12 – ECONOMICS MATERIAL

LESSON - 1

1. **State Alfred Marshall's definition of Economics?**

   Alfred Marshall defines economics as "a study of mankind in the ordinary business of Life". An altered form of this definition is "Economics is a study of Man's actions in the Ordinary business of life".

2. **What is the main division of Economics?**

   1. Production.
   2. Consumption.
   3. Exchange.
   4. Distribution.
   5. Public finance.

3. **Describe the Relationship between Economics, Mathematics and Statistics?**

   1. Economics is related to mathematics and statistics.
   2. Statistics is the science of averages. It is the science of counting.
   3. Many tables and diagrams used in economics are based on statistical analysis.
   4. Mathematical methods are largely used in modern economics.
   5. The new science called econometrics makes use of statistics and mathematics in economics.

4. Distinguish between free Goods and Economic Goods?

Free Goods:

1. Goods like **air and sunlight** which are gifts of nature are free goods.
2. They are not scarce. So they do not command a price in the market.
3. They are known as free goods.

Economic Goods:

1. Economic goods command a price in the market.
2. In other words, they have value – in – exchange.
3. For, they are scare in relation to demand.
4. **E.g**. Table, Chair etc.

5. Explain the difference between Value – in – use and Value - in – exchange.

The term "Value" refers to the exchange qualities of a good.

Value – in – use:

1. Air, rain and sunshine have value – in- use.
2. But they do not have value – in – exchange.

Value – in – exchange:

1. For a good to have value – in – exchange, it must possess utility.
2. It must be scarce in relation to demand and it must be possible to exchange it.
3. All economic goods have value – in – exchange.

LESSON - 2.

1. Name the important general Economic systems?

The most important general Economic systems are

1. Traditional Economy.(Subsistence Economy)
2. Capitalist Economy. (Market Economy)
3. Socialist Economy. (Planned Economy)
4. Mixed Economy. (Public and private sector co-exist**)**

2.What are the basic issues of any society?

The basic issues of any society are:

1. **What to produce and in what quantities?**
   Food or weapons, if so, in what quantities?
   Is it more food and less weapons or vice versa?
2. **How shall goods be produced?**
   Electricity from thermal power or from hydro power?
3. **For whom shall the goods be produced?**
   A few rich and many poor or most people in modest comfort?

3. List the basic features of Socialism?

1. In socialist economies, social or collective welfare will be the prime motive.
2. The right to private property is limited.
3. Most of the economic policy decisions will be taken by a centralized planning
4. Market forces have only a limited role to play.

4. Is India a Mixed Economy?

1. Yes, India is a mixed economy, both public and private institutions exercise economic control.
2. The public sector functions as a socialistic economy.
3. The private sector as a free enterprise economy.
4. All decisions regarding what, how and for whom to produce are taken by the state.
5. Since Indian economy possesses all these features, it is a mixed economy.

5. What is Opportunity Cost?

1. The "Opportunity cost" is the cost of something in terms of opportunity forgone.
2. The opportunity cost of an action is the value of next best alternative forgone.
3. It is a key difference between accounting cost and economic cost.

LESSON - 3.

1. **What are the Causes for wants?**

   a. **Wants may arise due to elementary and psychological causes.**

      The wants for food, clothing and housing are elementary and psychological.

   b. **Wants may arise due to social causes.**

      As members of society, we may require a particular type of dress and food.

   c. **Wants may arise due to customs and habits like drinking tea, coffee and chewing.**

   d. **Wants may arise due to advertisements.**

2. **What are the Classification of goods?**

Economics, wants are classified into three categories,

1. **Necessaries.**
2. **Comforts.**
3. **Luxuries**.

Necessaries:

1. Necessaries are those which are essential for living. Man requires certain basic things to live.
2. He wants food, clothing and shelter, without these things, life is impossible.

Comforts:

Comforts refer to those goods and services, which are not essential for living but which are required for a happy living.

Example, A TV, a sofa, chair, a cushioned revolving chair may be stated under 'comforts'.

Luxuries:

Those goods that are used to show off one's higher status in life.

Example, Diamond, studded jewels are luxuries.

3. Define the Law of Diminishing Marginal Utility?

According to Marshall, "The additional benefit which a person derives from a given increase of his stock of a thing diminishes with every increase in the stock that he already has".

4. What are the properties of Indifference curve?

1. All indifference curves slope downwards to the right.
2. All indifference curves are Convex to the origin.
3. No two Indifference curves can ever cut each other.

5. Define "Consumer's Surplus "in the words of Marshall.

Marshall Defines, "The excess of price which a person would be willing to pay rather than go without the thing, over that which he actually does pay is the economic measure of this surplus of satisfaction. It may be called Consumer's Surplus.

Consumer Surplus = Potential Price - Actual Price.

LESSON - 4.

1. What is Demand?

1. Demand for a commodity refers to the desire backed by ability to pay and willingness to buy it.
2. If a person below poverty line wants to buy a car, it is only a desire but if a rich man wants to buy a car it is demand.
3. Thus, desire backed by purchasing power is demand.

2. Enumerate the determinants of demand?

1. Price is the main determinants of demand.
2. Other determinants include price of related commodities, income of consumers, taste and preferences of consumer, wealth and price of the related goods.

$$D = F(P_x, P_s, Y, T, W)$$

Where D_x represents demand for good X

P_x is price of good X

P_s is price of related goods.

Y is income

T refers to taste and preferences of the consumers

W refers to wealth of the consumer.

3. Why does the demand curve slope downwards?

1. The demand curve slopes downwards mainly due to the Law of diminishing marginal utility.

2. The Law of diminishing marginal utility states that an additional unit of a commodity gives a lesser satisfaction.
3. Therefore, the consumer will buy more goods only at a lower price.
4. The demand curve slopes downwards because the marginal utility curve also slopes downwards.
5. This effect is known as substitution effect. So demand curve slope downwards from left to right.

4. Write a note on Giffen Paradox ?

1. Sir Robert Giffen discovered that the poor people will demand more of inferior goods, if their prices rise and demand less if their prices fall.
2. For example, poor people spend more of their income on coarse grains (Ragi) and only a small part on Rice.
3. This is known as Giffen Paradox.

5. What are the types of elasticity of demand?

There are three types of elasticity of demand. They are:

1. Price elasticity of demand.
2. Income elasticity of demand.
3. Cross – elasticity of demand.

LESSON - 5.

1. **What is equilibrium price?**

1. There is only one price at which the preference of sellers and buyers meet together.
2. At the point of intersection of the demand and supply curve.
3. Demand is equal to supply.
4. Price is stable.

2. Distinguish between change in demand and shift in demand.

Change in Demand:

1. Changes in quantity demanded occur only when there is change in the price.
2. The change in the price quantity schedule brings movements on the demand curve.

Shift in Demand:

Any change in the other determinants like income and tastes will shift the demand curve as a whole.

3. What are the factors determinants of shift in supply?

1. Price is the main determinants of supply.
2. Other determinant like number of sellers, taxes and subsidies, factor prices etc, these factors shift entire supply curve.

4. Differentiate the short period from the long period?

Short period:

The short period for a firm is the time period during which at least one of the inputs is fixed input. The supply is inelastic.

Long period:

1. The long period is the time period during which all the inputs are variable inputs.
2. The specific duration of the short period and long period will vary from firm to firm.

5. Write a short note on market period?

1. Market period is otherwise known as very short period.
2. Supply is fixed in the market period.
3. It is shown as a vertical line.
4. It is also called inelastic supply.
5. It is a period of one hour, one day (or) a month.
6. Perishable goods like flowers, fruits and vegetables are good example for market period.

LESSON - 6 .

1. **Name the type of Utility**?

Production means the creation of utilities.

These utilities are in the nature of,

1. Form Utility.

2. Place Utility.
3. Time Utility.
4. Possession Utility.

2. Define Labour?

Marshall defines Labour as "the use or exertion of body or mind, partly or wholly with a view to secure an income apart, from the pleasure derived from the work."

3. What is meant by division of Labour ?

Division of Labour:

The concept of 'Division of labour' was introduced by Adam Smith. Division of labour means dividing the process of production into distinct and several component processes and assigning each component in the hands of a labour or a set of labourers, who are specialists in that particular process.

Example:

A tailor stitches a shirt in full. In the case of garment exporters, cutting of cloth, stitching of hands, body, collars, holes for buttons, stitching of buttons, etc, are done independently by different workers. Therefore, they are combining the parts into a whole shirt.

A tailor may stitch a maximum of four shirts a day. In the case of garment exports firm, it may stitch more than 100 shirts a day. Thus, division of labour results in increased production.

4. What are the forms of capital?

1. Physical capital (or) Material Resources.
2. Money Capital (or) Monetary Resources.
3. Human Capital (or) Human Resources

5. What is production function? and What are its classification?

The functional relationship between inputs and outputs is known as production function.

Classification:

1. Short Run - Law of variable proportions.
2. Long Run - Returns to scale.

LESSON - 7

1. Bring out the distinction between short run and long run.

Short Run:

1. Short run is a period of time over which certain factors of production cannot be changed, and such factors are called fixed factors.
2. The factors whose quantity can be changed in the short run are variable factors.

Long Run:

Long run is a period of time over which all factors of production can be changed to meet the changes in demand.

2. Define Opportunity cost?

The opportunity cost of an action the value of next best alternative forgone the con opportunity cost is one is one of the key differences between the concept of "economic cost" and "accounting cost".

3. What is Economic cost?

The economic cost includes both explicit and implicit cost. The money rewards for the own services of the entrepreneur and the factors owned by himself and employed in production are known as implicit cost.

Economic cost = Implicit cost + Explicit cost.

4. Define marginal cost?

Marginal cost is defined as the addition made to the total cost by the production of one additional unit of output.

$MC_n = TC_n \_ TC_n - 1$

MC_n = Marginal cost

TC_n = Total cost of producing n units.

Marginal cost curve is "**U**" shaped.

5. Mention the relationship between MC and AC.

1. When marginal cost is less than average cost, average cost is falling.
2. When marginal cost is greater than the average cost, average cost is rising.
3. The marginal cost curve must cut the average cost curve at AC's minimum point from below. Thus at minimum point of AC, MC is equal to AC.

LESSON - 8.

1. What are the characteristics of a market?

1. Existence of buyers and sellers.
2. The establishment of contract between the buyers and sellers.
3. Buyers and sellers deal with the same commodity or variety.
4. There should be a price for the commodity bought and sold in the market.

2. Classify the market based on Competition ?

1. Perfect competition: Large number of sellers selling homogeneous products.

2. Imperfect competition:
   1. Monopoly : Single seller.
   2. Duopoly : Two sellers.
   3. Oligopoly : A few sellers selling homogeneous or differentiated products.
   4. Monopolistic competition : Large number of sellers selling differentiated products.

3. Mention any three benefits of perfect competition?

1. There is consumer Sovereignty.
2. The price is equal to the minimum average cost.
3. Firms are price takers and the products are homogeneous.
4. Firm is functioning at the optimum level.

4. What are the conditions of price discrimination?

Price discrimination is possible only the following conditions are fulfilled:

a. The demand must not be transferable from the high priced market to the low priced market.

b. The monopolist should keep the two markets or different markets separate so that the Commodity will not be moving from one market to the other market.

5. Define price discrimination with an Example?

Price discrimination may be defined as "the sale of technically similar products at prices which are not proportional to marginal cost.

For example:

All Cinema theatres charge different prices for different classes of people.

LESSON - 9

1. What are the assumptions of marginal productivity theory of distribution?

a. There is perfect competition.

b. All units of a factor are homogeneous.

c. Factors can be substituted for each other.

d. The theory is based on the Law of Diminishing returns as applied to business.

2. What is Transfer earning?

1. Transfer earning refer to the amount that a factor could earn in its best paid alternative employment.
2. It represents the opportunity cost of its present employment.
3. It represents the opportunity cost of its present employment.
4. Thus, any payment in excess of transfer earning is economic rent.

3. Distinguish between Real wages and Money wages?

Wages are the reward for labour. There are two main kinds of wages.

- Money Wages
- Real wages

Money wages:

Money wages is also known as nominal wages.

Real Wages:

1. Real wages refers to the commodities and services which the money wages command.
2. They depend mainly on the purchasing power of money, which in turn depends upon the price level.
3. The standard of living of workers in a country depends upon the real wages.

4. What is standard of living theory of wages?

1. This theory tells that wages depend upon the standard of living of workers.
2. The standard of living of workers in a country depends upon the real wages.

5. What are the three motives of liquidity preference?

Keynes gives three motives for the liquidity preference of the people. They are:

1. Transaction motive.
2. Precautionary motive.
3. Speculative motive.

LESSON - 10

1. What are the assumptions of Say's Law of Market?

a. All incomes of the household are spent on consumption of goods and services.

b. There is no government activity (no taxation, public `spending, price control etc)

c. It is a closed economy. (no relationship with other economies)

2. What is an effective demand?

1. The principle of effective demand occupies a key position in the Keynesian theory of employment.
2. Effective demand is the ability and willingness to spend by individuals, firms and government.
3. The level of output produced and hence the level of employment depends on the total spending in the economy.
4. According to Keynes, effective demand is that point where the **ADF** and **ASF are equal.**

3. Give the factors on which the aggregate depends on Aggregate demand.

1. In Keynesian theory of employment depends on Aggregate demand.
2. **Aggregate demand depends on two factors.**
   - **Propensity to consume. (Consumption function)**
   - **Inducement to Invest. (Investment function)**

4. What are the three motives of liquidity preference theory?

Keynes gives three motives for the liquidity preference of the people. They are:

- Transaction Motive.
- Precautionary Motive.
- Speculative Motive.

5. What a note on Multiplier?

The ultimate determinant of income and employment is the multiplier. Any increase in investment increases income manifold due to multiplier effect. Thus the **concept of multiplier expresses** the relationship between an initial investment and the final increment in the GNP. That is, the magnified or amplified effect of initial investment on income is called as the multiplier effect.

❖ **Multiplier (k) =** $\frac{\textbf{Change in equilibrium income}}{\textbf{Change in expenditure.}}$

(Or)

$$K = \frac{\Delta Y}{\Delta I}$$

(Or)

$$K = \frac{1}{1 - MPC}$$

LESSON - 11.

1. Define money?

Crowther, has defined money as "anything that is generally acceptable as a means of exchange and that at the same time acts as a measure of exchange and that at the same time acts as a measure and as a store of value".

Prof. Walker has said **"Money is that which money does ".**

2. What are the four components of money supply in India?

The Reserve Bank of India (RBI) is the central bank of our country. It manages the monetary system of our country. It has classified the money supply of our county into four components. **They are,**

M1 = Currency with the public.

M1 = is also known as narrow money.

M2 = M1 + post office saving deposits.

M3 = M2 + Time deposits of the public with the banks. M3 is also known as broad money.

M4 = M3 + total post office deposits.

3**. Define monetary policy?**

Edward Shapiro said "Monetary policy is policy that employs the central bank's control over the supply and cost of money as an instrument for achieving the objectives of economic policy".

4. **What are the Instruments of quantitative credit control?**

The quantitative credit control instruments are:

- Bank Rate policy.
- Variation of Cash Reserve Ratios, and
- Open Market Operations.

5. **What do you mean Stagflation**?

1. Since 1970 s the world has been facing the problem of stagflation and lack of demand on the one hand and inflation on the other is called Stagflation.
2. In the case of stagflation, both monetary policy and fiscal policy are found to be ineffective.

LESSON – 12.

1. **Define Public Finance.**

According to Dalton, "Public finance is concerned with the income and expenditure of Public authorities and with adjustment of the one with the other.

2. What is the subject matter of public finance?

1. Public Expenditure.
2. Public Revenue.
3. Public Debt.
4. Financial Administration
5. Federal Finance.

3. What are the canons of taxation?

Canons of taxation are considered as fundamental principles of taxation.

Adam Smith laid down the following canons of taxation.

a. Canon of equity
b. Canon of certainty
c. Canon of convenience.

d. Canon of economy.

4. What are the kinds of tax?

1. Direct Taxes.
2. Indirect Taxes.
3. Proportional Tax.
4. Progressive Tax.
5. Regressive Tax.
6. Digressive Tax.
7. Specific and advalorem Taxes.
8. Value Added Tax. (VAT)
9. Single and Multiple Taxes.

5. What is Zero based Budget ?

In zero based budgeting, every year is considered as a new year thus providing a Connecting link between the previous year and the current year. The post performance and programmers are not taken in to account.

E.g. From zero bases.

LESSON 2 - TEN MARKS

1. Write a note on traditional Economy?

1. Traditional economy is also known as subsistence economy
2. In traditional economy, the basic problems are solved by traditions and custom.
3. In traditional economy these two rules were used to understand the aspect of behavior.
4. It produces exactly to its consumption requirements.
5. There is less sales under traditional economy.
6. Small scale productions were only possible with traditional economy.
7. Same products will be produced by every generation.
8. The production techniques are traditional.

2. Explain the salient features of capitalism.

Meaning of Capitalist Economy:

A capitalist economy is an economic system in which the production and distribution of commodities take place through the mechanism of free markets. Hence it is called as market economy or free trade economy.

Right to private property:

Individuals have the right to buy and own property. There is no limit they can own any amount of property. There is no limit and they can own any amount of property. They also have legal rights to use their property in any way they like.

Profit – Motive:

Profit is the only motive for the functioning of capitalism. Production decisions involving high risks are taken by individual only to earn large profits. Hence, profit motive is the basic force that drives the capitalist economy.

Freedom of Choice:

The question 'what to produce?' will be determined by the producers. They have the freedom to decide. The factors of production can also be employed any where freely to get due prices for their services. Similarly consumers have the freedom to buy anything they want.

Market Forces:

Market forces like demand, supply and price are the signals to direct the system. Most of the economic activities are centered on price mechanism. Production, consumption and distribution questions are expected to be solved by market forces.

Minimal role of Government:

As most of the basic economic problems are expected to be solved by market forces, the government has minimal role in the economy. Their role will

be limited to some important functions. They include regulation of market, defence, foreign policy, currency, etc.

3. What are the merits of socialist economy?

Meaning of Socialist Economy:

In a socialist Economy, the means of production are owned and operated by the state. All decisions regarding production and distribution are taken by the central planning authority. Hence the socialist economy is also called as planned economy or command economy.

The merits of socialist economy are:

1. **Efficient use of resources:**

The resources are utilized efficiently to produce socially useful good without taking the profit margin into account. Production is increased by avoiding wastes of competition.

2. **Economic Stability:**

Economic is free from business fluctuations. Government plans well and everything is well coordinated to avoid over – production or unemployment. There is stability because the production and consumption of goods and services are well regulated.

3**. Maximisation of Social Welfare:**

All citizens work for the welfare of the state. Everybody receives his or her remuneration. The state concentrates on the production of basic necessaries instead of luxury goods. The state provides free education, cheap and congenial housing, public health amenities and social security for the people.

4. **Absence of Monopoly:**

The elements of corporation and monopoly are eliminated since there is absence of private ownership. The state is a monopoly but produces quality goods at reasonable price.

5. **Basic needs are met:**

In socialist economies, basic human needs like water, education, health, social security, etc, are provided. Human development is more in socialist countries.

6. **No extreme inequality:**

As social welfare is the ultimate goal, there is no concentration of wealth. Extreme inequality is prevented in socialist system.

4. What are the merits and demerits of a mixed economy?

Meaning of mixed Economy:

India would be mixed economy in which public and private sectors would co – exists.

Merits of Mixed Economy:

1. **Efficient Resource Utilisation:**

The resources are utilized efficiently as good features of both capitalism and socialism co – exist. If there is misallocation of resources, the state controls and regulates it. This ensures the efficient utilization of resources.

2. **Prices are administered:**

The prices are not fixed always by forces of demand and supply. In the case of goods which are scarce, the prices are administered by the government and such goods are also rationed.

3. Social Welfare:

In a mixed economy, planning is centralized and there is overall welfare. Workers are given incentives and reward for any innovations. There is social security provided to the workers. Inequalities of income and wealth are reduced.

Demerits of Mixed Economy:

1. Lack of Co – Ordination:

The coordination between the public and private sectors is poor in a mixed economy. Public sector spends huge public resources for infrastructure.

The private sector aims at profit maximization by using the infrastructure created by the public sector. But they lack social responsibility and fail to spend for public causes like health, education. The private sector also dislikes any restriction imposed on it by the government.

2. Red – tapism and delay by Public Sector:

There is every chance that the public sector works inefficiently. There is too much of red – tapism and corruption leading to delays in decision – making and project implementation. They result in inefficiency and also affect production.

3. Economic Fluctuations:

The mixed economies experience economic fluctuations. On the one hand, the private sector does not operate under very rigid conditions prescribed by the government. On the other hand, the public sector too does not operate under very rigid conditions enforced by the planned economy. The lack of policy coordination between private and public sector results in economic fluctuations.

5. **Explain 'Opportunity Cost' with an example?**

Opportunity Cost:

The "Opportunity cost "is the cost of something in terms of an opportunity forgone (and the benefits that could be received from that opportunity).

In other words, the opportunity cost of an action is the value of next best alternative forgone. The consideration of opportunity costs is one of the key differences between the concepts of 'economic cost' and 'accounting cost'. Choices are mostly made on the basis of opportunity cost.

Opportunity Cost Example:

When you choose a particular alternative, the next best alternative must be given up. For example, if you choose to watch cricket highlights in T.V., you must give up an extra hour study. The choice of watching cricket in T.V. results in the loss of the next best alternative – an extra hour study instead. Thus by

watching T.V., you have forgone the opportunity of scoring an extra five or ten marks in examination.

LESSON –6.

1. **Explain the merits and demerits of Division of Labour**.

Meaning of Division of Labour:

Division of Labour:

The concept of 'Division of labour' was introduced by Adam Smith. Division of labour means dividing the process of production into distinct and several component processes and assigning each component in the hands of a labour or a set of labourers, who are specialists in that particular process.

Example:

A tailor stitches a shirt in full. In the case of garment exporters, cutting of cloth, stitching of hands, body, collars, holes for buttons, stitching of buttons, etc, are done independently by different workers. Therefore, they are combining the parts into a whole shirt.

A tailor may stitch a maximum of four shirts a day. In the case of garment exports firm, it may stitch more than 100 shirts a day. Thus, division of labour results in increased production.

1. Merits of Division of Labour:

1. Division of labour improves efficiency of labour when labour repeats doing the same tasks.
2. Facilitates the use of machinery in production, resulting in inventions. e.g. More's telegraphic codes.
3. Time and materials are put to the best and most efficient use.

2. Demerits of Division of Labour:

1. Repetition of the same task makes labour to feel that the work is monotonous and stale. It kills the humanity in him.
2. Narrow specialization reduces the possibility of labour to find alternative avenues of employment. This result in increased unemployment.
3. Kills the growth of handicrafts and the worker loses the satisfaction of having made a commodity in full.

2. Describe the Characteristics of capital.

Meaning of Capital:

Capital is the man made physical goods used to produce other goods and services. **In the ordinary Language, capital means money.**

Characteristics of Capital:

1. Capital is a passive factor of production.
2. Capital is man – made.
3. Capital is not an indispensable factor of production,
   E.g. Production is possible even without capital.
4. Capital has the highest mobility.
5. Supply of capital is elastic.
6. Capital lasts over time (A plant may be in operation for a number of years).
7. Capital involves present sacrifice (cost) to get future benefits.

3. What are the functions of Entrepreneur?

Functions of Entrepreneur:

1. Identifying Profitable Investible Opportunities:

Conceiving a new and most promising and profitable idea or capturing a new idea available in the market is the foremost function of an entrepreneur. This is known as identifying profitable investible opportunities.

2**. Deciding the size of unit of production:**

An Entrepreneur has to decide the size of the unit – whether big or small depending upon the nature of the product and the level of competition in the market.

3. Deciding the location of the production unit:

A rational entrepreneur will always locate his unit of production nearer to both factor market and the end – use market. This is to be done in order to bring down the delay in production and distribution of products and to reduce the storage and transportation cost.

4**. Identify the optimum combination of factors of production**:

The Entrepreneur, after having decided to start a new venture, takes up the task of hiring factors of production. Further, he decides in what combinations he should combine these factors so that maximum output is produced at minimum cost.

5**. Making Innovations:**

According to Schumpeter, basically an entrepreneur is an innovator of new markets and new techniques of production. A new market increases the sales volume whereas a new cost cutting production technique will make the product cheaper. This will in turn increase the volume of sales and the profit.

6**. Deciding the Reward Payment:**

The factors used in production have to be rewarded on the basis of their productivity. Measuring the productivity of the factors and the payment of reward is the crucial function of an entrepreneur.

7. Taking Risks and facing Uncertainties:

According to Hawley, a business is nothing but a bundle of risks. Products are produced for future demand. The future is uncertain. The investments are made in present. This is serious risk in production. One who is ready to accept the risk becomes a successful entrepreneur. A prudent entrepreneur forecasts the future risks scientifically and take appropriate decision in the present to overcome such risks. According to Knight one of the important functions of entrepreneur is Uncertainty – bearing.

5. Explain the producer's Equilibrium by using isoquants.

Producer's Equilibrium:

1. A rational producer always tries to achieve largest volume of output from a given Factor – expenditure.
2. Combined in an optimal or most efficient way.
3. The producer maximizes his profits and products a given level of output with least combination of factors

Figure:

Figure [redacted] Producers' Equilibrium

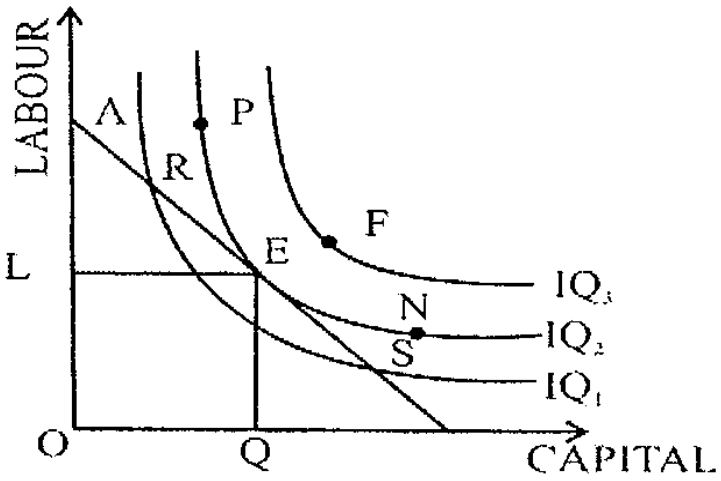


Figure Explanation:

1. X axis refers to capital and Y axis refers to Labour.
2. E is the point of equilibrium .Where isoquant IQ2 is tangential to isocost line at AB.
3. The line AB is budget line.
4. Points 'p' 'N' and 'F' are beyond the reach of the producer and points 'R' and 'S' on Iso quant IQ1 give less output than the output at the point of equilibrium 'E' which is an IQ2.
5. The output produced at point E is higher as E lies on a higher isoquant.
6. Isocost line is tangential to the highest possible isoquant.
7. Thus the producer is in equilibrium at point E where the isoquant is tangential to Isocost line.
8. The equilibrium point the marginal rate of technical substitution is equal to the price ratio of factors.
9. Condition for producer's Equilibrium is

$$\text{MRTS xy} = \frac{PX}{PY}$$

10. At this point of equilibrium, the combination E (that is OL of Labour and OQ of Capital) is called least cost.

LESSON-10.

1. What are the Criticisms of Say' law?

Introduction:

Keynes has clearly exposed the weakness of Say's law. In 1936, Keynes brought about a revolution in economic theory attacking Say's law. Great Depression and its effects showed that the classical theory of employment was wrong and its foundation, the Say's Law was unacceptable. Keyes a vigorous attack on the Say's Law.

Criticism of Say's Law:

1. Great Depression made Say's law unpopular.
2. All incomes earned are not always spent on consumption.
3. Similarly whatever is saved is not automatically invested.
4. The Law was based on wrong analysis of market.
5. It suffers from the fallacy of aggregation.
6. Aggregate supply and Aggregate demand are not always equal.
7. Rate of interest is not the equilibrating factor.
8. Capitalist system is not self – adjusting always.
9. Perfect competition is an unrealistic assumption.
10. Money is a dominant force in the economy.
11. The law is applicable only for long period.
12. Say's law holds goods only in a barter economy.

Conclusion:

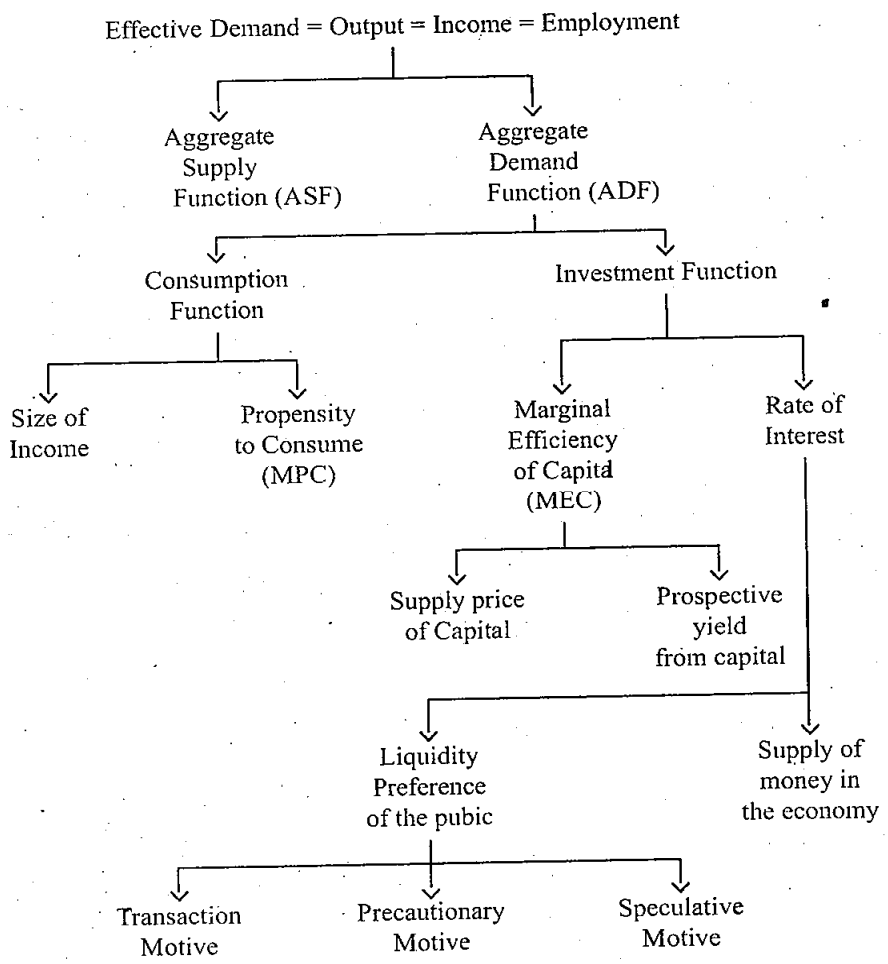
Say's law has no validity and use now, critics point out. However, the classical theory relied on Say's law to assure that there would always be full – employment as a result to equality between aggregate demand and aggregate supply. In short there cannot be deficiency of aggregate demand. Even if there is any unemployment, the market mechanism would restore full employment.

2. Draw the flow chart to depict the essence of Keynes theory.

Introduction:

Keynes is considered to be the greatest economist of the 20th century. He wrote several books. However, his 'The General Theory of Employment, Interest and Money' (1936) won him everlasting fame in economics. The book revolutionized macroeconomic thought. Keynesian economics is called the Keynesian revolution.

Essence of Keynesian Theory of Employment and Income:



Summary of Flow Chart:

1. Total income depends on total employment.
2. Total employment depends on effective demand.
3. Effective demand depends on consumption expenditure and investment expenditure.
4. Consumption depends on income and propensity to consume.
5. Investment depends upon the marginal efficiency of capital and the rate of interest.

3. Describe the Consumption Function with a Diagram:

Consumption Function:

The term **'consumption function'** explains the relationship between income and consumption. A function is the link between two or more variables.

Propensity to consume:

The proportion of income spent on actual consumption at different levels of income is called **propensity to consume.**

Figure of Consumption Function :

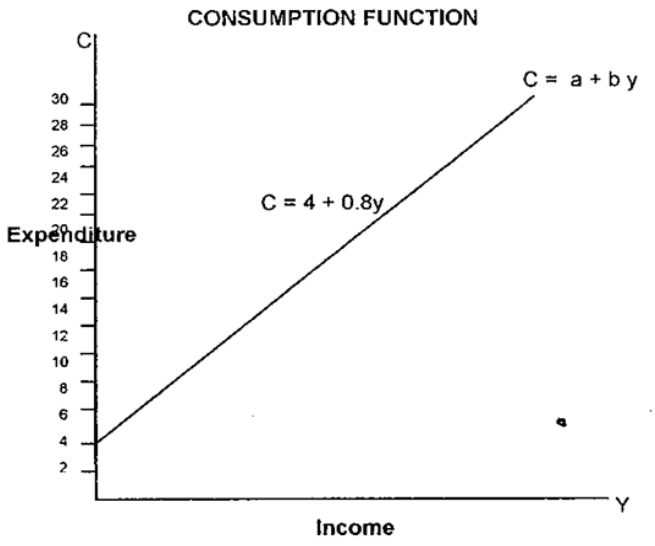


Figure Explanation:

- The vertical axis shows the spending on consumption indicated by C.
- The horizontal axis shows income or output indicated by Y.
- The straight line consumption function CC is defined in terms of equation C = 4 + 0.8y.
- Keynes made it clear that there is a direct relation between income and consumption
- C = a + by ------ 1
- C = 4 + 0.8y ----- 2
- Thus a consumption function is generally described in terms of the linear equation Y = a + by where the constant 'a' is the amount of autonomous consumption and slope (b) is MPC.

- Equation (2) simply says that consumption (c) depends on income (Y). The + Sign indicates that as income increases, obviously consumption will also increase.
- Consumption takes place even when income is zero.
- Even when income is zero, people spend some minimum level either by gift or borrowing. This consumption which is not related to income is called as autonomous consumption.
- In equation (2) o.8 indicates that 80 percent of additional income is spent on consumption and it is called as marginal propensity to consume (MPC).

$$\textbf{MPC} = \frac{\textit{Change in consumption } \Delta C}{\textit{Change in income } \Delta Y}$$

(Or)

$$\textbf{MPC} = \frac{\Delta C}{\Delta Y}$$

$$\textbf{Slope} = \frac{\textit{Vertical Change}}{\textit{horizontal change}}$$

- In our case 0.8 indicates that out of every additional income earned eighty percent will be spent for consumption keeping the rest for saving.
- When the income of an economy rises, consumption also rises and vice versa.
- Suppose people spend more in an economy in relation to their income , their MPC will be more.

4. What are the determinants of Consumption other than Income?

Introduction:

Though income is the most important factor that has greater influence on consumption, there are other factors which influence the propensity to consume.

Other Determinants of Consumption:

- Income distribution.
- Size and nature of wealth distribution.
- Age distribution of population.
- Inflation or price level.
- Government policies.
- Rate of interest.
- Expectations about price, income, etc.
- Advertisements.
- Improvement in the living standard.
- Changes in cultural values.

Conclusion:

As discussed earlier, aggregate demand consists of two parts (if you ignore government and external trade) namely consumption function and investment function. However, consumption function or MPC remains constant in the short run. Hence, Keynes placed greater emphasis on investment function.

5. What are the assumptions of Keynes' Simple Income Determination?

Simple Income Determination:

According to Keynes, the level of income of a country in the short run will change as a result of change in employment. The level of employment depends on aggregate demand and aggregate supply. The equilibrium of income depends on the balance between aggregate demand and aggregate supply. Full employment prevails when there is quality between these two. Thus the model can be used to show the determination of income, output and employment.

Assumption of Keynes' Simple Income Determination:

1. There are only two sectors viz. consumers (c) and firms (I).

2. Government influence on the economy is nil. In other words government expenditure (G) is zero. As there is no taxation, all personal income will become disposable income.
3. The economy is a closed one without any influence of foreign trade **(X-M)** that is, X-M is zero.
4. Wages and prices remain constant.
5. There are unemployed resources and hence less than full employment equilibrium prevails.
6. There no variation in the rate of interest.
7. Investment is autonomous and it has no effect on price level or rate of interest.
8. The consumption expenditure is stable.
9. Due to the first three assumption the basic equation **Y = C + I+ G+X-M.**
10. It has been reduced to **Y= C+I.**

LESSON – 12.

1. Explain the canons of Taxation.

Canons of Taxation:

Canons of taxation are considered **as fundamental principles of taxation.**

Adam Smith laid down the following canons of taxation.

1. Canon of Equity.
2. Canon of Certainty.
3. Canon of Convenience.
4. Canon of Economy.

Canon of Equity:

This canon is also called the **'ability to pay'** principle of taxation. It means that taxes should be imposed according to the capacity of the tax payer.

Poor should be taxed less and rich should be taxed more. This canon involves the principle of justice. All person contribute be equally borne by all, this canon is justified.

Canon of Certainty:

Every tax payer should know the amount of tax to be paid, when to be paid, and where to be paid and also should be certain about the rate of tax to make investment decisions.

Canon of Convenience:

Tax payment should be convenient and less burdensome to the tax payer**.** **e.g.** income tax collected at source, sales tax collected at the time of sales and land tax collected after harvest.

Canon of Economy:

This canon signifies that the cost of collecting the revenue should be kept at the minimum possible level. The tax laws and procedures should be made simple, so as to reduce the expenses in maintaining people's income tax accounts, **e.g.** Administrative Expenditure to be kept at a minimum.

2. What are the main sources of Tax and Non – Tax revenue of the State Government?

Taxes of the State Governments:

Under the Constitution of India, only the State governments are provided with separate powers to raise revenue, while the Union territories are financed by the Central government directly.

The Main sources of tax and Non- Tax Revenue:

1. Land Revenue,
2. Taxes on Agriculture Income,

3. Taxes on Land and Building,
4. Succession and Estate duties in respect of agricultural land,
5. Excise duty on Alcoholic Liquors and Narcotics,
6. Taxes on the consumption of Electricity,
7. Taxes on Vehicles, Animals and Boats,
8. Taxes on goods and passengers carried by road and inland water ways,
9. Stamp duties, Court fees and Registration,
10. Entertainment Tax,
11. Taxes on Advertisements other than those in Newspaper,
12. Taxes on Trade, profession and employment,
13. Income from irrigation and forests,
14. Grants from the central government ,
15. Taxes on trade, profession and employment.
16. Income from irrigation and forests,
17. Grants from the central government
18. Other incomes such as income from registration and share in the income – tax, excise and estate duties and debt services, loans and overdrafts.

3. Define Budget. Explain the Balanced and Unbalanced Budget.

Meaning of Budget:

Thus, **'Budget'** has been defined as the annual financial statement of the estimated receipts and proposed expenditure of the government in a financial year, usually April 1 to March 31 of the next year.

Definition:

Prof. Dimock says, "A budget is a balanced estimate of expenditures and receipts for a given period of time. In the hands of the administration, the budget is record of past performance, a method of current control and a projection of future plans".

Kinds of Budget:

1. Balanced Budget.
2. Unbalanced Budget.

Balanced Budget:

The government budget is said to be balanced when its tax revenue and expenditure are equal.

Balanced Budget = Revenue = Expenditure.

Unbalanced Budget:

An Unbalanced budget is that, over a period of time, revenue exceeds expenditure or expenditure exceeds revenue. In other words, the government's income or tax revenue and expenditure are not equal.

Unbalanced Budget = Revenue ≠ Expenditure.

Unbalanced Budget's are two types

1. **Surplus Budget**
2. **Deficit Budget**

Surplus Budget:

When there is an excess of income over expenditure, it is called a surplus budget.

Surplus Budget = Revenue > Expenditure.

Deficit Budget:

When there is an excess of expenditure over income, it is called a deficit budget.

Deficit Budget = Expenditure > Revenue.

Conclusion:

- Classical economists advocated balanced budget. But it is not always helpful in achieving and sustaining economic growth.
- Modern economists argue that an unbalanced budget is very useful for achieving and maintaining economic stability.

4. What are the Limitations of Fiscal Policy?

Limitations of Fiscal policy:

Though the fiscal policy has an important place in economic development and in particular, in the stepping up of saving and investment both in public and in private sectors, it has the following limitations.

Size of Fiscal Measures:

1. The budget is not a mere statement of receipts and revenue of the government.
2. It explains and shapes the economic structure of a country.
3. When the budget forms a small part of the national income in developing economies, fiscal policy cannot have the desired impact on the economic development.
4. Direct taxation at times becomes an instrument of limited applicability, as the vast majority of the people are not covered by it.
5. Further, when the total tax revenue forms a smaller portion of the national income, fiscal measures will not step up the sagging economy requiring massive help.

Fiscal policy as ineffective anti – cyclical measure:

1. Fiscal measures – both loosening fiscal policy and tightening fiscal policy – will not stimulate speedy economic growth of a country, when the different sectors of the economy are not closely integrated with one another.

2. Action taken by the government may not always have the same effect on all the sectors.
3. Thus we may have for instance the recession in some sectors followed by a rise in prices in other sectors.
4. An increasing purchasing power through deficit financing, a policy advocated by **J.M. Keynes in 1930's** may not have the effect of reviving the recession hit economies, but merely result in a spiraling rise in prices.

Administrative Delay:

1. Fiscal measures may introduce delay, uncertainties and arbitrariness arising from administrative bottlenecks.
2. As a result, fiscal policy fails to be a powerful and therefore a useful stabilization policy.

Other Limitations:

1. Large Scale under Employment,
2. Lack of Coordination from the public,
3. Tax Evasion,
4. Low Tax Base is the other limitations of fiscal policy.

6. Differentiate between Direct and Indirect Taxes?

Meaning of a Tax:

A tax is one of the important sources of public revenue. A tax is a compulsory charge or payment levied by the government on an individual or corporation.

Direct Taxes:

Direct taxes are collected from the public directly. That it is to say, these taxes are imposed on and collected from the same person. One cannot evade paying the tax if it is imposed on him.

Example:

Income tax, wealth tax, corporate tax, gift tax, estate duty, expenditure tax are good examples of direct taxes.

Indirect Taxes:

Taxes imposed on commodities and services are termed as indirect taxes. There is a chance for shifting the burden of indirect taxes. The incidence is upon the person who ultimately pays it.

Examples

Indirect taxes are excise duties, customs and sales taxes.

Differentiate between the Direct and Indirect Taxes:

Direct Taxes:

- The classification of direct taxes and indirect taxes is based on the criterion of shifting of the incidence of tax.
- The burden of a direct tax is borne by the person on whom it is levied.
- For example, income tax is a direct tax.
- Its burden falls on the person who is liable to pay it to pay it to the Government.
- He cannot transfer the burden to some other person.

Indirect Tax:

- An Indirect tax is initially paid by one person but ultimately the burden of the tax is fully or partially borne by another person.
- Because there is a possibility of transfer of burden of an indirect tax.

For example:

- The excise duty on a motor – bike is initially paid by the manufacturer.
- But he subsequently shifts this burden to the consumer by including the tax in the price of the bike.
- Roughly, we may say that the direct taxes are paid by the rich and the indirect taxes are paid by the poor.

LESSON - 1

1. Examine Marshall's definition of Economics.

Introduction:

- **Alfred Marshall - (1842 – 1924)**
- **Wrote a book - Principles of Economics (1890)**

Welfare Definition:

Alfred Marshall defined Economics as "a study of mankind in the Ordinary business of life. An altered form of this definition is. "Economics is a study of man's actions in the ordinary business of life".

Man is more importance:

1. Marshall agrees that Economics studies about wealth but not wealth alone.
2. Economics is on the one side a study of wealth and on the other and more important side, a part of the study of man.
3. Man is the centre of his study.
4. The study of man is more important the study of wealth.

Material welfare:

1. Economics studies how people try "to increase the material means of well – being".
2. Economics is the study of the causes of material welfare.
3. Marshall's definition is known as material welfare definition of economics because of its Emphasis on welfare.

Criticism:

1. There is no doubt that Marshall's definition is a great improvement over the definition of Adam Smith.
2. But the main idea of Marshall that Economics is a science that deals with material welfare has been strongly criticized by Lionel Robbins.

3. Lionel Robbins is a great Critic of Marshall's definition. He says that Marshall misrepresents the science of Economics.
4. First if we go by the definition of Marshall, in Economics we should consider only those activities which promote material welfare. But many activity do not promote welfare rightly
   Consider as Economic activity.
5. For example: Alcoholic drinks and Cigarettes are bad for our health but these products are produced and sold in the market.
6. And there are buyers and sellers so the production and distribution of these goods is Economic activity.
7. We have "Economics of War "and it is an important branch of economics but it does not promote material welfare. So it is not right to say that economics studies material welfare.
8. Second, some activities promote welfare but not material welfare. For example :
   Doctors, Lawyers, Actors promote our welfare. But their Labour does not do the production Of material goods. But we make use of their services. We pay a price, sometime very high price for their services.
9. Their services have Economic values. It is misleading to describe economics as the study of the causes of material welfare.
10. In the words of Lionel Robbins. "Whatever Economics is concerned with, it is not concerned with the causes of material welfare as such".
11. Third, "It considers the production of material goods like, e.g. Table, Chair, and Cycles alone as economic activity as the services of a teachers and Judges are not.
12. As Lionel Robbins says, "We do not say the production of potatoes is Economic activities and the production of philosophy is not".
13. Lastly Ethical concepts like welfare, Economic will become on inexact science for it is rather difficult to measure welfare.

Conclusion:

In spite of the above Criticism against Marshall's definition, we should not forget the Marshall has widened the scope of Economics by establishing a link between wealth and man and his welfare.

2. Examine Lionel Robbins definition of Economics?

Introduction:

- **Lionel Robbins - Scarcity definition.**
- Book - "An Essay on the nature and significance of Economic Science".

Definition:

Lionel Robbins has defined Economics as follows: "Economics is the science which studies human behavior as a relationship between ends and scarce means which have alternative uses".

Basic Assumptions:

1. Ends are various 'ends' mean wants, wants are unlimited.

2. Means are limited, means like time, money etc.
3. We can put time and money to alternative uses. E.g. We can use time for earning (or) enjoy it as leisure.
4. All wants are not equal importance.

Scarcity and Choice are central problems in Economics:

1. All means which satisfy human wants are not limited. E.g. Air and Sunshine.
2. Many things which we want are scarce in relation to our wants.
3. So that we study in Economics how the prices of scarce goods are determined.
4. Economics is the science of choice.
5. Choice between alternatives is the basic principle underlying in all Economic activity. This is applicable in all economic systems like Capitalist, Socialist and Mixed Economy.
6. All Economic life involves planning.
7. As Robbins puts it. To plan is to act with a purpose, to choose, and choice is the essence of Economic Activity.
8. Lionel Robbins definition is also known as scarcity definition of Economics.
9. That is why Scarcity and Choice are central problems in Economics.

Criticism:

1. Marshall classified human behavior into Economic and Non –Economic activity but Robbins definition covers both.
2. Another merit of Robbins's definition is that it makes Economics a scientific study.

   But Ethical aspects of Economic problems are not taken into account.
3. Moral aspects are not considered.
4. Robbins's definition has no human touch.

5. Economics only as the science of pricing process but in general economics is more than a theory of value (or) resource allocation.
6. According Robbins's an economic problem will arise only when there is scarcity but it may arise during times of abundance as well.

Conclusion:

1. It is true that there have been improvements in the methods of production because of technological advancements.
2. Even though technological advancements scarcities are always with us.
3. "That is why we say Economics is the science of scarcity".

4.Discuss the Relationship between Economics and Other Social Science?

Introduction:

1. Economics is a Social Science which deals with human wants and their Satisfaction.
2. We shall discuss Economics in its relation to other science.

Economics in Relation to other Social Science:

1. Economics is related to other Social Science like Sociology, Politics, History, Ethics, Jurisprudence and Psychology.

Economics and Sociology:

1. Social Science like Political and Economics are the branches of Sociology.
2. Sociology is a general Social Science which discussion facts and Laws of Society as a whole.
3. Sociology deals with all aspects of a society but economics deals only with the Economic aspects.
4. For students of Sociology , Social institutions like marriage, religion, political condition and Economic condition are all important subjects for

study, but in economics we are interested to know how it affect the economic life of a society.

Economics and Politics:

1. There is a close connection between Economics and Politics.
2. Politics is the Science of State.
3. Politics studies about man in his relation to the state.
4. It may be related to a government policy but planning is a Economic policy.
5. Some important questions like nationalization, privatization and prohibition are all economic as well as political questions.
6. So that the early Economics described economics as a political Economy.

Economics and History:

1. Economics and History are closely related.
2. History is a record of past events.
3. We Survey Economic, Political and Social conditions of the people in the past.
4. A student of history, love affairs, Marriages and even murders of kings are important subjects of study.
5. For students of Economics, things like taxation, other sources of Revenue and standard of living in the past is important subjects.
6. "Economics without History has no Root: History without Economics has no Fruits".

Economics and Ethics:

1. Ethics deals with moral questions.
2. It deals with questions of right and wrong for promoting good life.
3. According to Marshall Economics and Ethics are closely related at promoting moral welfare.
4. Marshall considered Economics as a handmaid of Ethics.

Economics and Jurisprudence:

1. Psychology is the Science of Mind which deals with all kinds of human behavior.
2. Many important laws of Economics are based on psychology for E.g: Law of Diminishing Marginal Utility.
3. This psychology has become important in analyzing Economic problems.
4. To deal with labour problems we must understand industrial psychology.
5. A good businessman must understand the psychology of buyers.

Economics, Mathematics and Statistics:

1. Economics is related to mathematics and statistics is the science of average and counting.
2. In Economics, Statistics helps to make tables and diagrams for statistical analysis.
3. In Modern Economics, Statistics and Mathematical methods are largely used which is Called Econometrics.

4. Discuss the Nature and Importance of Economics Laws?

Economics Laws:

1. Like other Science, Economics has its own Laws.
2. A Law is a statement of what must happen in certain given conditions.
3. The Laws of Economics are statement of tendencies. For example, according to law of Demand, there is fall in the price of a good, the demand for it will be expanded vice versa.
4. The laws of Physical Sciences are exact but economics are not as exact as physical sciences.
5. Because Economics laws deal with human behavior.

6. As Economics deals with man and his behavior, its laws are complex and in exact.
7. We study about average human behaviors' in Economics.
8. Economic laws also indicate probable trends. For example, when there is increase in the Quantity of money, there may be increase in the price level.
9. All Economic laws are based on certain assumption. A law of demand is based on the Assumption of "other things being equal".
10. Many Economic laws are not verified by experiment. That is why we way sometimes the Economic laws are hypothetical.
11. The law of diminishing returns has universal application.

Importance of Economic Laws:

1. Economics laws are of great importance in practical life.
2. Some Economic law is applicable to all types of Economic systems.
3. They have universal application. For example Law of Diminishing Returns, Law of Diminishing marginal utility and law of demand.
4. Some Economists believe that the quantity theory of money is valid under all Economic Systems.
5. The law of diminishing utility is based on actual experience. It deals that more and more of a thing you have the less and less you want it.
6. Progressive taxation is based on the law of diminishing utility.
7. The law of diminishing marginal returns has universal application.
8. In Agriculture, it means that we cannot double the output by doubling Labour and Capital.
9. The Malthusian theory of population tells that population increases at a faster rate than Food supply.
10. The Green Revolution helped in increasing Agricultural Productivity.

11. So most of the laws of Economics are of great practical importance.

5. Discuss the Nature and Scope of Economics?

Nature of Economics:

1. Economics is a Social Science which deals with human wants and their satisfaction.
2. Economics is the science of scarcity.
3. Scarcity is the basic fact of life.
4. Our wants are unlimited but means are limited.
5. This leads to choice making.
6. Choice is the essence of economic activity.
7. As all wants are not of equal importance this leads to choice.
8. We have to pay a price for scarcity goods.
9. As prices are paid in money, we study about the part played by money in the economic life of a society.
10. All scarce goods which satisfy our wants are known as wealth.
11. In Economics, we study about the production of wealth, exchange of wealth distribution of Wealth and consumption of wealth.
12. This wealth is production to promote human welfare; we study the relationship between Wealth and welfare.

Scope of Economics:

1. Economics has become one of the important branches of social science.

2. It is of great practical value in our daily life.
3. In pure science we study the subject to arrive at the truth but in economics it's to find out many economic and social problems of the society. "Knowledge for the sake of knowledge "is not the goal of an economist.
4. Economics must be fruit bearing. It has no ready made answer for immediate problems.
5. The Government is making broad economic policies.
6. According to Keynes "The theory of economics does not furnish a body of settled conclusions immediately applicable to policy. It is a method, rather than doctrine an apparatus of the mind, a technique of thinking, which helps to draw correct conclusion.
7. Most of the problems of the modern state are economic in nature.
8. During World War II, the German Economy was damaged heavily. The advice of an economist Ludwig Erhard who made miracle to recover quickly.
9. Similarly, J.M. Keynes had great influence on the economic policies of the American government when it was in great economic trouble during the 1930's.
10. "You cannot be in any real sense a citizen, unless you are also in some degree an Economist.

LESSON – 3

1. Explain the Characteristics of Human Wants.

Characteristics of Wants:

Wants are Unlimited:

1. Man is a bundle of desires.
2. There is no limit to human wants.

3. If one set of wants are fulfilled immediately another set of wants would be felt.
4. Even the richest man will have a list of wants to be fulfilled.

Every want is satiable:

1. Wants in general are unlimited.
2. But a single or a particular want is satiable. We can completely satisfy a single want.
3. A man is hungry and he requires food so he gets food and satisfies his hunger.

Wants are Complementary:

1. Wants are complementary in nature; though they are single we require many
2. Commodities to satisfy all wants.
3. For E.g. Want for writing includes want for Paper, pen, Ink.

Wants are Competitive:

1. Wants are unlimited whereas resources are limited. So the wants will be competing to get satisfied.
2. For E.g. Raju has a sum of Rupees 20 with this amount of Rs. 20 he has to choose anyone wants like going to a movie (or) buying Magazine or buying vegetables.
3. Wants will be chosen by the need of time.

Wants are Alternative:

1. A want can be satisfied by two or more goods or two or more methods.
2. For E.g. Ram wants a hot drink he can take Coffee or Tea, this is called Alternatives or substitutes.

Wants vary with Time, Place and Person:

1. Wants are not static in nature it varies with time, place and person.
2. For E.g. We require hot drinks in winter and cool drinks in summer.
3. In England people require woolen suits but people of India prefer cotton.

Wants are Recur Again:

1. Some wants are felt again and again.
2. For E.g. People eat food every day.

Wants are influenced by Advertisements:

1. Effective Advertisements through films, journals, ratio and T.V will create new wants and the Existing wants get modified.
2. Through advertisements and clever salesmanship, businessmen create tastes for their products.

Wants become Habits and Customs:

1. If a particular want is satisfied repeatedly by a commodity, then it becomes a habit.
2. **Example: drinking coffee and tea.**
3. Wants become habits and habits are responsible for wants.

2. Describe the Law of Diminishing Marginal Utilities with a Diagram:

Introduction:

- The Law of diminishing Marginal Utility explains an ordinary experience of a consumer.
- If a consumer takes more and more units of commodity the additional utility he derives from an extra unit of the commodity goes on falling.
- This idea was first developed by Gossen, Benthan Jevons, Karl Menger, so this law is also known as Gossen's First Law.
- But Alfred Marshall perfected these ideas and made it as a Law.

Definition:

According to Marshall's "The additional Benefit which a person derives from a given increase of his stock of a thing diminishes with every increase in the stock that he already has"

Assumption of the Law:

1. The consumption must be in standard units. E.g. a cup of coffee or cup of tea.
2. The units of commodity must be identical in all aspects like taste, quality, color and size.
3. The process of consumption continues without any time gap.
4. The consumer's taste remains the same.
5. The income of the consumer remains constant.
6. The consumer is a rational economic man and he wants to maximize the total utility.
7. Utility is measurable.

Explanation:

1. Suppose Mr. X is hungry and eats apple one by one.
2. The first Apple gives him great pleasure, as he is hungry.
3. When he takes the second apple, the extent of his hunger will reduce.
4. Therefore he will derive less utility from the second apple.
5. If he continues to take additional apples, the utility derived from the third apple will be less than that of the second one.
6. In this way, the additional utility from the extra units will go on decreasing.
7. If the consumer continues to take more apples, Marginal utility falls to zero and then becomes negative.

Total and Marginal Utility Schedule:

Units of Apple	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

Schedule Explanation:

1. It is very clear that the marginal Utility goes on declining.
2. The consumer derives 20 units of utility from the first apple he consumes.
3. When the consumer the apples continuously, the marginal utility fall to 5 units for the fourth apple and becomes zero for the fifth apple.
4. The marginal Utilities are negative for the 6th and 7th apples.
5. Thus when the consumer consumes a commodity continuously, the marginal utility declines, reaches zero and then becomes negative.

Figure:

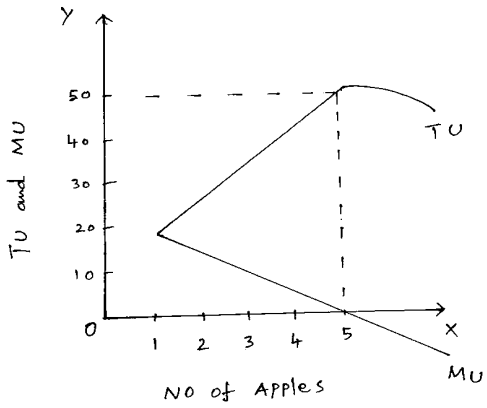


Figure Explanation:

1. X axis represents number of apples consumed.
2. Y axis represents Total Utility and Marginal Utility.
3. TU – represents Total Utility and MU – represents Marginal Utility.
4. If a consumer consumes first apple given. Utility measures (E.g.) 20 utility.
5. If he consumes second apple he get the satisfaction of 15 marginal utility,
6. Likewise **10, 5, 0, -5, and 10.**
7. Total utility goes on increasing reaches maximum and declines.
8. **Marginal utility goes on declining reaches '0' and becomes negative.**

Importance:

1. The Law of Diminishing Marginal utility is the foundation for various other Economic laws.
2. E.g. Law of Demand.
3. The Law of Diminishing Marginal Utility operates in the case of money also.
4. Alfred Marshall assumed that the marginal utility of money remains constant.

5. This Law is a handy tool for the Finance Minister for increasing tax rate on the rich.

Criticism:

1. A single commodity consumption mode but in real life a consumer more than one good at a time.
2. Consumer should consume successive units of the same good continuously but in real life it is not so.
3. Marginal Utility of money remains constant when money stock changes. In real life, the marginal Utility derived from precisely in monetary terms.

3. Explain Consumer's Surplus with the help of a diagram and bring out its importance and it's Criticism.

Introduction:

1. The concept of consumer's surplus was first mentioned by **J.A. Dupuit** a French Engineer – Economist in **1844.**
2. Consumer surplus is experienced in commodities which are highly useful but relatively cheap.
3. For example: Newspaper, Salt, Matchbox, Postage stamp, etc.
4. For these commodities we are ready to pay more than what we actually pay.

Definition:

Marshall defines Consumer's Surplus as follows: "The excess of price which a person would be willing to pay rather than go without the thing, over that which he actually does pay, is the economic measure of this surplus of satisfaction. It may be called Consumer's Surplus.

Assumption:

1. Commodity is measured in money terms.

2. There is definite relationship between expected satisfaction and realized satisfaction.
3. Marginal utility of money is constant.
4. Absence of income, taste, fashion etc.
5. Independent goods and independent utilities.
6. Demand for commodities depends on its price alone.

Measurement:

Consumer's Surplus = Potential Price – Actual Price.

Potential Price:

Potential price is the price which a consumer is willing to pay for a commodity.

Actual price:

Actual price is the price which the consumer actually pays for that commodity.

Consumer's Surplus Schedule:

Units	Marginal Utility	Price of the units (in Rs)	Consumer's Surplus.
1	50	10	40
2	40	10	30
3	30	10	20
4	20	10	10
5	10	10	0

	150	50	100

Schedule Explanation:

1. The market price of the commodity is Rs. 10 – (column 3).
2. Column 2 gives the potential price.
3. Potential price explains the price which a consumer is willing to pay for the unit of the commodity.
4. As more and more units of a commodity is purchased, the potential price declines.
5. Therefore the price, which the consumer is willing to pay, also decreases.
6. Thus from the table consumer's surplus for each unit is the difference between potential price minus Actual price.
7. The consumer's surplus for all the units can be calculated as Total Utility minus Total amount spent on the commodity.
8. Consumer's Surplus = Rs 150 – 50 = Rs 100.

Consumer's Surplus Figure:

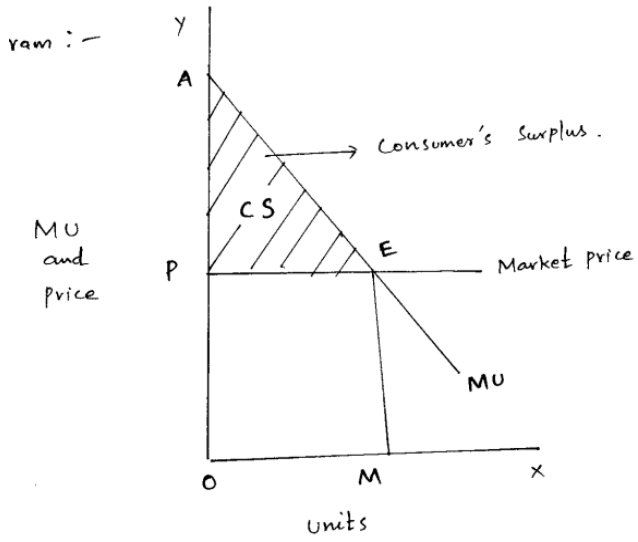


Figure Explanation:

1. X axis refers to units of commodity.
2. Y axis refers to Marginal utility and price.
3. MU is the marginal utility curve.
4. OP is the price and OM is the units of the commodity purchased.
5. For OM units, the consumer is willing to pay OAEM.
6. The actual amount he pays is OPEM.
7. Thus Consumer's Surplus is OAEM – OPEM = PAE (the shaded area).
8. A rise in the market price reduces consumer's surplus.
9. A fall in the market price increases the consumer's surplus.

Importance;

1. It is useful to the finance minister is formulating taxation policies.
2. It is also helpful is fixing a higher price by a monopolist in the market.
3. It enables comparison of the standard of living of people.

Criticism:

1. Marshall assumed that utility is measurable, but utility is immeasurable because it is psychological in nature.
2. The Marshall assumption of marginal utility of money remaining constant is unrealistic.
3. Marshall assumed that there are no interpersonal differences. But it will change with regard to tastes, preferences, status etc.

4. Explain the Indifference Curve Approach?

Introduction:

1. Indifference curve approach based on **Ordinal Ranking.**
2. Vilfred Pareto, Wicksteed and Slutsky developed this approach first.
3. Two noted Economists Prof. **J.R. Hicks and R.G.D. Allen** provided a refined version of indifference curve.
4. According to Hicks and Allen utility cannot be measure. It can only be ranked or ordered.

Definition:

"An Indifference curve is the locus of different combination of two commodities giving the same level of satisfaction".

Assumption:

1. The consumer is rational.
2. He purchases two goods, X and Y only.
3. His income remains constant.

4. His taste, preferences, habits remains constant.

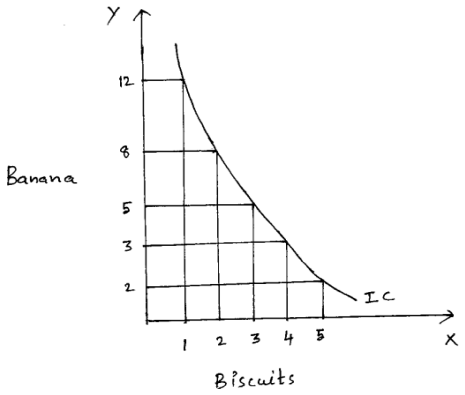
Indifference Curve Schedule:

Combination	Biscuits (Good X)	Bananas (Good Y)
A	1	12
B	2	8
C	3	5
D	4	3
E	5	2

Schedule Explanation:

1. An Indifference Schedule is a statement of various combinations of two commodities such as banana and biscuits that will equally be accepted by the consumer.
2. The number of biscuits is increasing; the number of banana is decreasing.
3. So that the level of satisfaction is the same for all the combination.
4. Therefore the consumer is indifferent between the combination A, B, C, D, and E.

Indifference Curve Figure:



Indifference Curve Explanation:

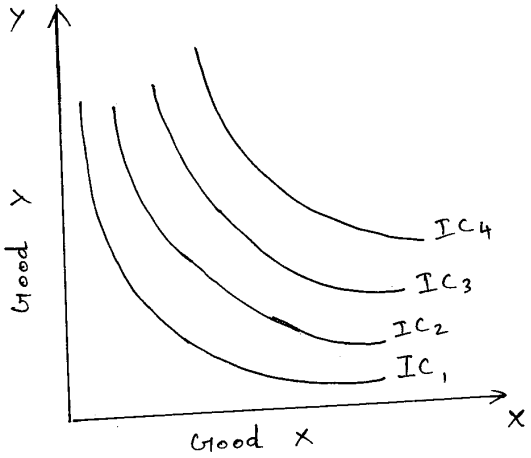
1. X axis represents Biscuits and Y axis represents Banana.
2. IC is an Indifference curve.
3. The various combinations of two commodities are plotted and join to form a curve called Indifference curve.
4. All the points on this curve give equal level of satisfaction to the consumer indifference curve is otherwise called 'iso – utility curve.

5. **What is Indifference Curve Map? Explain the properties of Indifference curve with Diagrams?**

Indifference Map:

- Indifference map is a group of indifference curves for two commodities showing different levels of satisfaction.
- In this indifference map, a higher indifference curve denotes higher level of satisfaction and a lower indifference curve represents lower level of satisfaction.
- Being rational, the consumer will always choose a higher indifference curve to get maximum satisfaction, other things being equal.

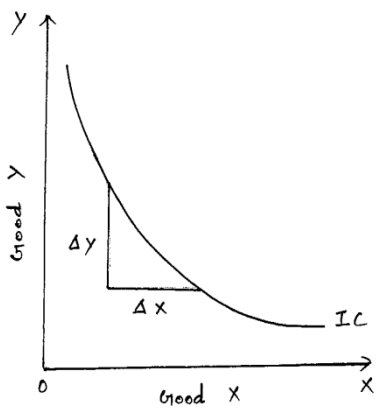
Figure:



Properties of an Indifference Curve:

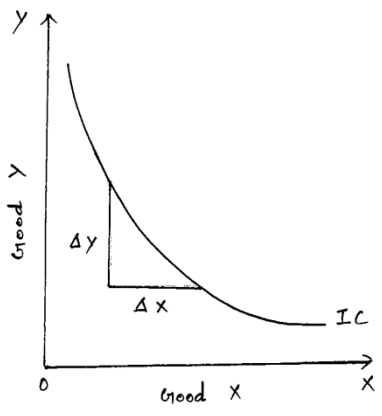
1. Indifference curves slope downwards to the right.
2. Indifference curves are Convex to the Origin.
3. No two Indifference curves can ever cut each other.

All Indifference Curves slope downwards from left to Right:



- The downward slope of indifference curve must be attributed to the fact that the consumer in substituting good X by good Y, increase the amount of Y and reduces the amount of X.
- The Indifference curve were horizontal line running parallel to X axis then the combinations which it represents is the same amount of Y but more and more of X.
- In that case, the satisfaction from the combination will not be equal.
- For the same reason, it can be said that indifference curve will not be vertical.

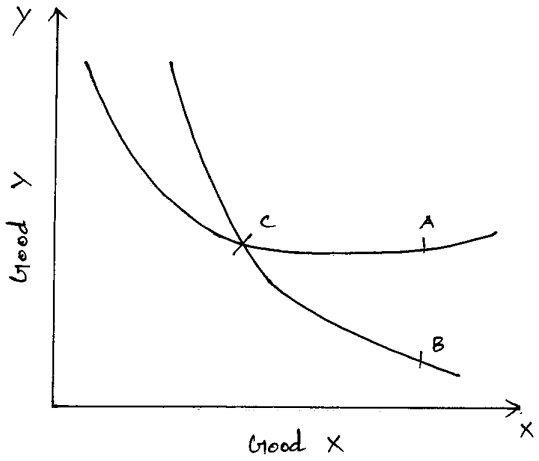
All Indifference curve are convex to the origin:



- The operation of a principle known as "Diminishing Marginal Rate of Substitution".
- X axis represents the commodity of X.

- Y axis represents the commodity of Y.
- If the indifference curves are concave to the origin, then it will mean that MRS is increasing.
- Indifference curve cannot be a straight line (or) vertical line.

No Two Indifference Curves intersect each other:



- Point A which is on indifference curve 2 represents a higher level of satisfaction to the consumer that at point B which is on indifference curve 1.
- But, point C lies on both curves, that means two equal of satisfaction A and B which are unequal have become equal that cannot be accepted.

  So indifference curves can never cut each other.

Lesson -8

1. How are the Price and Output Determined in Short Run Under Perfect Competition?

Perfect competition:

Perfect competition is a market situation where there is infinite number of sellers in the market.

Features and Conditions of perfect Competition:

1. Large number of buyers and sellers.
2. Homogeneous product.
3. Perfect knowledge about market conditions.
4. Free entry and Free exit.
5. Perfect mobility of factors of production.
6. Absence of transport cost.
7. Absence of government and Artificial restrictions or collusions.

Nature of Revenue curve:

1. Under Perfect competition, the market price is determined by market forces namely the demand for and the supply of the products.
2. There is uniform price in the market and all the units of output are sold at the same price.
3. As a result the average revenue is perfectly elastic.
4. The average revenue curve is horizontally parallel to x – axis. Since Average Revenue is constant, Marginal revenue is also constant and coincides with Average Revenue.

Short Run Equilibrium Price and Output Determination under Perfect Competition:

1. Since a firm in perfectly competitive market is a price – taker, it has to adjust its level of output to maximize its profit. The aim of any producer is to maximize his profit.
2. The short run is a period in which the number and plant size of firms are fixed. In this period the firm can produce more only by increasing the variable inputs.
3. As the entry of new firms or exit of existing firms are not possible in the short run, the firm is perfectly competitive market can either earn super normal profit or normal profit or incur loss in the short period.

Super Normal Profit:

When Average Revenue of the firm is greater than its average cost, the firm is **earning super normal profit.**

Figure:

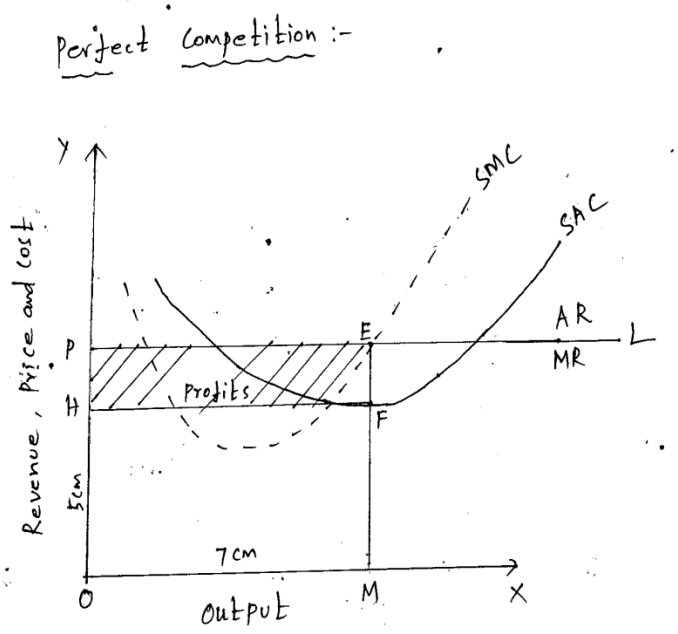


Figure Explanation:

1. Output is measures along the X – axis.
2. Price, revenue and cost along the Y axis.
3. OP is the prevailing price .
4. PL is the demand curve or average and the marginal revenue curve.
5. SAC and SMC are the short run average and marginal cost curve.
6. **MC** curve cuts **MR** curve from below at the point of equilibrium.
7. At OM level of output **ME** is Average Revenue **and MF** is Average Cost.
8. The profit per unit of output **is EF.**
9. Thus the total profits will be equal to the area **HFEP.**
10. **HFEP** is the Super Normal Profits earned by the firm.

2. What are the Characteristics and Cause of Monopoly?

Define Monopoly:

Monopoly is a market structure in which there is a single seller, there are no close substitutes for the commodity it produces and there are barriers to entry.

Characteristics of Monopoly:

Single Seller:

- There is only one seller; he can control either price or supply of his product.
- The seller cannot control demand for the product, as there are many buyers.

No Close Substitutes:

- There are no close substitutes for the product.
- The buyers have no alternatives or choices.

Price:

- The monopolistic has control over supply so as to increase the price.

- Sometimes he may adopt price discrimination.
- He may fix different prices for different sets of consumer.

No Entry:

- There is no freedom to other producers to enter the market as the monopolist enjoying monopoly power.
- There are strong barriers for new firms to enter.
- There are legal, technological, economic and natural obstacles, which may block the entry of new products.

Firm and Industry:

- Under Monopoly, there is no difference between a firm and an industry.
- There is only one firm, that single firm constitutes whole industry.

Causes for Monopoly:

Natural:

- A Monopoly may arise on account of some natural causes.
- Some minerals are available only in certain regions.
- **For example**: South Africa has the monopoly of Diamonds; Nickel in the world is mostly available in Canada and Oil in Middle East.
- This is natural monopoly.

Technical:

- Monopoly power may be enjoyed due to technical reasons.
- Coca Cola is the best example for technical monopoly.

Legal:

- Monopoly power is achieved through Patent Rights, Copy Rights and Trade Marks by the producers.
- This is called Legal Monopoly.

Large Amount of Capital:

- The manufacture of some goods requires a large amount of capital (or) Lumpiness of capital.

- **For example:** Iron and Steel Industry, Railways, etc.

State:

- Government will have the sole right to producing and selling some goods.
- They are state monopolies.
- **For example**: Electricity and Railways.

3. Explain the Price and Output Determination Under Monopoly.

Meaning of Monopoly:

Monopoly is a market structure in which there is a single seller, there are no close substitutes for the commodity it produces and there are barriers to entry.

Price and Output Determination:

1. A monopolist like a perfectly competitive firm tries to maximize his profits.
2. A monopoly firm faces a downward sloping demand curve, that is, its average revenue curve.
3. The downward sloping demand curve implies that larger output can be sold only by reducing the price.
4. The marginal revenue curve will be below the average revenue curve.
5. The Average cost curve is **"U" shaped.**
6. The monopolist will be in equilibrium when **MC = MR.**
7. The MC curve cuts the MR curve from below.

Figure:

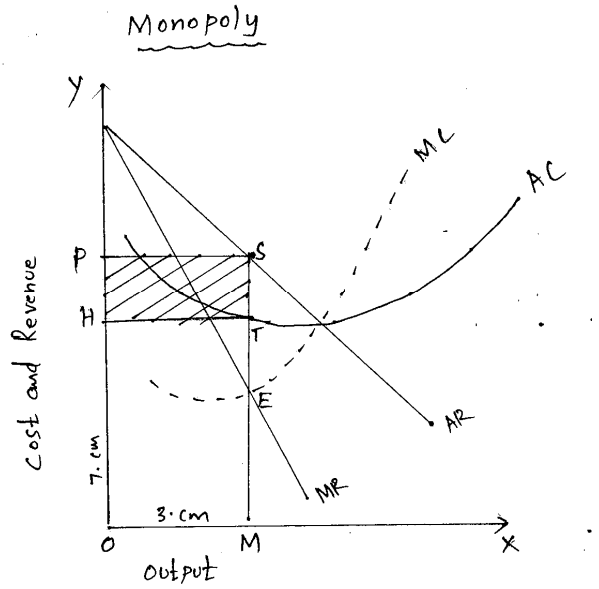


Figure Explanation:

1. Output is measures along the X axis.
2. Price, Revenue and Cost along the Y axis.
3. AR is the Average Revenue Curve.
4. MR is the Marginal Revenue Curve.
5. AR curve is falling and MR curve lies below AR.
6. The monopolist is in equilibrium at **E Where MR = MC.**
7. He produces **OM** units of output and fixes price at **OP.**
8. At OM output, the **average revenue is MS and Average Cost MT.**
9. **Therefore the profit per unit is MS – MT = TS.**
10. **The Total profit is average profit (TS) multiplied by output (OM), which is equal to HTSP.**

11. The monopolist is in equilibrium at point E and produces OM output at which he is earning maximum profit.
12. The monopoly price is higher than the Marginal Revenue and Marginal Cost.

4. Explain the Price and Output Determination Under Monopolistic Competition?

Monopolistic Competition:

- Monopolistic Competition was introduced by **Prof. E.H. Chamberlin**.
- Monopolistic competition, as the name itself implies, is a blending of monopoly and competition.
- Monopolistic competition refers to the market situation in which a large number of sellers produce goods which are close substitutes of one another.
- The products are similar but not identical.

Example of Monopolistic Competition:

- Shampoo – Sun silk, Vatika, Kadal, Clinic Plus, Pantene, etc.
- Tooth Paste – Binaca, Colgate, Anchor, Babool, Close – up, Pepsodent, etc.

Determination of Equilibrium Price and Output under Monopolistic Competition:

- The Monopolistic Competition firm will come to equilibrium on the principle of equalizing **MR with MC.**
- Each firm will choose that price and output where it will be maximizing it is profit.

- The following figure shows the Equilibrium of the Individual firm in the Short Period:

Short Period Equilibrium of a monopolistic Competitive firm with profit:

Figure:

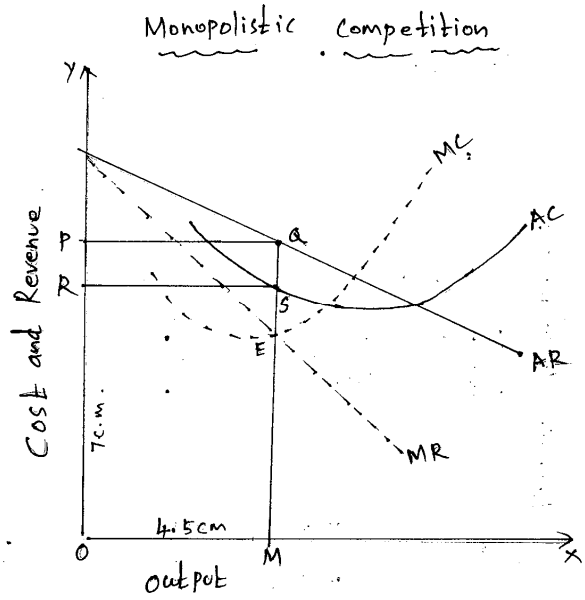


Figure Explanation:

1. X axis refers to output and Y axis refers to price, cost and revenue.
2. **MC** and **AC** are the Short Period Marginal Cost and Average Cost Curves.
3. The slopping down Average Revenue and Marginal Revenue curves are shown as AR and MR.
4. The Equilibrium point is E Where **MR = MC.**
5. The difference between Average cost and Average Revenue is SQ.
6. The output is OM. So, the supernormal profit for the firm is shown by the rectangle **PQSR.**
7. The firm by producing OM Units of its commodity and selling it at a price of OP per unit realizes the maximum profit in the short run.

8. The different firms in monopolistic competition may be making either abnormal profits or losses in the short period depending on their costs and revenue curves.

In the Long Run:

1. If the existing firms earn **super normal profits,** the entry of new firms will reduce its share in the market.
2. If the existing firms incur losses in the long run, some of the firms will leave the industry increasing the share of the existing firms in the market.
3. Thus under Monopolistic Competition, **all the existing firms will earn normal profit in the long run.**

5. Explain the Advantages and Disadvantaged of Monopoly?

Meaning of Monopoly:

Monopoly is a market structure in which there is a single seller, there are no close substitutes for the commodity it produces and there are barriers to entry.

Advantages of Monopoly:

1. Monopoly firms have large scale production possibilities and also can enjoy both Internal and External economies.
2. It reduces the cost of production.
3. Output can be sold at low prices. This is beneficial to the consumers.
4. Monopoly firms have vast financial resources which could be used for research and development. This will enable the firms to innovate quickly.
5. There are a number of weak firms in an industry. These firms can combine together in the form of monopoly to meet competition. In such a case, market can be expanded.

Disadvantages:

1. A monopolist always charges a high price, which is higher than the competitive price. Thus a monopolist exploits the consumers.

2. A monopolist is interested in getting maximum profit. He may restrict the output and raise prices. Thus, he creates artificial scarcity for his product.
3. A monopolist often charges different prices for the same product from different consumers. He extracts maximum price according to the ability to pay of different consumers.
4. A monopolist uses large – scale production and huge resources to promote his own selfish interest. He may adopt wrong practices to establish absolute monopoly power.
5. In a country dominated monopolies, wealth is concentrated in the hands of a few. It will lead to inequality of incomes. This is against the principle of the socialistic pattern of society.

6. Differentiate the Perfect Competition from Monopoly.

S.NO	Perfect Competition	Monopoly
1.	Average revenue curve is a horizontal straight line parallel to X axis. Marginal revenue is equal to average revenue and price.	Both average revenue curve and marginal revenue curve are downward falling curves. Marginal revenue is less than average revenue and price.
2.	At the equilibrium, **MC = MR = AR.** That is price charged is equal to marginal cost of production.	At the equilibrium, **MC = MR < AR** that is price charged is above marginal cost.
3.	The firm in the long run comes to equilibrium at the minimum point or the lowest point of the long run average cost curve. The firm tends to be of optimum size operating at the minimum average cost.	Even in the long run equilibrium the firm will be operating at a higher level of average cost. The firm stops short of optimum size.
4.	Equilibrium can be conceived only under increasing cost and not under decreasing or constant cost conditions.	Equilibrium situation is possible at increasing, decreasing or constant cost conditions.
5.	The firm can earn only normal profit in the long run and may earn super profit in the short run.	But monopoly firm earns super normal profit both in short run and long run.
6.	Price will be lower and the output is larger.	Price is higher and the output will be smaller.

Lesson – 4

1. Discuss the Law of Demand.

Introduction:

1. Demand for a commodity refers to the desire backed by ability to pay and willingness to buy it.
2. The law of demand status that there is a negative or inverse relationship between the price and quantity demanded of a commodity over a period of time.

Determination of the Demand:

1. The demand for any commodity mainly depends on the price of that commodity.
2. The other determinants include price of related commodities, the income of consumers, tastes and preference of consumers, and the wealth of consumers.

Hence the demand function can be written as

$$D_x = F\ (p_x, p_y, p, y, T, W)$$

Where D_x represents demand for good X

P_x is price of good X

P_s is price of related goods

Y is income

T refers to tastes and preference of the consumers

W refers to wealth of the consumer.

Law of Demand:

The law of demand states that there is a negative or inverse relationship between the price and quantity demanded of a commodity over a period of time.

Definition:

Alfred Marshall stated that "the greater the amount sold, the smaller must be the price at which it is offered, in order that it may find purchasers,.(Or) In other words, the amount demanded increases with a fall in price and diminishes with rise in price".

Assumption of the Law:

1. No change in the consumer's income.
2. No change in consumer's tastes and preferences.
3. No changes in the prices of other goods.
4. No new substitutes for the goods have been discovered.
5. People do not feel that the present fall in price is a prelude to a further decline in price.

Demand Schedule:

1. Demand schedule is a tabular statement showing how much of a commodity is demanded at different prices.
2. The Table is a hypothetical demand schedule of an individual consumer.
3. It shows a list of prices and corresponding quantities demanded by an individual consumer.
4. This is an individual demand schedule.

Demand Schedule

Price (in Rs)	Quantity Demanded (Units)
5	10
4	20
3	30
2	40
1	50

Demand Curve:

The demand schedule can be converted into a demand curve by measuring price on vertical axis and quantity on horizontal axis as shown in Figure.

Figure:

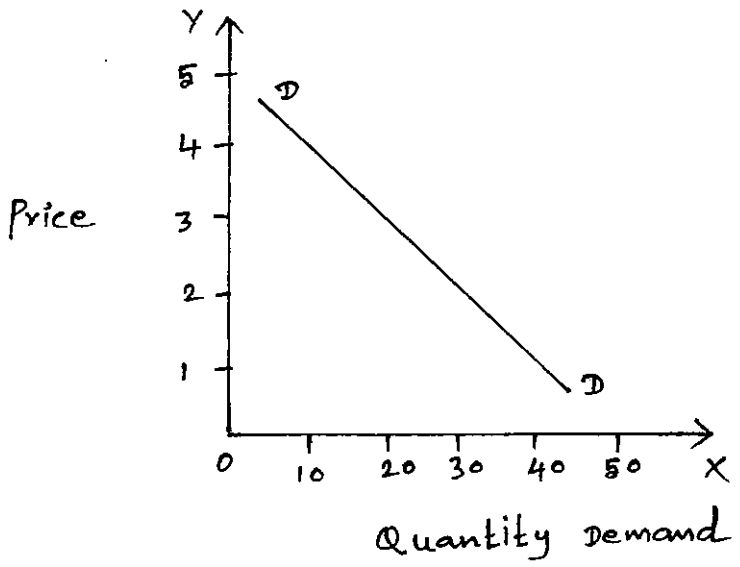


Figure Explanation:

1. DD_1 is the demand curve.
2. The curve slopes downwards from left to right showing that, when price rises, less is demanded and vice versa.
3. Thus the demand curve represents the inverse relationship between the price and quantity demanded, other things remaining constant.

Why does the demand curve slope downwards?

1. The demand curve slopes downwards mainly due to the law of diminishing marginal utility.
2. The law of diminishing marginal utility states that an additional unit of a commodity gives a lesser satisfaction.
3. Therefore, the consumer will buy more only at a lower price.
4. The demand curve slopes downwards because the marginal utility curve also slopes downwards.

Individual Demand and Market Demand Schedules:

Individual Demand Schedules:

Individual demand schedule tells the quantities demanded by an individual consumer at different prices.

Individual demand schedule for oranges:

Prices of oranges (Rs)	Quantity of oranges
5	1
4	2
3	3
2	4
1	5

Schedule Explanation:

1. It is clear from the schedule that when the price of organs in Rs. 5 – the consumer demands just one oranges.
2. When the price falls to Rs.4 he demands 2 oranges.
3. When the price falls further to Rs 3, he demands 3 oranges.
4. Thus, when the price of a commodity falls, the demand for that commodity increases and vice versa.

Market demand schedule:

1. A demand schedule for a market can be constructed by adding up demand schedules of the individual consumers in the market.
2. Suppose that the market for oranges consists of 2 consumers.
3. The market demand is calculated follows.

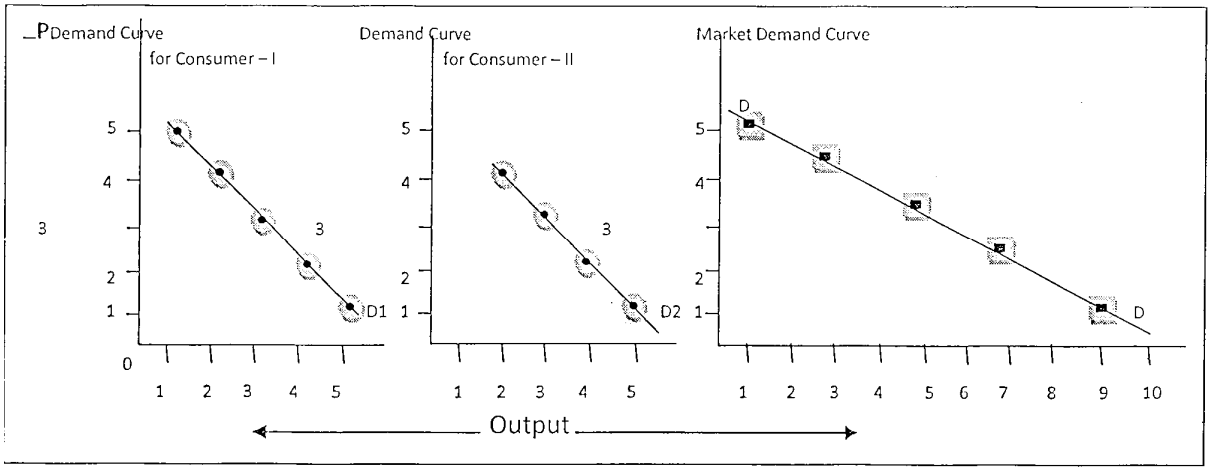
Demand Schedule for two consumers and the Market Demand Schedule

Price of Oranges (in Rs)	Quantity Demanded		
	Consumer I	Consumer II	Market Demand
5	1	-	1
4	2	1	3
3	3	2	5
2	4	3	7
1	5	4	9

Market Demand Curve:

1. The market demand also increases with a fall in price and vice versa.
2. The quantity demanded by consumer I and consumer II are measured on the horizontal axis.
3. The total demand of these two consumers i.e. $\mathbf{D_1 + D_2 = DD_m}$.
4. $\mathbf{DD_m}$ is the market demand curve.
5. Like normal demand curves, it is convex to the origin.
6. This reveals the inverse relationship.

Individual Demand and Market Demand curves



2. Explain the methods of measurement of price elasticity of demand in detail.

Elasticity of Demand:

1. The concept of elasticity of demand measures the rate of change in demand.
2. The concept of elasticity of demand was introduced by Alfred Marshall. According to him "the elasticity of demand in a market is great or small according as the amount demanded increases much or little for a given fall in price, and diminishes much or little for a given rise in price".

Types of Elasticity of Demand:

There are three types of elasticity of demand,

1. Price elasticity of demand
2. Income elasticity of demand
3. Cross – elasticity of demand

Price elasticity of demand:

"The degree of responsiveness of quantity demanded to a change in price is called price elasticity of demand".

Price elasticity of demand = $\frac{\text{percentage changing in quantity demanded}}{\text{percentage change in price}}$

Symbolically,

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

1. Δ - Change
2. P – price
3. Q – quantity

Measurement of price elasticity of demand

Important methods for calculating price elasticity of demand are

1. Percentage method
2. Point method or slope method
3. Total outlay method
4. Arc method

Percentage method

This is measured as the relative change in demand divided by relative change in price (or) percentage change in demand divided by percentage change in price.

Formula is $e_p = \frac{\% \Delta q}{\% \Delta P}$

For example, the price of rice rises by 10% and the demand for rice falls by 15%

Then $e_p = \frac{15}{10} = 1.5$

This means that the demand for rice is elastic.

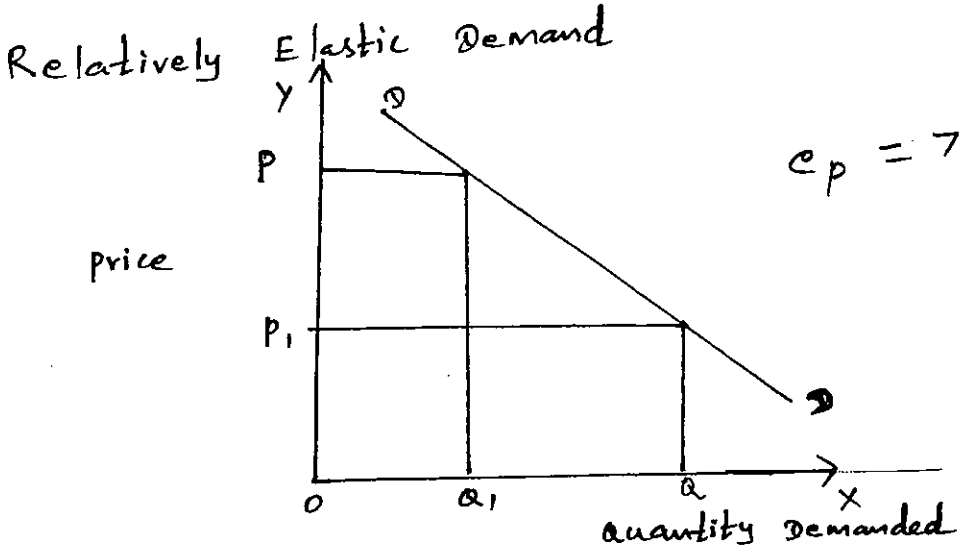
If the demand falls to 5% for a 10% rise in price, then e_p =5/10=0.5. This means that the demand for rice is inelastic.

Thus there are five measures of elasticity.

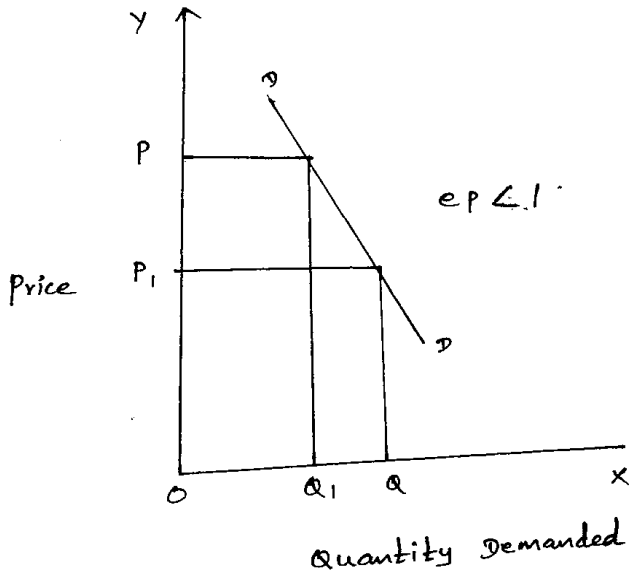
1. Relatively elastic demand, if the value of **elasticity is greater than 1**
2. Relatively inelastic demand, if the value of **elasticity is less than 1**
3. Unitary elastic demand, if the value of **elasticity is equal to 1**
4. Perfectly inelastic demand, if the value of **elasticity is zero.**
5. Perfectly elastic demand, if the value of **elasticity is infinity.**

Graphical illustration

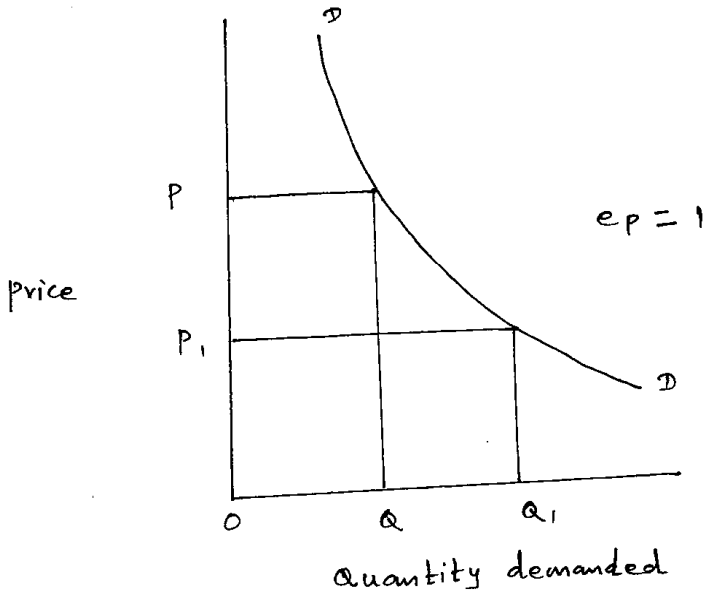
All the five measures are illustrated in the following figures respectively.



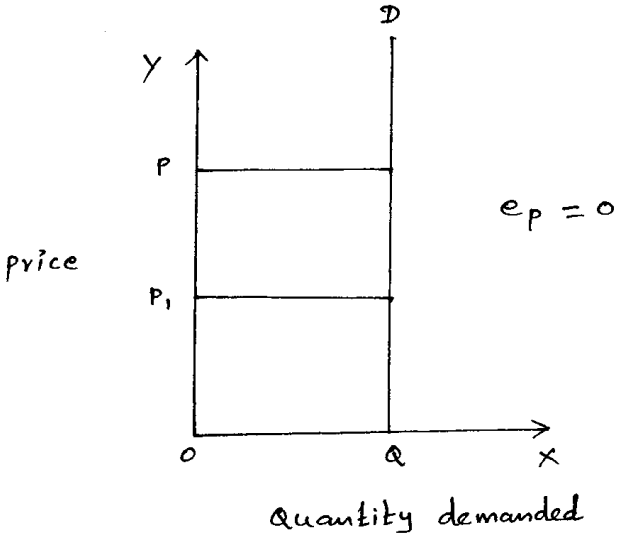
ii. Relatively inelastic Demand :-



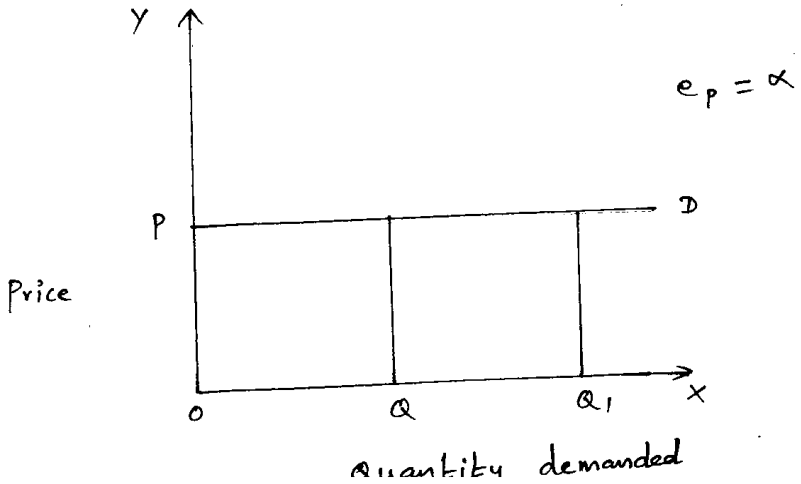
iii. Unitary elastic Demand



Perfectly inelastic demand



Perfectly Elastic Demand

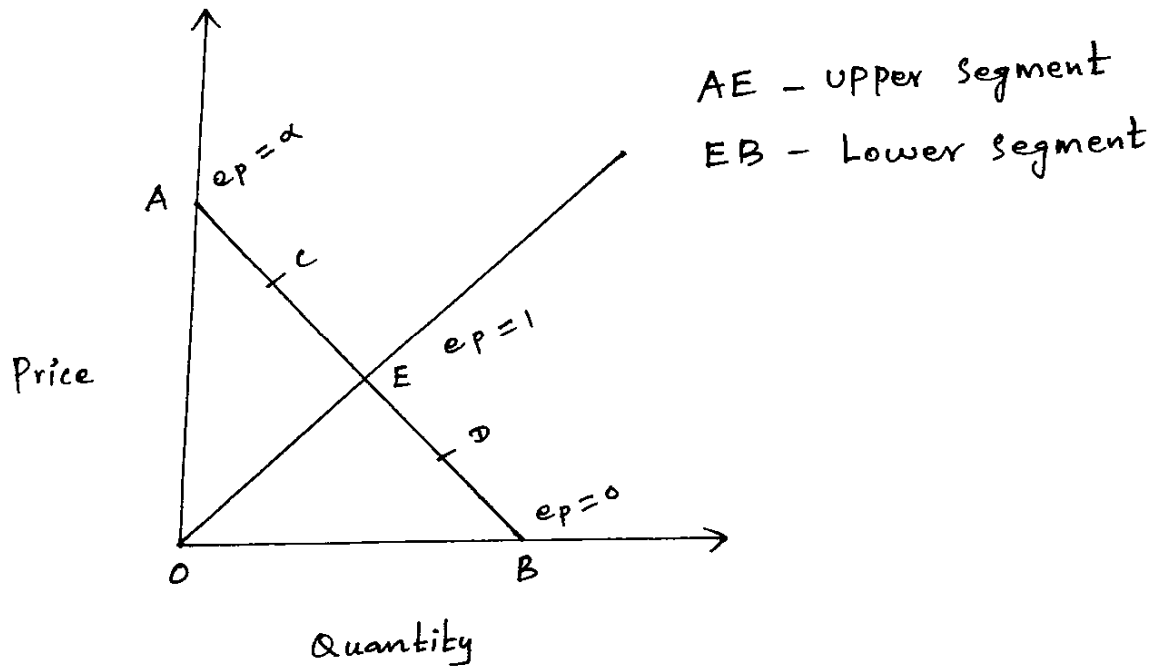


Point method

we can calculate the price elasticity of demand at a point on the linear demand curve. Formula to find out e_p through point method is

$$e_p = \frac{\text{Lower segment of demand curve}}{\text{Upper segment of demand curve}}$$

Figure point method



For example,

In the figure the length of demand curve AB is 4 cm

Exactly at middle point of AB demand curve,

1. e_p at point E $e_p \frac{EB}{EA} = \frac{2}{2} = 1$

   $\therefore e_p = 1$

2. e_p at point D = (middle point of EB portion of demand curve)

   $\frac{DB}{DA} = \frac{1}{3} = 0.3$ $e_p < 1$

3. e_p at point C (middle point of EA portion of demand curve)

$\therefore e_p = \frac{CB}{CA} = \frac{3}{1} = 3$ $e_p > 1$

4. e_P at point B $= \frac{0}{AB} = \frac{0}{4} = 0$

   (0 by anything is zero, a mathematical principle) $\therefore e_p = 0$

5. e_P at point A $= \frac{AB}{0} = \frac{4}{0} = \infty$

   (Anything by Zero becomes infinite a mathematical principle) $\therefore e_p = \infty$

Total outlay method

we can measure elasticity through a change in expenditure on commodities due to a change in price .

1. **Demand is elastic,** if total outlay or expenditure increases for a fall in price ($e_p > 1$).
2. **Demand is inelastic,** if total outlay or expenditure falls for a fall in price ($e_p < 1$)
3. **Elasticity of demand is unitary**, if total expenditure does not change for a fall in price ($e_p = 1$)

Changes in price	**Types of elasticity of demand.**		
	$e_p = 1$	**$e_p < 1$**	**($e_p > 1$).**
Fall in price.	**Total outlay remains constant**	**Total outlay falls**	**Total outlay rises.**
Rise in price	**Total outlay remains constant**	**Total outlay rises**	**Total outlay falls**

Arc method:

Segment of a demand curve between two points is called an Arc method.

Formula

$$E_p = \frac{Q_1 - Q_2}{Q_1 + Q_2} \div \frac{p_1 - p_2}{p_1 + p_2}$$

$$= \frac{\Delta Q}{Q_1 + Q_2} \div \frac{\Delta P}{p_1 + p_2}$$

$$= \frac{\Delta Q}{Q_1 + Q_2} \times \frac{p_1 + p_2}{\Delta p}$$

$$= \frac{-\Delta Q}{\Delta P} \times \frac{p_1 + p_2}{Q_1 + Q_2}$$

Where

ΔQ = Change in quantity demanded

ΔP = Change in price of the commodity

P_1 = Original price

P_2 = New Price

Q_1 = Original quantity

Q_2 = New quantity

Arc elasticity formula should be used when the change in price is somewhat large.

Figure Arc Elasticity

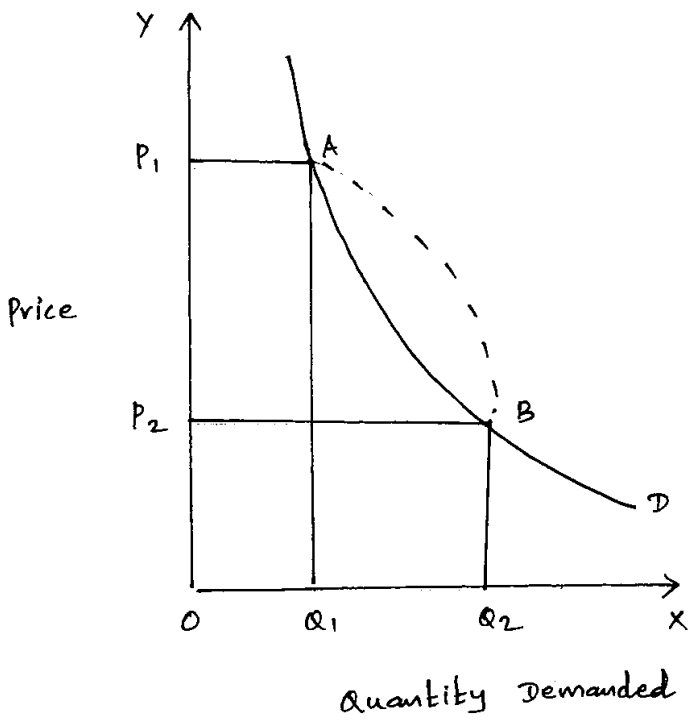


Figure Explanation

1. We can measure are elasticity between points a and b on the demand curve.

2. We will have to take the average prices of op_1 and op_2 and average of the two quantities demanded (original and the new).

Income elasticity of demand

Income elasticity of demand is the degree of responsiveness of demand to the change in income.

$$e_y = \frac{\text{Percentage chagnge in quantity demanded}}{\text{Percentage change in income}}$$

Symbolically $e_y = \frac{\Delta q}{q} \div \frac{\Delta y}{y}$

$$= \frac{\Delta q}{q} \times \frac{y}{\Delta y}$$

Cross –Elasticity of demand

1. The responsiveness of demand to changes in prices of related goods is called cross – elasticity of demand (related goods may be substitutes or complementary goods. In other words, it is the responsiveness of demand for commodity x to the change in the price of commodity y.

$$e_c = \frac{\text{Percentage chagnge in quantity demanded of commodity X}}{\text{Percentage change in price of commodity y}}$$

$$e_c = \frac{\Delta q_x}{\Delta p_y} \times \frac{p_y}{q_x}$$

BEST OF LUCK STUDENTS

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