UNIT 1

CENTRAL CONCEPTS OF ECONOMICS

Definitions of Economics

- The term Economics is derived from two Greek words, namely, “oikos” which means household and “Nemein” which means Household management. The term Economics was first used by Dr. Marshall in 1890 in his famous book, “Principles of Economics”.

- According to Lionel Robbins, Economics is the study of economic issues arising out of the fact that resources are scarce in relation to our needs and the scarce resources have alternative uses.

- According to Adam smith, Economics is an inquiry into the nature and causes of the wealth of nations.

- According to Alfred Marshall, Economics is the study of mankind in the ordinary business of life. It examines that part of individual and social action which is most closely connected with the attainment and with the use of material requisites of wellbeing.

Scarcity and Efficiency

- Wants of an individual are always unlimited. As soon as he satisfies one want, a new want arises. It is unending process. No matter how rich we are the available resources are never enough to fulfill our needs. The scarcity of resources is a stark reality and nobody can escape from it.
- Economics helps us to know how the societies use the scarce resources to produce valuable commodities and how it is being distributed among the people.
- The goods are scarce and society must use its resources efficiently.
- Efficiency is when there is effective use of society’s resources in satisfying peoples wants and needs.
- Economic efficiency requires that an economy to produce the highest combination of quantity and quality of goods & services given its technology & scarce resources.
- An economy is producing efficiently when no individual’s economic welfare can be improved unless someone else is made worse off.
- The essence of economics is to acknowledge the reality of scarcity and then figure out how to organize society in a way which produces the most efficient use of resources. That is where economics makes its unique contribution.

Central problems of an economy

1) What to produce and in what quantity?
   Every society must decide how much of goods & services need to be produce, whether to produce food, clothing & housing or to have more of luxury goods. Whether to produce agricultural goods or to produce industrial goods, whether to have more of consumption goods or to have an investment goods.
2) How to produce?

How to produce refers to techniques of production. It means which technology to be adopted in order to produce goods & services.

3) For whom to produce?

The concept of whom to produce is problem related to the distribution of resources among the individuals in the economy. Here, the has to decide whether to produce for richer section of the society or for poor section.

Nature of Economics

- **Positive Economics**

  Positive economics focuses on the description, quantification and explanation of economic developments, expectations and other associated phenomena. Positive economics is objective and fact-based in which the statements are precise, descriptive and measurable. It depends on data analysis, facts and figures.
- For example: Government provides free education facilities to the girl child.
- This statement is factual and its validity can be easily proven by studying educational spending by government for the education of the girl child and how many girls have been benefited from it.

- **Normative Economics**

  Normative Economics focuses on the ideological, opinion-oriented, prescriptive judgements toward economic development, value based, statements and scenarios.
- They cannot be proven and do not contain facts.
- It contains 'ought' and 'should' in the situations.
- For example: Higher education should be free of cost for all students. Tuition fees should be abolished.
- This statement states the personal perspective, value based and based on what should be done.

❖ Economics is divided into two major subfields:
  - **Microeconomics**
  - **Macroeconomics**

Microeconomics

- Adam smith is considered as the founder of microeconomics. In his book 'The Wealth of Nations' (1766), Smith considered how individual prices are set and other concepts.
- When economics problem or economic issues are studied considering small economic units like an individual consumer or an individual producer, we are referring to microeconomics.
- It is derived from the Greek word, 'Mikro' meaning small.
- It is a branch of economics that deals with the behaviour of individual economic units-consumers, firms, workers and investors as well as the markets that these units comprise.
- It studies the decisions of individuals and firms to allocate resources of production, exchange and consumption. For e.g. Consumer behavior, Individual labour markets, etc.

- For example, microeconomics explains how consumers can best allocate their limited incomes to the various goods and services available to purchase.
- It explains how workers can best allocate their time to labor instead of leisure, or to one job instead of another.
- Basically, microeconomics tries to understand human choices, decisions and allocation of resources.

- **Components of Microeconomics**
  1) Theory of consumer behaviour
     It studies how consumer allocates its income to different uses so that he maximizes his satisfaction level.
  2) Theory of producer behaviour
     Its analysis how producer makes his choice on the use of different inputs and how he decides what to produce and how to produce.
  3) Theory of price
     It studies how price of goods are determined in commodity market.

Macroeconomics

- Macroeconomics is concerned with the overall performance of the economy.
- John Keynes first introduced the concept of Macroeconomics.
- Macroeconomics deals with economic issues or economic problems at the level of an economy as a whole.
- It is derived from the Greek word, 'Macros' meaning large.
- It includes topics such as inflation, unemployment and economic growth.
- For example, the level of total investment by firms in new machinery and equipment helps to determine how rapidly the economy grows which is a macroeconomic issue.
- There is a larger degree of aggregation in macroeconomics.
- Today, macroeconomics examines a wide variety areas, such as how total investment and the consumption are determined, how central banks manage money and interest rates, what causes international financial crises and why some nations grow rapidly while others stagnate.

Basic elements of supply and demand

- The basic model of supply and demand is the workhorse of microeconomics.
- It helps us understand why and how prices change and what happens when the government intervenes in the market.
- The supply-demand model combines two important concepts: a supply curve and a demand curve.
- The supply curve shows the quantity of good that producers are willing to sell at a given price.
- The demand curve shows how much of good consumers are willing to buy as the price per unit changes.

Demand

- Demand is a desire to have a commodity, backed by ability and willingness to pay for the product.
- Income also plays a major role in determining demand for the product.
- Every consumer has its own demand for different products in the market.

- **Law of Demand**
    - Law of demand states that other things remaining equal, the demand for goods expands with a fall in price and when price rises quantity demanded of the commodity falls.
    - There is an inverse relationship between quantity demanded of a commodity and its price.

- **Assumptions of law of demand**
    - There is no change in the income of the consumer.
    - Tastes and preferences of the consumer remains constant.
    - There is no change in price of related goods.
    - Size of the population is also constant.

- **Determinants of demand**
    - Price of commodity
    - Income of the consumer
    - Taste and preferences
    - Advertisement
    - Price of related goods
    - Quality of the commodity
    - Population

- **Demand Schedule and curve**

Price of commodity	Quantity demanded
10	5
20	4
30	3
40	2
50	1

The above schedule shows inverse relation between price and quantity demanded of the commodity.

- On Y-axis price is measured and on X-axis quantity demanded.
- DD is the demand curve which slopes downward from left to right.
- It shows inverse relation between price and quantity demanded of the commodity.

- **Market Demand**
  - Market demand is the total quantity of commodity that all buyers in the market are willing and able to purchase at different possible prices.
  - The willingness and ability of all consumers in a market to purchase a given good.
- **Market demand schedule**

Price	A's demand	B's demand	C's demand	Market Demand
3	40	30	20	90
6	30	20	10	60
9	20	10	07	37
11	10	05	03	18

The above table shows that when the price of commodity rises its market demand falls.

- **Shifts in Demand**
  - **Increase in demand**
    When demand of commodity rises due to change in factors other than price. It is also known as forward shift in demand curve.
  - **Decrease in demand**
    When demand for commodity falls due to change in factors other than price. It is also known as backward shift in demand curve.

- **Supply**
  - Supply refers to the quantities of commodity that producer or seller is willing to sell at different prices in a given period of time in the market.
- **Law of Supply**
  - Other things remaining unchanged, an increase in the price of product leads to an increase in the quantity supplied of it and vice-versa.
- **Assumptions of law of Supply**
  - There is no change in state of technology.
  - There is no change in price of related goods.
  - There is no change in price of inputs.
  - There is no change in the goal of the firm.

- There is no change in the number of firms.

Determinants of Supply

- Own price of the commodity
- Improvement in technology
- Price of factors of production
- Number of firms in the industry
- Government policy (Taxation and Subsidy)

Supply Schedule and curve

Price of commodity	Quantity Supplied
10	10
20	20
30	30
40	40
50	50

The above schedule shows positive relation between price and quantity supplied of the commodity.

- Price is measured on Y-axis and quantity supplied is measured on X-axis.
- SS is a supply curve which is positively slopped.
- When price rises quantity supplied also rises and vice-versa.

Market Supply

- Quantity supplied of a commodity by all the sellers in the market at different prices.

Market supply schedule

Price	Qty SS by A	Qty SS by B	Qty SS by C	Market Supply
10	08	20	02	30
20	12	24	04	40
30	16	28	06	50
40	20	32	08	60
50	24	36	10	70

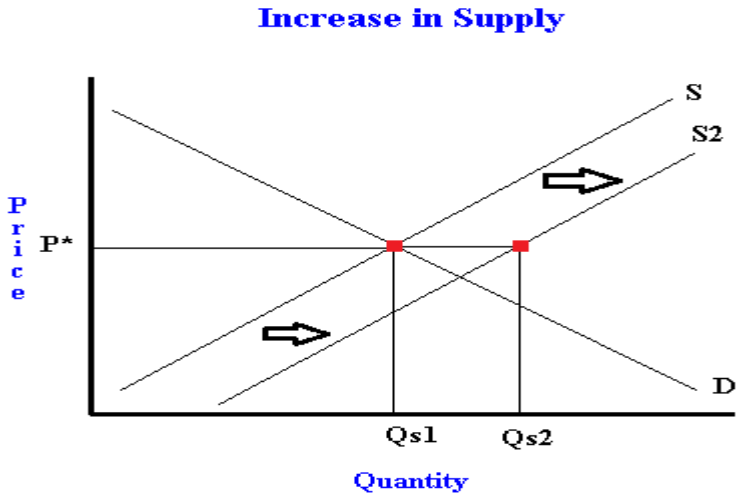
The above table shows that supply rises due rise in prices from Rs. 10 to Rs. 50.

Shifts in Supply

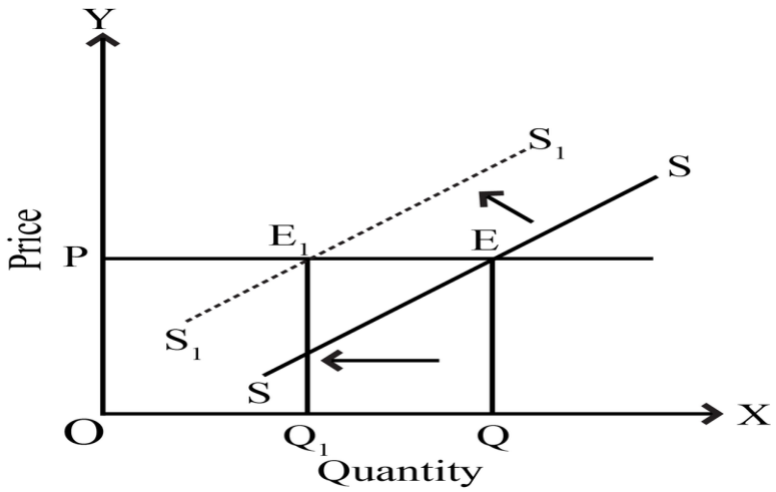
- **Increase in Supply**

  When supply of a commodity rises due to change in other factors other than price of the commodity, it is known as increase in supply.

  For e.g. Rise in supply of a commodity due to improvement in technology, decrease in taxation, increase in number of firms, etc.



- **Decrease in Supply**
  When supply of a commodity falls due to change in other factors other than price of the commodity, it is known as decrease in supply.
  For e.g. Decrease in supply of a commodity due to deterioration in technology, increase in taxation, decrease in number of firms, etc.

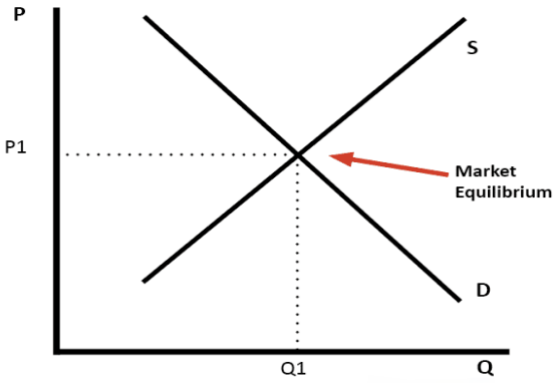


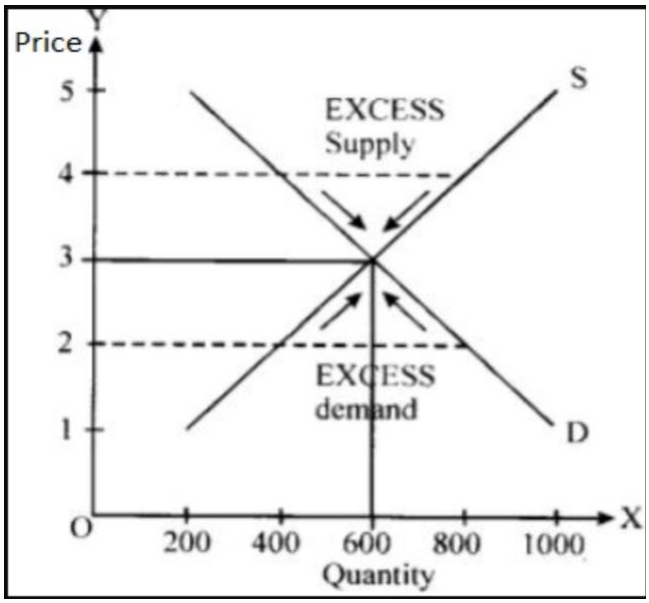
Equilibrium of supply and demand/ Market Equilibrium

- Market equilibrium is determined by the equality between Quantity demanded = Quantity supplied.

- **Market Equilibrium schedule**

Price	Qty DD	Qty SS
10	100	20
20	80	40
30	60	60
40	40	80
50	20	100





- **Elasticity of demand and supply**
  - The elasticity of demand is an economic concept that describes the extent to which consumers modify their demand for a particular good or service in response to changes in its price.
  - An elasticity measures the sensitivity of one variable to another.
  - Elasticity of demand implies how much demand responds to changes in variables like price or income of an individual.
  - Price elasticity of demand is the ratio of the percentage change in quantity demanded of a product to the percentage change in price.
  - **Formula:**
  - **Price elasticity of demand (Ep) =** $\frac{\%\ \text{change in Qty dd}}{\%\ change\ in\ Price}$
  - Price elasticity of supply is the measure of the percentage change in quantity supplied of a product to change in its price.
  - **Price elasticity of supply (Ep) =** $\frac{\%\ \text{change in Qty SS}}{\%\ change\ in\ Price}$
- **Income elasticity of demand**

  Percentage change in the quantity demanded resulting from change in income of the consumer.

$$E=\frac{\Delta Q/Q}{\Delta I/I}$$

Cross price elasticity of demand

Percentage change in the quantity demanded of one good resulting from increase in the price of another.

The demand of commodity X responds here to price change of commodity Y.

Types of Price elasticity of demand

1) **Perfectly elastic demand**

   The demand for commodity is infinite at the prevailing price. (P. eD = ∞)

2) **Perfectly inelastic demand**

   A change in price of the commodity causes no change in its quantity demanded. (P. eD = 0)

3) **Unitary elastic demand**

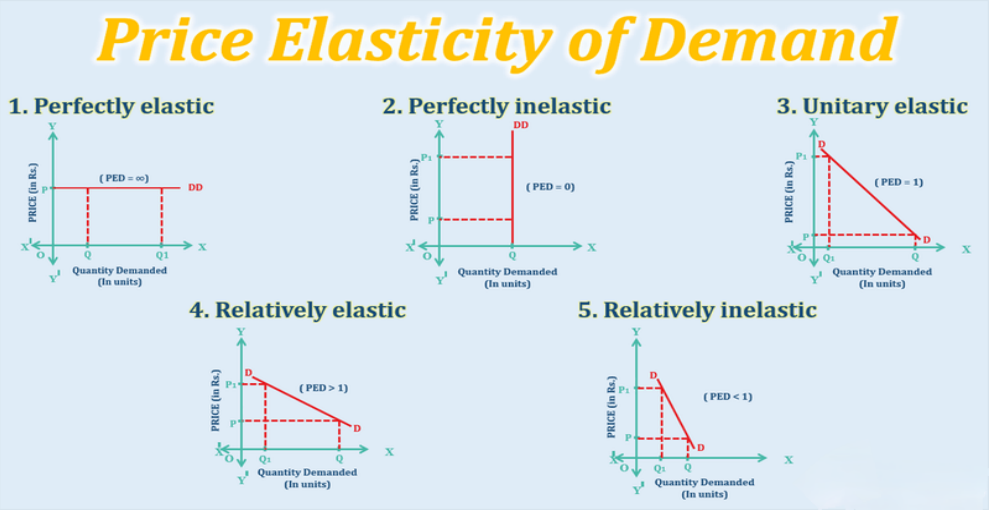
   The change in price brings about exactly proportionate change in quantity demanded. (P. eD = 1)

4) **Elastic demand/ Greater than unitary elastic demand**

   The change in price brings about more than proportionate change in quantity demanded. (P. eD > 1)

5) **Inelastic demand/ Less than unitary elastic demand**

   The change in price brings about less than proportionate change in quantity demanded. (P. eD < 1)



Category of Elasticity of demand	Value of price elasticity	Description
Perfectly elastic	Ed = ∞	Infinite demand at same price.
Perfectly inelastic	Ed = 0	Same demand at all prices.
Unitary elastic	Ed = 1	% Δ in dd = % Δ in price
Highly elastic	Ed > 1	% Δ in dd > % Δ in price
Less elastic	Ed <1	% Δ in dd < % Δ in price

- **Importance of elasticity of demand**
  - It helps business and policymakers make informed decisions about pricing strategies and taxation policies.
  - Elasticity of demand measures the responsiveness of quantity demanded to a change in price.
  - Knowing the elasticity of demand can help businesses. To determine the optimal price point to maximize revenue and profits.
  - It can also inform policymakers about the potential impact of taxes or subsidies on consumer behaviour and market outcomes.
  - To analyze the effectiveness of marketing and promotions.

- **Factors affecting price elasticity of demand**
  1. Nature of commodity
     A commodity for a person may be a necessity, a comfort or a luxury.
     When a commodity is a necessity like foodgrains, vegetables, etc. its generally inelastic as it is required for human survival & demand does not fluctuate much with Δin price. When a commodity is a comfort like fan, etc. its demand is generally elastic as consumer can postpone its consumption. When a commodity is a luxury like A.C., luxury cars, etc. its demand is generally more elastic as compared to demand for comforts.
  2. Availability of substitutes
     With large no. of substitutes, demand for commodity will be more elastic. Even a small rise in its prices will move buyers to go for its substitutes.
     For e.g., A rise in price of coke will encourage the buyers to buy Pepsi & vice-versa.
     Therefore, commodities with few or no substitutes like wheat & salt have less price elasticity of demand.
  3. Income level
     Elasticity of demand for any commodity is generally less for higher income level groups in comparison to people with low income. It happens because rich people are not influenced much by changes in the price of goods. As a result, demand for lower income group is highly elastic.
  4. Level of price
     The costly goods like laptops, A.C., etc. have highly elastic demand as their demand is very sensitive to changes in the prices. However, demand for inexpensive goods like match box, etc. is inelastic as change in the prices of such goods do not change their demand by a considerable amount.
  5. Number of uses
     If the commodity under consideration has several uses, then its demand will be elastic. When price of such a commodity increases, then it is generally put to only more urgent uses & demand falls, when prices falls then it is used for satisfying even less urgent needs & demand rises.
  6. Time period
     Demand is generally inelastic because consumers find it difficult to change their habits in short period. In long run, demand is more elastic because it is comparatively easier to shift to other substitutes, if the price of the given commodity rises.

7. Postponement of consumption
   Commodities like biscuits, soft drinks, etc. whose demand is not urgent, have highly elastic demand as their consumption can be postponed in case of an increase in their prices. Commodities like lifesaving drugs have inelastic demand because of their immediate requirement.
8. Share in total expenditure
   Proportion of consumers income spent on a particular commodity. Greater the proportion of income spent on the commodity; more is the elasticity of demand for it & vice-versa. For e.g., demand for goods like salt, needle, soap, etc. tends to be elastic as consumers spend a small proportion of their income on such goods. When prices of such goods change, consumers continue to purchase almost the same quantity of these goods.
9. Habits
   Commodities like alcohol, cigarettes, tobacco, etc. which have become habitual necessities for the consumers have less elastic demand. It happens because such a commodity becomes a necessity for the consumer & he continues to purchase it even if its price rises.

- **Elasticity of demand formulas**

1) Percentage method

According to this method, P. e D is measured by the ratio of proportionate change in quantity demanded of a commodity to the proportionate change in its price.

- Ed = $\frac{\textbf{\textit{Percentage change in demand}}}{\textbf{\textit{Percentage change in price}}}$
- Percentage change in Quantity demanded = $\frac{\Delta Q}{\mathrm{Q}} \times 100$
- Percentage change in Price = $\frac{\Delta P}{\mathrm{P}} \times 100$

OR

2) **Proportionate method**

Ed = $\frac{\boldsymbol{\Delta Q}}{\boldsymbol{\Delta P}} \times \frac{\boldsymbol{P}}{\boldsymbol{Q}}$

$\Delta Q = Q_1 - Q$

$\Delta P = P_1 - P$

Where, Q = Initial quantity demanded

Q_1 = New quantity demanded

ΔQ = Δ in quantity demanded

P = Initial price

P_1 = Δ in price

ΔP = Δ in price