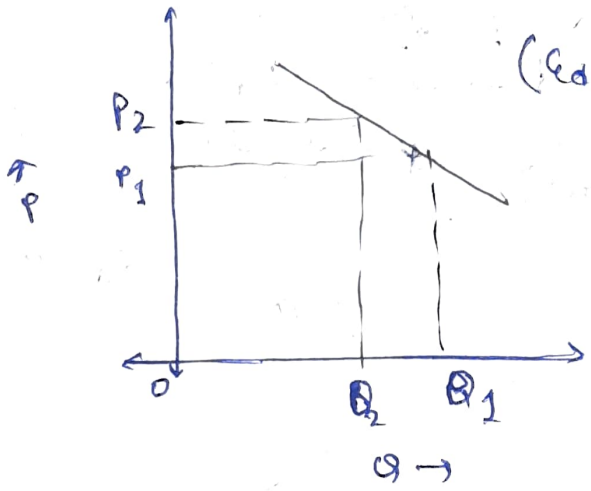
($\epsilon_d = 0$)

3) Unitary elastic Demand ($\epsilon_d = 1$)
→ when proportionate change in the price leads equal proportionate change in quantity demanded.



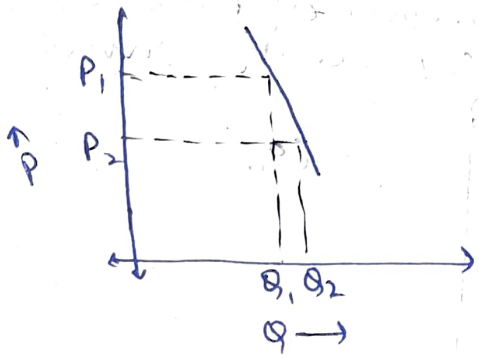
($\epsilon_d = 1$)

4) Relatively elastic demanded ($\epsilon_d > 1$)
→ small change in price leads to a big change in quantity demanded.



(5) Relatively Inelastic Demand ($e_d < 1$)

→ A price change leads to lesser change in quantity demanded.



Elasticity of Demand

- Price Elasticity of Demand
  → Responsiveness to quantity demanded to the price of the commodity.
- Income Elasticity of Demand
  → Responsiveness to the change in income
- Cross Elasticity of Demand.
  → Responsiveness to substitute complementary goods

Elasticity of Demand (e_p) = $\frac{\%\text{ change in quantity demanded}}{\%\text{ change in price}}$

$e_p = \frac{\%\ \Delta Q}{\%\ \Delta P}$

$$e_p = \frac{\Delta Q}{\Delta P} \times \frac{P}{Q}$$

$$0 < e_p < \infty$$

- Determinants of Elasticity of Demand

1) Nature of commodity
2) Substitutes
3) No. of users
4) Income level
5) Habits
6) Distributed income
7) Joint Demand
8) Time.

Mid point : $$\frac{\frac{\Delta Q}{Q_1 + Q_2} \times 100}{\frac{\Delta P}{P_1 + P_2} \times 100}$$

$$\Rightarrow \frac{\Delta Q}{\Delta P} \times \frac{P_1 + P_2}{Q_1 + Q_2}$$

2. Utility Analysis

Utility: Total psychological satisfaction derived using the commodity

→ Measurement of utility

CARDINAL UTILITY	ORDINAL UTILITY
4 given by A Marshall	4 Given by J. R. Hicks
4 satisfaction derived by the consumer from consumption of goods & services can be numerically expressed	4 Satisfaction derived by the consumer from the consumption of goods and services can be expressed in ranks or levels.
4 Qualitative approach.	4 Quantitative approach
4 Measurement of utility	4 Measurement of ranks.
4 Marginal utility analysis	4 Indifference curve analysis.

Types of Utility

1. **Total Utility**

Total psychological satisfaction obtained after consumption of a set of a commodity

2. **Marginal Utility**

Utility as a result of consumption of one additional unit of a commodity.

$$MU = TU_n - TU_{n-1}$$

- **Cardinal Approach of utility**

1. **Law of Diminishing Marginal Utility (LDMU)**

↳ It states that when a consumer goes on consuming subsequent units of a commodity, the marginal utility derived from each subsequent units will gradually decline.

↳ Increasing the no. of stocks of a goods decreases the marginal utility of a good.

→ **assumption**

1. Measurements of utility
2. Time gap b/w subsequent consumption
3. Subsequent units of commodity must be homogenous
4. constant taste, habit, fashion & income.

2. **Law of Equimarginal Utility**

↳ It states that a consumer should distribute his limited income/given income among the commodities in such a way that the last unit of money spent is derived same level of satisfaction from all the available commodities.

↳ Consumer gets maximum satisfaction when the ratio of marginal utility of goods and prices are equal.

$$\frac{PU_{x1}}{PX_1} = \frac{MU_{x2}}{PX_2} = \cdots = \frac{PU_{xN}}{PU_N}$$

where, m → total money income.