ECONOMICS FOR ENGINEERS

Topic covered : Definitions of economics, Micro and macro economics utility law of diminishing marginal utility and law of equi marginal utility

UNIT-1

Economics Definition

- Economics is the study of how people allocate scarce resources for production, distribution, and consumption, both individually and collectively.
- Two major types of economics are *microeconomics*, which focuses on the behavior of individual consumers and producers, and *macroeconomics*, which examine overall economies on a regional, national, or international scale.
- Economics is especially concerned with efficiency in production and exchange and uses models and assumptions to understand how to create incentives and policies that will maximize efficiency.

Types of Economics

The study of economics is generally broken down into two disciplines.

- Microeconomics focuses on how individual consumers and firm make decisions; these individuals can be a single person, a household, a business/organization or a government agency. Analyzing certain aspects of human behavior, microeconomics tries to explain they respond to changes in price and why they demand what they do at particular price levels. Microeconomics tries to explain how and why different goods are valued differently, how individuals make financial decisions, and how

individuals best trade, coordinate and cooperate with one another. Microeconomics' topics range from the dynamics of supply and demand to the efficiency and costs associated with producing goods and services; they also include how labor is divided and allocated, uncertainty, risk, and strategic game theory.

- Macroeconomics studies an overall economy on both a national and international level. Its focus can include a distinct geographical region, a country, a continent, or even the whole world. Topics studied include foreign trade, government fiscal and monetary policy, unemployment rates, the level of inflation and interest rates, the growth of total production output as reflected by changes in the Gross Domestic Product (GDP), and business cycles that result in expansions, booms, recessions, and depressions.

Micro- and macroeconomics are intertwined; as economists gain an understanding of certain phenomena, they can help us make more informed decisions when allocating resources. Many believe that microeconomics' foundations of individuals and firms acting in aggregate constitute macroeconomic phenomena.

MICRO AND MACRO ECONOMICS

BASIS FOR COMPARISON	MICROECONOMICS	MACROECONOMICS
Meaning	The branch of economics that studies the behavior of an individual consumer, firm, family is known as Microeconomics.	The branch of economics that studies the behavior of the whole economy, (both national and international) is known as Macroeconomics.
Deals with	Individual economic variables	Aggregate economic variables
Business	Applied to operational or	Environment and external

BASIS FOR COMPARISON	MICROECONOMICS	MACROECONOMICS
Application	internal issues	issues
Tools	Demand and Supply	Aggregate Demand and Aggregate Supply
Assumption	It assumes that all macro-economic variables are constant.	It assumes that all micro-economic variables are constant.
Concerned with	Theory of Product Pricing, Theory of Factor Pricing, Theory of Economic Welfare.	Theory of National Income, Aggregate Consumption, Theory of General Price Level, Economic Growth.
Scope	Covers various issues like demand, supply, product pricing, factor pricing, production, consumption, economic welfare, etc.	Covers various issues like, national income, general price level, distribution, employment, money etc.
Importance	Helpful in determining the prices of a product along with the prices of factors of production (land, labor, capital, entrepreneur etc.) within the economy.	Maintains stability in the general price level and resolves the major problems of the economy like inflation, deflation, reflation, unemployment and poverty as a whole.
Limitations	It is based on unrealistic	It has been analyzed that

BASIS FOR COMPARISON	MICROECONOMICS	MACROECONOMICS
	assumptions, i.e. In microeconomics it is assumed that there is a full employment in the society which is not at all possible.	'Fallacy of Composition' involves, which sometimes doesn't proves true because it is possible that what is true for aggregate may not be true for individuals too.

UTILITY AND ITS APPLICATION

.

Utility:

Utility is the capacity of a commodity through which human wants are satisfied.

Law of Diminishing Marginal Utility:

The law of diminishing marginal utility is comprehensively explained by Alfred Marshall. According to his definition of the law of diminishing marginal utility, the following happens:

“During the course of consumption, as more and more units of a commodity are used, every successive unit gives utility with a diminishing rate, provided other things remaining the same; although, the total utility increases.”

Utils:

'Utils' is considered as the measurable 'unit' of utility.

Explanation for the Law of Diminishing Marginal Utility:

We can briefly explain Marshall's theory with the help of an example. Assume that a consumer consumes 6 apples one after another. The first apple gives him 20 utils (units for measuring utility). When he consumes the second and third apple, the marginal utility of each additional apple will be lesser. This is because with an increase in the consumption of apples, his desire to consume more apples falls.

Therefore, this example proves the point that every successive unit of a commodity used gives the utility with the diminishing rate.

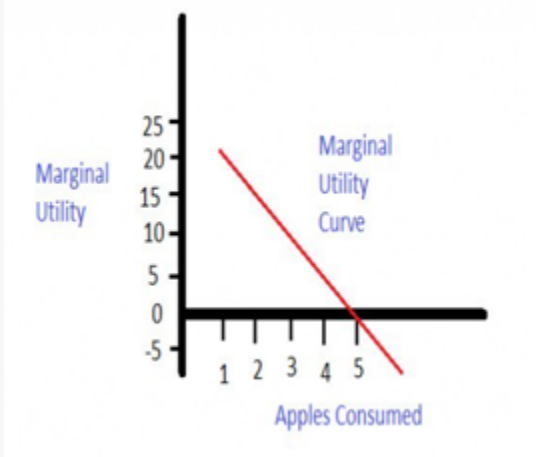
We can explain this more clearly with the help of a schedule and diagram.

Schedule for Law of Diminishing Marginal Utility:

Unit of Consumption	Marginal Utility	Total Utility
1	20	20
2	15	35
3	10	45
4	05	50
5	00	50
6	-05	45

In the above table, the total utility obtained from the first apple is 20 utils, which keep on increasing until we reach our saturation point at 5th apple. On the other hand, marginal utility keeps on diminishing with every additional apple consumed. When we consumed the 6th apple, we have gone over the limit. Hence, the marginal utility is negative and the total utility falls.

With the help of the schedule, we have made the following diagram:



Saturation Point: The point where the desire to consume the same product anymore becomes zero.

Law of Diminishing Marginal Utility

This law explains the relation between utility and quantity of a commodity. It states that as consumption increases more and more, the marginal utility will be less and less.

Assumptions of Law of Equi-Marginal Utility

- Units of goods are homogenous.
- No time gap between the consumption of the different units.
- Tastes, fashion, preferences, and priorities remain unchanged.
- Consumer aims at maximum satisfaction.
- Consumer’s income is fixed and limited.

Types of Marginal Utility

Based on the relationship between the total and the Marginal Utility, there are three types of marginal utility.

Positive

The marginal utility is positive when the consumption of an additional unit of a product results in the increase in the total utility. Getting a coupon of free hair spa is its example.

Negative

It is negative when the consumption of an additional unit of a product results in the decrease in the total utility. Taking more vitamin supplements or overtake of some medicine is its example.

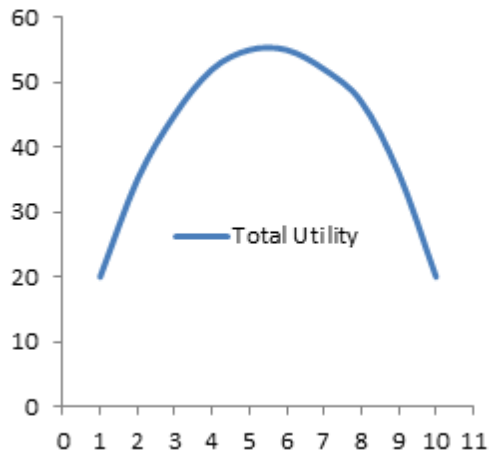
Zero

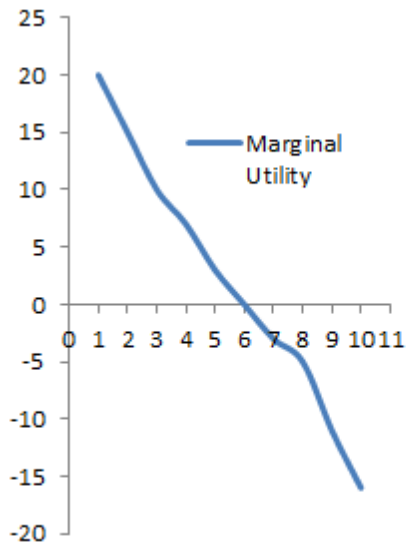
It is zero when the consumption of an additional unit of a product results in no change in the total utility. Getting two copies of the same novel is one of the examples of zero marginal utility.

Suppose we have data for the marginal and the total utility for different units of ice creams. Let us see the relation between the two.

Units	Total Utility	Marginal Utility
1	20	20
2	35	15
3	45	10

4	52	7
5	55	3
6	55	0
7	52	-2
8	47	-5
9	36	-11
10	20	-16





Law of Equi-Marginal Utility

This law is based on the principle of obtaining maximum satisfaction from a limited income. It explains the behavior of a consumer when he consumes more than one commodity.

The law states that a consumer should spend his limited income on different commodities in such a way that the last rupee spent on each commodity yield him equal marginal utility in order to get maximum satisfaction.

Suppose there are different commodities like A, B, …, N. A consumer will get the maximum satisfaction in the case of equilibrium i.e.,

$MU_A / P_A = MU_B / P_B = \ldots = MU_N / P_N$

Where MU's are the marginal utilities for the commodities and P's are the prices of the commodities.

Assumptions of the Law

- There is no change in the price of the goods or services.
- The consumer has a fixed income.
- The marginal utility of money is constant.
- A consumer has perfect knowledge of utility.
- Consumer tries to have maximum satisfaction.
- The utility is measurable in cardinal terms.
- There are substitutes for goods.
- A consumer has many wants.

Limitation of the Law

There are some limitations to this law. They are

- The law is not applicable in case of knowledge. Reading books provides more knowledge and has more utility.
- This law is not applicable in case of fashion and customs.
- This law is not applicable for very low income.
- There is no measurement of utility.

- Not all consumer care for variety.
- The law fails when there are no choices available for the good.
- The law fails in case of frequent price change.

Importance of the Law

- This law is helpful in the field of production. A producer has limited resources and tries to get maximum profit.
- This law is helpful in the field of exchange. The exchange is of anything like some goods, wealth, trade, import, and export.
- It is applicable to public finance.
- The law is useful for workers in allocating the time between the work and rest.
- It is useful in case of saving and spending.
- It is useful to look for substitution in case of price rise.

UNIT -2

Topic covered: Demand, Demand shifts , Elasticity of demand , price elasticity of demand its measurements importance and uses, Cost types of costs theory of costs, total cost, average cost and marginal cost

Demand

Demand in economics is the consumer's desire and ability to purchase a good or service. It's the underlying force that drives economic growth and expansion. Without demand, no business would ever bother producing anything.

Law of Demand

The law of demand governs the relationship between the quantity demanded and the price. This economic principle describes something you already intuitively know. If the price increases, people buy less. The reverse is also true. If the price drops, people buy more.

But price is not the only determining factor. The law of demand is only true if all other determinants don't change.

Demand Schedule

The demand schedule is a table or formula that tells you how many units of a good or service will be demanded at the various prices, *ceteris paribus*. Here is an example of a demand schedule:

Elasticity of Demand

The **Elasticity of Demand** is a measure of change in the quantity demanded in response to the change in the price of the commodity. Simply, the effect of a change of price on the quantity demanded is called as the elasticity of demand

$$E = \frac{\text{Percentage change in demand for a product}}{\text{Percentage change in the price of the product}}$$

According to this formula, the elasticity of demand can be defined as a percentage change in demand as a result of the percentage change in price. Numerically, it can be written as:

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

Where,

$\Delta Q = Q_1 - Q_0$
$\Delta P = P_1 - P_0$
Q_1= New quantity
Q_2= Original quantity
P1 = New price
P0 = Original price

Types of Elasticity of Demand

- Perfectly Elastic: $E_P \rightarrow -\infty$
- Relatively Elastic: $-\infty < E_P < -1$
- Unit Elasticity: : $E_P = -1$
- Relatively Inelastic: $-1 < E_P < 0$
- Perfect Inelastic: $E_P = 0$

The elasticity of demand measures the **relative change in the total amount of goods or services that are demanded** by the market or by an individual. The quantity demanded depends on several factors. Some of the most important factors are the price of the good or service, the price of other goods and services, the income of the population or person and the preferences of the consumers.

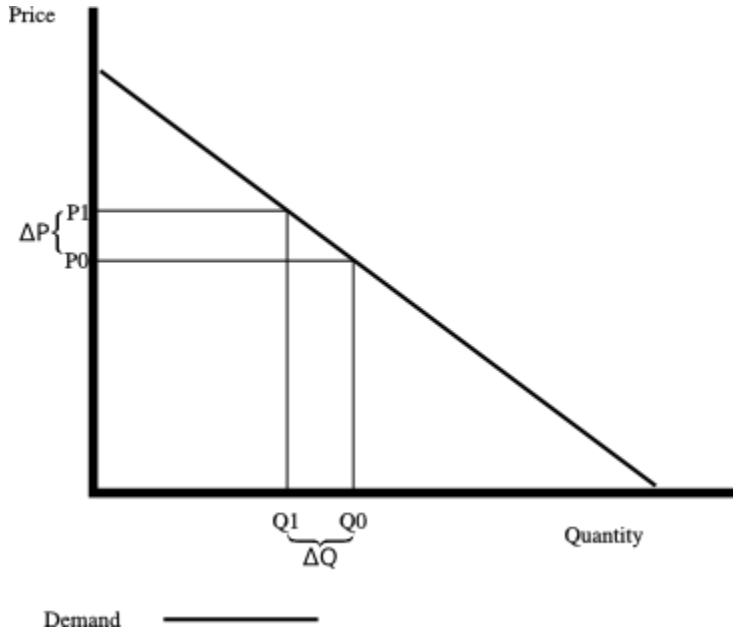
So, we have several **types of elasticity of demand according to the source of the change in the demand**. For example, if the price is the source of the change, we have the "price elasticity of demand".

According to the **source** of the change, the following types of elasticity of demand can be mentioned:

1. Price Elasticity of Demand
2. Cross Elasticity of Demand (the elasticity in relation to the change of the price of other good and services)
3. Income Elasticity of Demand

1. Perfectly Elastic
2. Relatively Elastic
3. Unit Elasticity
4. Relatively Inelastic
5. Perfect Inelastic

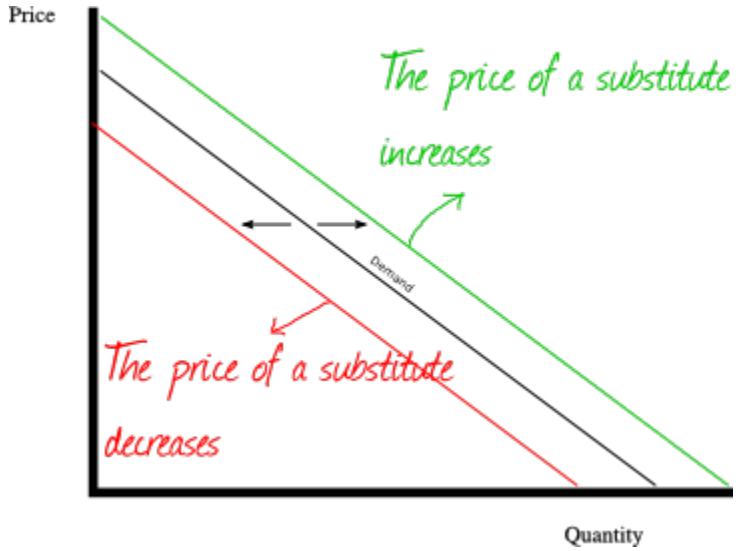
Price Elasticity of Demand



The price elasticity of demand is the proportional change in the quantity demanded, relative to the proportional change in the price of the good.

Price elasticity of demand = Percentage change in quantity demanded / percentage change in price = ΔQ/Q / ΔP/P

Cross Elasticity of Demand



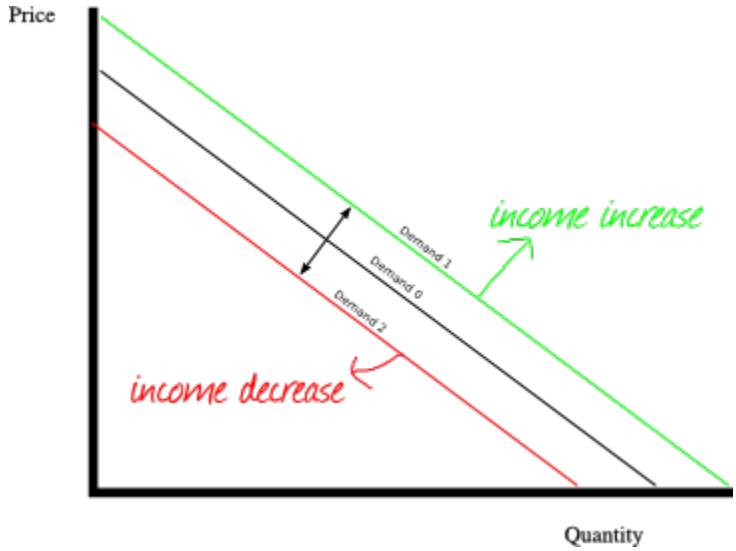
The cross elasticity of demand is the proportional change in the quantity demanded, relative to the proportional change in the price of another good.

Price elasticity of demand = Percentage change in quantity demanded / percentage change in price of another good = ΔQ1/Q1 / ΔP2/P2

Looking at the chart, the change in the price of another good shifts the demand curve to the left or to the right.

If the two goods are **substitutes**, the cross elasticity of demand is positive. If the two goods are **complements**, the cross elasticity of demand is negative.

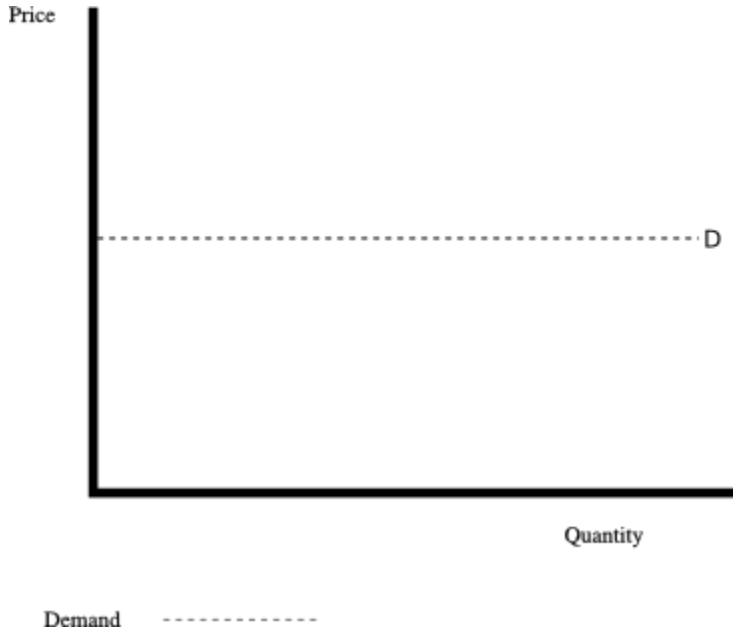
<u>Income Elasticity</u> of Demand



The income elasticity of demand is the proportional change in the quantity demanded, relative to the proportional change in the income.

Income elasticity of demand = Percentage change in quantity demanded / percentage change in the income = ΔQ/Q / ΔI/I

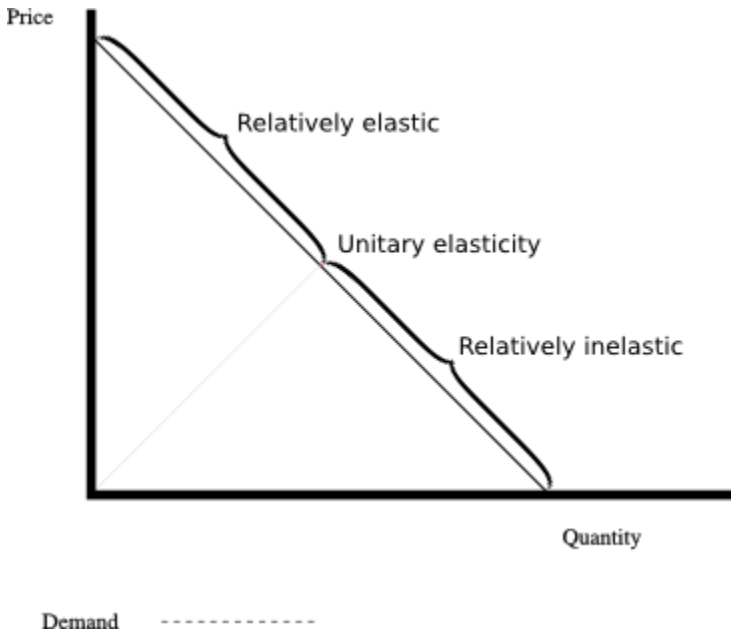
Perfectly Elastic Demand: $E_P \rightarrow -\infty$



Perfect Elastic Demand: The elasticity tends towards -∞.

When the demand is perfect elastic, it drops to zero in the face of a minimal price increase. If the price is the same of below the point where the demand touches the vertical axis, the market will demand all the quantity offered.

Relatively Elastic Demand: $-\infty < E_P < -1$, unit elasticity demand and relatively inelastic demand

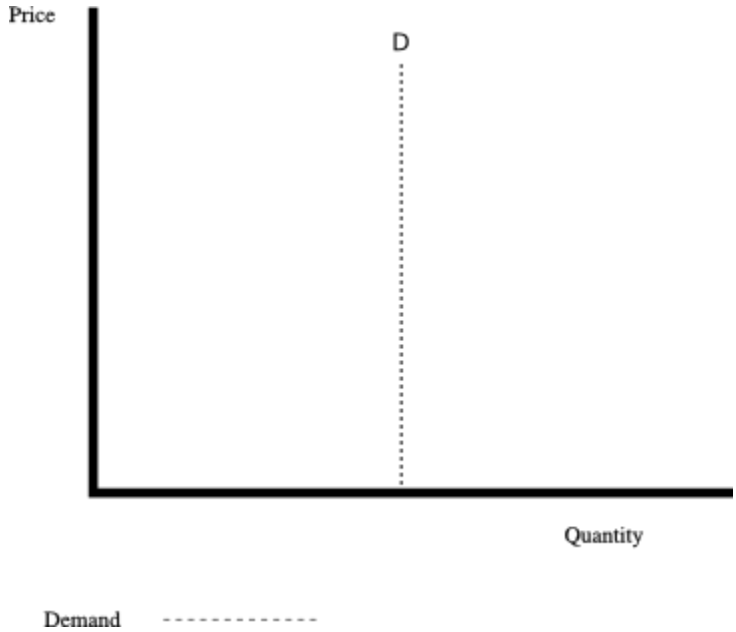


Relatively elastic demand: The elasticity is between -1 and -∞.

Unit Elasticity Demand: $E_P = -1$, the elasticity is -1.

Relatively Inelastic Demand: $-1 < E_P < 0$, the elasticity is between 0 and -1.

Perfect inelastic demand: $E_P = 0$



A perfect inelastic demand has an elasticity of 0. The quantity demanded will not change despite changes in the price.

Measurement of price elasticity of demand

What is price elasticity of demand?

Price elasticity of demand is a measure of the degree of change in demand of a commodity to the change in price of that commodity.
In other words, price elasticity of demand is the rate of change in quantity demanded in response to the change in the price. It is often referred to as 'price elasticity' and is denoted by Ep or PED.

Methods of Measuring Price Elasticity of Demand

There are basically four ways by which we can measure price elasticity of demand. These methods are

1. Percentage method
2. Total Expenditure method
3. Point method
4. Arc method

1. Percentage Method

Percentage method is one of the commonly used approaches of measuring price elasticity of demand under which price elasticity is measured in terms of rate of percentage change in quantity demanded to percentage change in price.

According to this method, price elasticity of demand can be mathematically expressed as

$$PED = \frac{\text{\% change in quantity demanded}}{\text{\% change in price}}$$

where,

$$\text{\% change in quantity demanded} = \frac{\text{new quantity (Q2) - initial quantity (Q1)}}{\text{initial quantity (Q1)}} \times 100$$

$$\text{\% change in price} = \frac{\text{new price (P2) - initial price (P1)}}{\text{initial price (P1)}} \times 100$$

$$\text{therefore, } PED = \frac{\Delta Q}{\Delta P} \times \frac{P1}{Q1}$$

For an example: When the price of a commodity was Rs 10 per unit, its demand in the market was 50 units per day. When the price of the commodity fell to Rs 8, the demand rose to 60 units. Here, price elasticity of demand can be calculated as

$$PED = \frac{\text{\% change in quantity demanded}}{\text{\% change in price}}$$

$$= \frac{\frac{Q2 - Q1}{Q1} \times 100}{\frac{P2 - P1}{P1} \times 100}$$

$$= \frac{\frac{60 - 50}{50} \times 100}{\frac{8 - 10}{10} \times 100}$$

$$= \frac{20}{-20}$$

$$= -1$$

Unlike price elasticity of supply, price elasticity of demand is always a negative number because quantity demanded and price of the commodity share inverse relationship. This means, higher the price, lower will be the demand, and lower the price, higher be the demand of the commodity.

2. Total Expenditure Method

Total outlay method, also known as total expenditure method of measuring price elasticity of demand was developed by Professor Alfred Marshall. According to this method, price elasticity of demand can be measured by comparing total expenditure on a commodity before and after the price change.

While comparing the expenditure, we may get one of three outcomes. They are

Elasticity of demand will be greater than unity (Ep > 1)

When total expenditure increases with fall in price and decreases with rise in price, the value of PED will be greater than 1. Here, rise in price and total outlay or expenditure move in opposite direction.
Elasticity of demand will be equal to unity (Ep = 1)

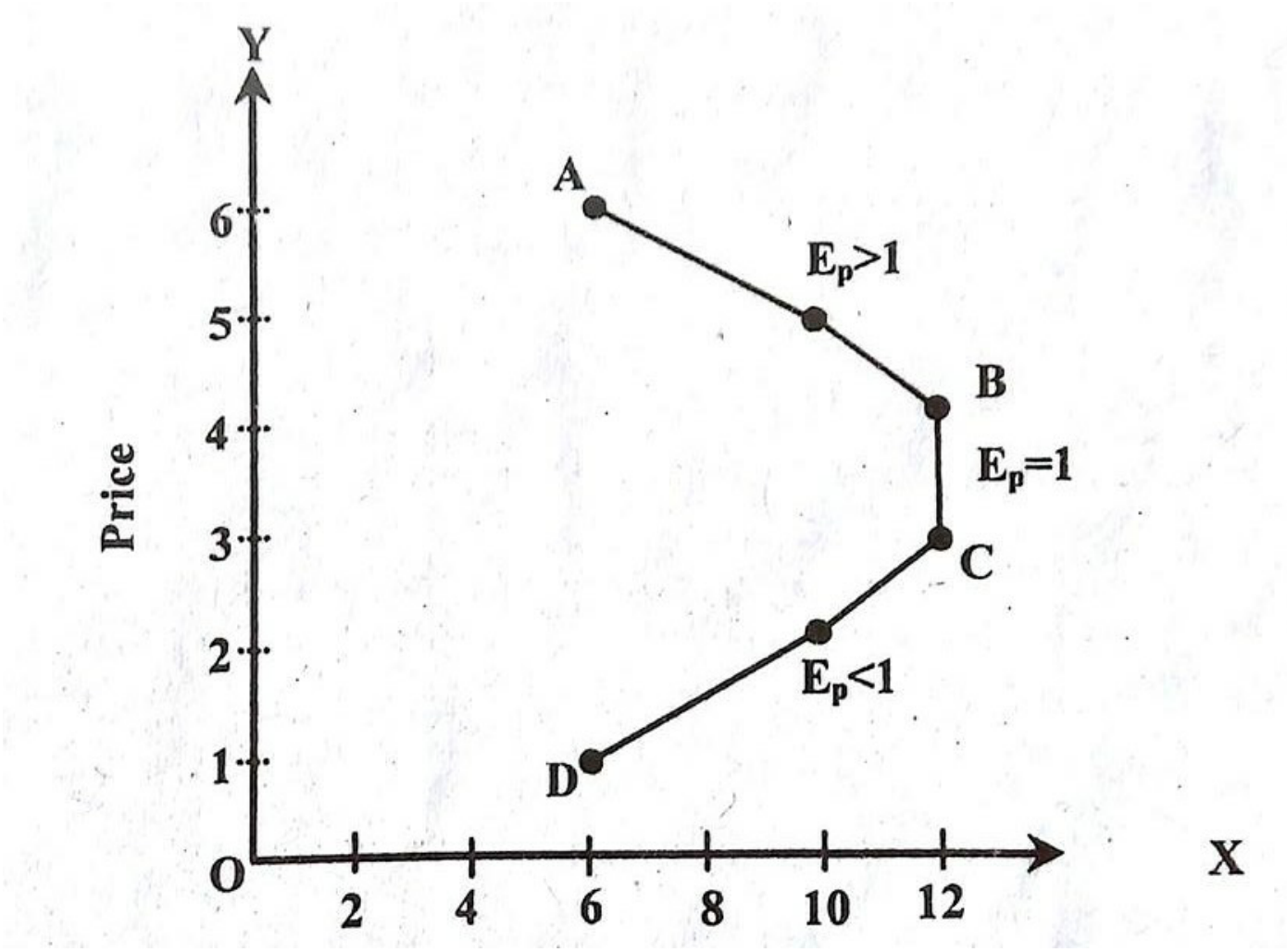
When total expenditure on commodity remains unchanged in response to change in price of the commodity, the value of PED will be equal to 1.

Elasticity of demand will be less than unity (Ep < 1)

When total expenditure decreases with fall in price and increases with rise in price, the value of PED will be less than 1. Here, price of commodity and total outlay move in same direction.

Cases	Price (P)	Quantity demanded (Q)	Total outlay or expenditure (E = PXQ)	Price elasticity of demand (PED)
	6	1	6	
I	5	2	10	PED = 10/6, > 1
	4	3	12	
II	3	4	12	PED = 12/12, = 1
	2	5	10	
III	1	6	6	PED = 6/10, < 1

When the information from the above table is plotted in the graph, we get graph like the one shown below.



In the graph, total outlay or expenditure is measured on the X-axis while price is measured on the Y-axis. In the figure, the movement from point A to point B shows elastic demand as we can see that total expenditure has increased with fall in price.

The movement from point B to point C shows unitary elastic demand as total expenditure has remained unchanged with the change in price. Similarly, the movement from point C to point D shows inelastic demand as total expenditure as well as price has decreased.

Total outlay method of measuring price elasticity of demand does not provide us exact numerical measurement of elasticity of demand but only indicates if the demand is elastic, inelastic or unitary in nature. Therefore,

this method has limited scope.

---

3. Point Method

The point method of measuring price elasticity of demand was also devised by prof. Alfred Marshall. This method is used to measure the price elasticity of demand at any given point in the curve.

According to this method, elasticity of demand will be different on each point of a demand curve. Thus, this method is applied when there is small change in price and quantity demanded of the commodity.

According to this method, price elasticity of demand (PED) is mathematically expressed as

$$\text{PED} = \frac{\text{lower segment of the demand curve}}{\text{upper segment of the demand curve}}$$

However, the method of calculating PED depends upon the nature of the demand curve. These methods are explained below.
Price elasticity on a linear demand curve

If the demand curve is of linear nature, PED is simply calculated by applying the expression given above, i.e.

$$\text{PED} = \frac{\text{lower segment of the demand curve}}{\text{upper segment of the demand curve}}$$

In the figure, MN is a linear demand curve and P is the mid-point of the curve.
Therefore, at point P,

$$PED = \frac{\text{lower segment of the demand curve}}{\text{upper segment of the demand curve}} = \frac{PN}{PM} = 1$$

In the same way,

At point A, PED= $\frac{AN}{AM}$, > 1

At point B, PED= $\frac{BN}{BM}$, < 1

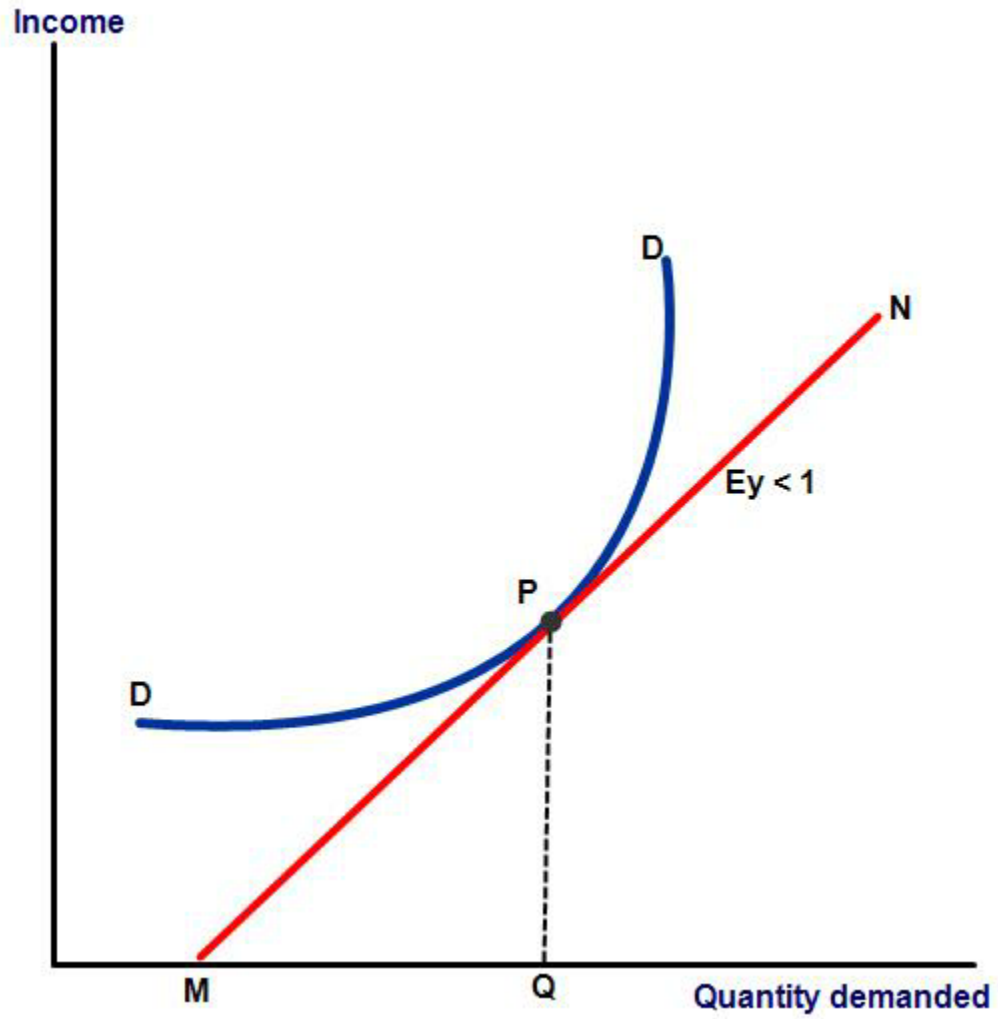
At point M, PED= $\frac{MN}{0}$,∞

At point N, PED= $\frac{0}{MN}$, 0

Price elasticity on a non-linear demand curve

If the demand curve is of non-linear or convex nature, then a tangent line is drawn at the point of which the PED is to be measured. Then PED is once again calculated as

$$PED = \frac{\text{lower segment of the demand curve}}{\text{upper segment of the demand curve}}$$

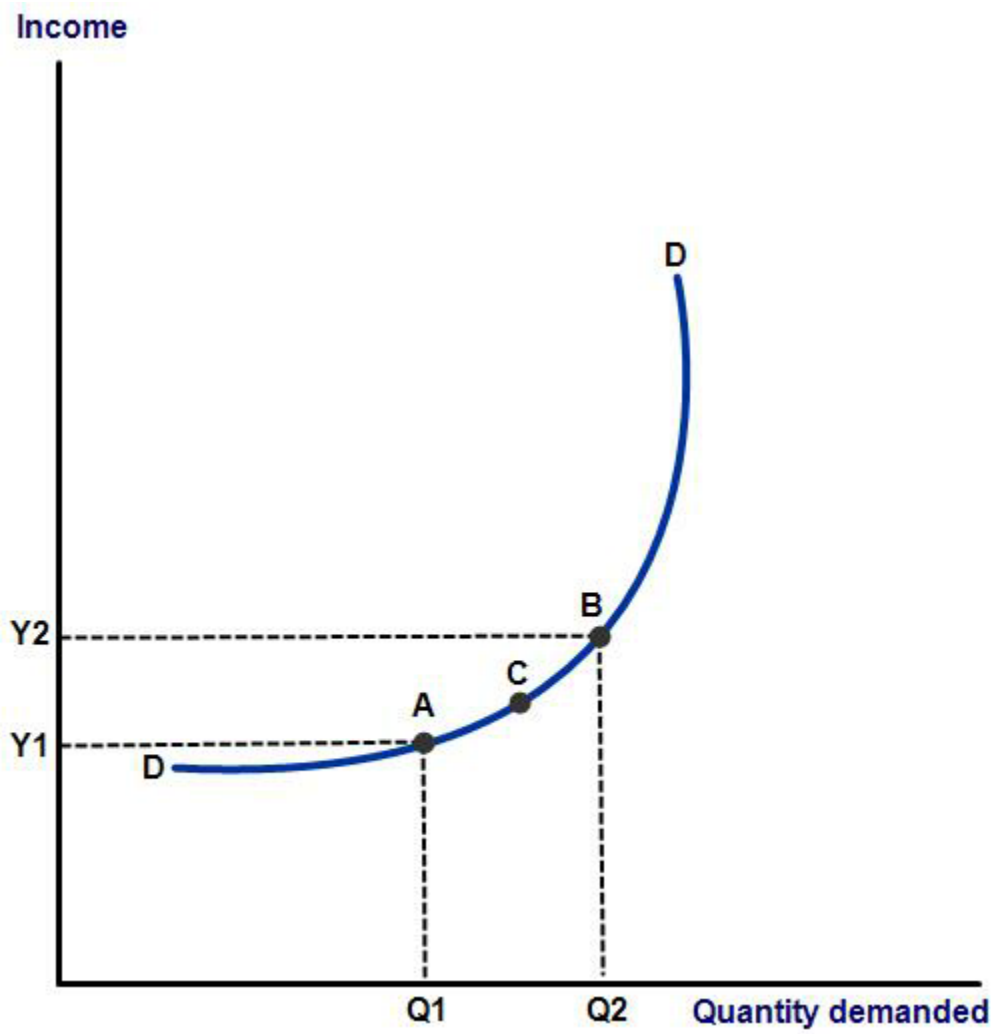


In the given figure, DD is a non-linear demand curve. If P is the point where we want to measure price elasticity, then we have to first draw a tangent through that point. Thus, tangent MN has been drawn through point P. Now, PED can be measured as

$$PED = \frac{\text{lower segment}}{\text{upper segment}} = \frac{PM}{PN}$$

4. Arc Method

Any two points on a demand curve make an arc, and the coefficient of price elasticity of demand of an arc is known as arc elasticity of demand. This method is used to find out price elasticity of demand over a certain range of price and quantity. Thus, this method is applied while calculating PED when price or quantity demanded of the commodity is highly changed.



In the figure, we can see that AB is an arc on the demand curve DD, and point C is the mid-point on AB. If we followed point method to measure

PED at points A and B in the curve DD, we get different coefficients as a result of using different bases. To avoid this discrepancy, elasticity is measured by taking mean values of price and quantity demanded in arc method.

The average of price and quantity demanded is calculated as

$$\text{Average price} = \frac{P1 + P2}{2}$$

$$\text{\& Average quantity demanded} = \frac{Q1 + Q2}{2}$$

Once the average value of price and quantity demanded are determined, PED at point C can be calculated by applying following formula

$$\text{PED} = \frac{\dfrac{\text{change in quantity demanded}}{\text{average quantity demanded}}}{\dfrac{\text{change in price}}{\text{average price}}}$$

$$= \frac{\dfrac{\Delta Q}{\dfrac{Q1 + Q2}{2}}}{\dfrac{\Delta P}{\dfrac{P1 + P2}{2}}}$$

$$= \frac{\Delta Q}{\Delta P} \times \frac{P1 + P2}{Q1 + Q2}$$

$$= \frac{Q2 - Q1}{P2 - P1} \times \frac{P1 + P2}{Q1 + Q2}$$

Where,

ΔQ = change in quantity demanded = Q2 – Q1

Q1 = initial quantity demanded

Q2 = new quantity demanded

ΔP = change in price = P2 – P1

P1 = new price

P2 = initial price

IMPORTANCE OF PRICE ELASTICITY OF DEMAND

1. Determination of price under monopoly
2. Price discrimination
3. Price discrimination of joint supply
4. Advantage to Finance Minister
5. Distribution of burden of taxes
6. International trade
7. Importance for the policy of Nationalization
8. Wage discrimination
9. Paradox of poverty

THEORY OF COST

There are seven types of cost

1. Money cost
2. Real cost
3. Accounting cost or real cost
4. Opportunity cost

5. Economic cost
6. Social cost
7. Private cost

Money cost

It is the sum of all the payments to the factors of production engaged in production of that commodity and for non –factor resources

Real cost

The exertions of all different kinds of labour that are directly or indirectly involved in making a product

Accounting cost

It refers to out of pocket expenses ,historical cost, depreciation and other book keeping entries

Opportunity cost

Opportunity cost of a particular product is the value of the foregone alternative

Product that resources used in its production , could have produced

Economic cost

It may be defined as those monetary payments a firm must make to those outsiders who supply resources and non expenditure payments of self owned and self employed resources which they could have earned in their best alternative opportunity

Social cost

It is defined as the sum of money which is just adequate when paid as compensation to restore to their original utility levels

Private cost

Private costs are costs incurred by the firm or the individual producer as a result of their decision

Theory of cost

1. Total cost
2. Average cost
3. Marginal cost

TOTAL COST (TC) =TOTAL FIXED COST (TFC) + TOTAL VARIABLE COST (TVC)

UNIT of output	TFC	TVC	TC
0	10	0	10
1	10	10	20
2	10	18	28
3	10	24	34
4	10	28	38
5	10	32	42

6	10	38	48

Average cost

1. Average fixed cost
2. Average variable cost

AFC=TFC/Q Q= Quantity

AVC= TVC/Q

Unit of output	**AFC**	**AVC**	**AC**
1	10	10	20
2	5	9	14
3	3.3	8	11.3
4	2.5	7	9.5
5	2	6.4	8.4
6	1.7	6.3	8
7	1.4	6.6	8

Marginal cost

May be defined as the additional cost of producing one more unit of output

MC=180-135=45 (Cost of producing 5 output is 135 and producing 6th unit it goes upto 180 rs)

UNIT -3

Topic covered: Production , law of production law of variable production law of return to scale , economies of scale market types of market perfect competition monopoly monopolistic competition

Production and Laws of production

Production

P = f (L, K, S) L=Labour k= capital S= Land

Law of production is divided into two parts

1. Law of variable proportion
2. Law of return to factor

Law of variable proportion

It states that if the input of one resource is increased by equal increments per unit of time while others are kept constant then output will increase beyond a limit then it would become constant and then decrease

Unit of land (constant)	Unit of labour	Total product	Marginal product
1 1 1	1 2 3	2 5 9	2 3 4
1 1	4 5	12 14	3 2

1 1	6 7	15 15	1 0
1	8	14	-1

Return to factor

1. Increasing return to factor
2. Decreasing return to factor
3. Constant return to factor

Increasing return to factor

Keeping one factor constant and another variable we would get increasing rate of return factor

Unit of labour	Unit of capital	T.P	M.P
1 2 3 4 5	1 1 1 1 1	4 10 18 28 40	4 6 8 10 12

Decreasing return to factor

Keeping one factor constant and another variable we would get decreasing rate of return factor

Unit of labour	Capital	T.P	M.P
1	1	5	5
2	1	8	3
3	1	10	2
4	1	11	1
5	1	11	0
6	1	10	-1

Constant return to factor

Keeping one factor constant and another variable we would get constant rate of return factor

Unit of labour	capital	T.P	M.P
1	1	5	5
2	1	10	5
3	1	15	5
4	1	20	5
5	1	25	5

Economies of scale

1. Internal Economies of scale
2. External Economies of scale

Internal economies of scale

Are those which are open to single factory or a single firm divided into two parts

1 Real economies 2 Pecuniary economies

Real economies

1. Economies of specialization
2. Inventory economies
3. Selling or marketing economies
4. Managerial economies
5. Transport and storage economies
6. Technical economies

External economies of scale

It shares a number of firms or industries when the scale of production in any firm or group of industries increases

Types of external economies

1. Economies of concentration
2. Economies of Information
3. Economies of disintegration

Meaning and Types of Market

1. Perfect completion
2. Imperfect competition (Monopolistic competition , Oligopoly, duopoly)
3. Monopoly

Perfect competition

1. Large number but small size of buyers and sellers
2. Homogenous products
3. Perfect knowledge
4. Free from entry or exit of firms
5. Perfect mobility
6. Lack of transport cost
7. Lack of selling cost
8. Same price

Monopoly

1. One seller and large no of buyers
2. Monopoly is also an industry
3. No close substitutes
4. Price maker
5. Price discrimination
6. Absence of supply curve

Monopolistic competition

1. Large numbers of firms and buyers
2. Product differentiation
3. Freedom of entry and exit of firms
4. Partial control over price
5. Limited mobility
6. Selling costs
7. Imperfect knowledge

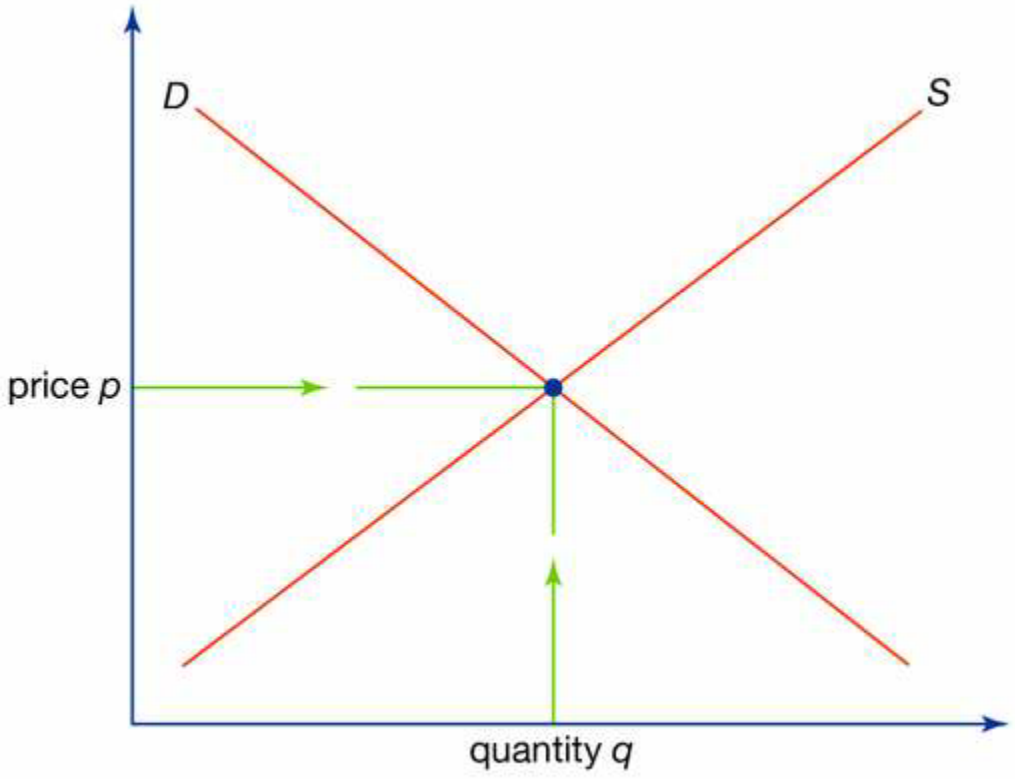
UNIT-4

Topic covered: Supply and law of Supply , role of supply and demand in price determination , Nature of Indian economy, Privatization its merits and demerits , Globalization and its merits and demerits

Supply and concept of supply

Supply of a commodity that producers wish to sell at various prices and the quantity that consumers wish to buy. It is the main model of price determination used in economic theory. The price of a commodity is determined by the interaction of supply and demand in a market. The resulting price is referred to as the equilibrium price and represents an agreement between producers and consumers of the good.
In equilibrium the quantity of a good supplied by producers equals the quantity demanded by consumers.

Supply and demand



© 2013 Encyclopædia Britannica, Inc.

Role of supply and demand in price determination

Price (1)	Quantity supplied (2)	Quantity demanded (3)	Surplus(+) shortage (-) (4)	Pressure on price (5)
5	50	10	+40	Downward
4	40	20	+20	Downward
3	**30**	**30**	**0 Equilibrium**	**Neutral**
2	20	40	-20 shortage	Upward
1	10	50	-40 shortage	Upward

NATURE AND CHARACTERSTICS OF INDIAN ECONOMY

1. Indian economy is an Underdeveloped economy
2. It is a mixed economy
3. It is planned developed economy
4. Dualistic nature of Indian economy
5. Sectoral distribution of Indian economy

Features of Indian economy as an Underdeveloped economy

1. Stagnant per capita income

2. Low standard of living
3. Unequal distribution of income and wealth
4. Excessive dependence on agriculture
5. Low level of per capita income
6. Lack of proper banking facilities
7. Lack of capital
8. Lack of industries
9. Poor technology
10. Dualistic economic structure
11. Unemployment and under employment
12. Outdated social institutions
13. Low grade human capital

Nature of Indian economy as mixed factor

1. Public sector
2. Licensed sector
3. Private sector

Nature of Indian economy as developing sector

1. Increase in national income
2. Increase in per capita income
3. Development of industries
4. Increase in employment

5. Modernisation
6. Export promotion
7. Social services

PRIVATISATION AND GLOBALIZATION

Privatisation

It is the general process of involving the private sectors in ownership

Measure Adopted for Privatisation

1. Contraction of public sectors
2. Sick public sector units
3. Setting up national investment funds
4. National renewal funds
5. Memorandum of understanding

Merits of privatization

1. Increase in efficiency
2. Increase in competition
3. Increase in foreign direct investment
4. Reduction in loss of public sector units
5. Encouragement to new inventions

Demerits of Privatisation

1. Industrial sickness
2. Ignores social welfare
3. Class struggle
4. Opposition by employees
5. Problem of financing
6. Increased in inequalities
7. Increase in regional imbalances

Globalization

It is the process associated with increasing openness, growing economic interdependence and deeping economic integration

Merits of globalization

1. Increase in foreign trade
2. Increase in collaborations
3. Increase in employment
4. Reduction in brain drain
5. Improvement in standard of living
6. Development of social sectors
7. Technological development
8. Expansions of market

Demerits of globalization

1. Loss of domestic industries
2. Demonstration effect
3. Unemployment
4. Bad effect on culture and value system
5. Unbalanced regional development
6. Tax evasion
7. Less entry in strategic areas