

Q Explain the Nature, Scope and Importance of Economics?

Ans

Introduction:- Economics is a social science which studies individuals and organizations engaged in production, distribution and consumption of goods and services. Economics is the systematic study of the never ending efforts of man to satisfy his endless wants with limited resources.

The word 'Economics' and 'Economy' both come from two Greek "OIKOS" and "NEMO" which means household management. The management of the household being one of the most familiar fields for the practice of the Economy. The nature of Economics took a definite shape with the writings of Adam Smith's wealth definition. Adam Smith in his famous book "An Enquiry into the nature and causes of wealth of Nations" in the year 1776, Economics saw the light of the day. Then the Adam Smith was called "the Father of Economics".

Definitions of Economics:-

1. Wealth Definition:- According to Adam Smith "Economics is the study of science of wealth".

2. Welfare Definition:- According to Marshall "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. Scarcity definition :- According to Robbins "Economics is the science which studies human behaviour as a relationship between ends and scarce means which have alternative uses."

4. Modern definition :- According to Jacob Viner "Economics is what Economists do".

Scope of Economics :-

1. Production :- Production is an important subdivision of Economics. In Economics Consumption generation is known as production. Production is the process that converts inputs into output. These process including several stages like manufacturing, package, ~~the~~ transportation and storage etc.

2. Consumption :- Consumption is an important subdivision of Economics. Consumption has the capacity to end the utility of goods and services. Some Economists consider the consumption both as the beginning and ending of Economics. Under consumption, nature of human needs, utility and its rules, demand and its rules etc studied.

3. Exchange :- It is required from the purpose of Consuming the production of goods and for the fulfillment of requirements. Earlier it was done by the manual exchange of goods, but the invention currency has ended the exchange of goods. Now-a-days the work of exchange is done through currency. It is also one of the important subdivision of Economics.

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Distribution? - It is the way total income is distributed among the factors of production. In this part, what is national income? How it is measured? As well as the principles related to tax, labour, interest and profits etc are studied.

5. Public Finance :- Public Economics includes public revenue, public expenditure, public debt and finance management etc. Studies of this subdivision. Reputation of a government of any country depends on public Finance.

6. Micro Economics :- Micro Economics is that branch of Economics which studies the behaviour of that particular unit. Micro Economics is also known as partial analysis.

7. Macro Economics :- Macro Economics studies Aggregates like National income, Total Employment, Total Savings and Total Investment etc. This is also an important concept in Economics.

8. International Economics :- International Economics is the study of Economic interactions between countries. It seeks to explain the patterns and consequences of transactions including trade and Investment etc.

Importance of Economics :-

1. Economics explains the distribution of wealth, Social security, Poverty, Unemployment, inflation etc its causes and remedial measures.
2. Economics study is more useful to the Central and State governments for achievement of maximum social benefit.

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3. Economics analysis is useful to the develops economic thinking and problem solving skills.

4. Economics can be used to the field of International trade in the determination of Exchange rates.

5. Economics is also useful to developing countries, how to use the scarce resources to maximise their growth.

6. Economics provide information and forecasting to inform decisions within Companies and Governments.

Limitations of Economics

1. Economics deals only human activity. It is not concerned with the activity of words and animals.

2. Economics studies assumption based principles.

3. Economics studies only Economic activities.

4. Economics deals only on the activities of Common,

social and real man.

Log Explain The Scope and Importance of Micro Economics.
Explains the differences between

Micro Economics and Macro Economics
 The Subject matter of Economics is divided into two

parts i.e. Micro Economics and Macro Economics. Ragnar Frisch has first time introduced the distinction between Micro Economics and Macro Economics in the year 1933. Neo-classical Economist Marshall has developed Micro Economics and J.M. Keynes has developed Macro Economics.)

Micro Economics:-

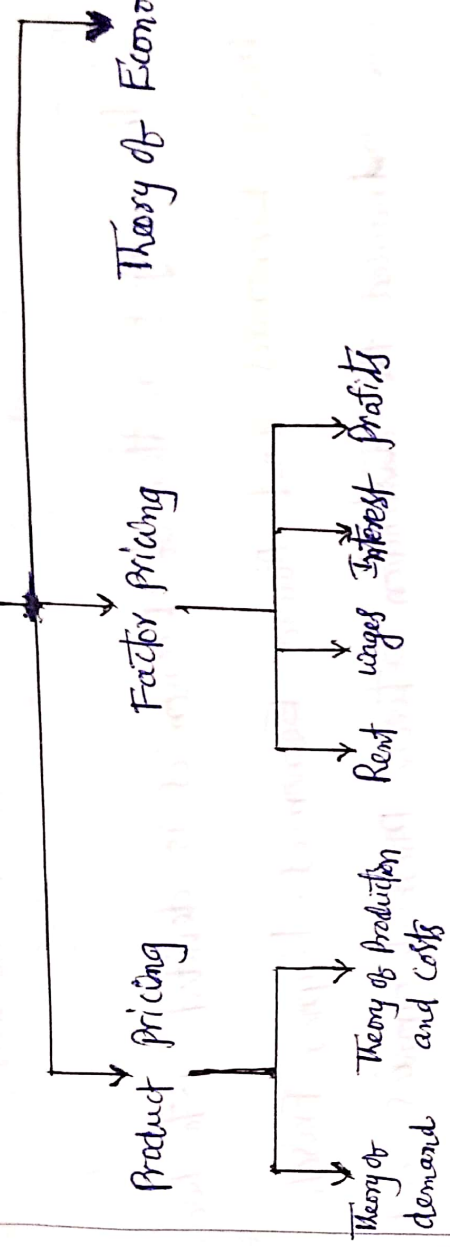
Marshall has gave much importance to Micro Economics. The Term "Micro Economics" is derived from the Greek word "MIKROS" which means small. Thus, Micro Economy is the Theory of Small. Micro Economic Theory studies the behaviour of the individual units, Pricing of goods and services etc. Micro Economic Analysis is also termed as "Price Theory".

Definition:- According to K.E. Boulding "Micro Economics is the study of particular firms, particular households, individual prices, wages, incomes, individual industries and particular commodities".) Next Macro Economy

Scope of Micro Economics:-

The scope of Micro Economics explains the below chart.

Scope of Micro Economics



1. Micro Economics is based on the assumption of Full Employment and Marginal Analysis.
2. Micro Economics Covered three major fields i.e. The theory of Product pricing, The theory of Factor pricing and The theory of Economic welfare etc.
3. Micro Economics studies how the prices of various goods services are determined.

4. Micro Economics is also called "Price Theory". Because it Explains pricing in Product market as well as Factor market.
5. Micro Economics Explain whether the resources are efficiently allocated to individual Consumers and Producers in an Economy.
6. Micro Economics also related to welfare Economies.

Importance of Micro Economics :-

1. Micro Economics Explains to us how a free market Economy with its millions of Consumers and Producers works to decide about the allocation of resources.
2. Micro Economic analysis is useful to the Govt. to frame suitable policies to promote Economic Efficiency.

Micro Economics can be used to examine the condition of Economic welfare and it suggests ways and means to bring about Maximum Social welfare.

4. Micro Economic Analysis is applicable to the field of International trade in the determination of Exchange rates.

5. Micro Economics is used to explain the factors which determine the distribution of the incidence of a Commodity tax between producers and sellers on one hand and the Consumers on the other.

6. Micro Economics solves the three Central Problems of the Economics i.e. What goods are produced?, how goods are produced and distributed? etc.

37) Explain the Scope and Importance of Macro Economics.
Introduction:-

The subject matter of Economics is divided into two parts i.e. Micro Economics and Macro Economics. Ragnar Frisch has first time introduced the distinction between Micro Economics and Macro Economics in the year 1933. Marshall has developed Micro Economics and J. M. Keynes has developed Macro Economics.

Macro Economics :-

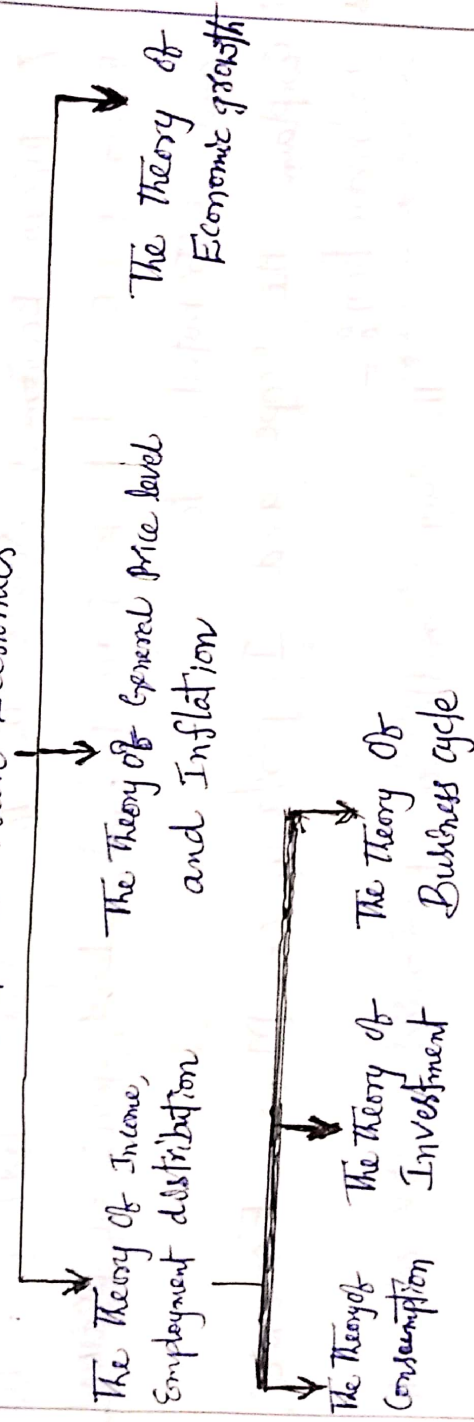
Macro Economics was developed by J.M. Keynes. The term "Macro Economics" is derived from the Greek word "MAKROS" which means Large or whole. Macro Economics studies

Aggregates like National Income, Total Consumption, Total Savings and Total Employment etc. Macro Economics is also known as Income and Employment Theory. Macro Economics relates to the behaviour of whole Economic System.

Definition:-

According to K.E. Boulding "Macro Economics Studies National Income, not individual Income, General Price level instead of Individual prices and National output instead of Individual output".

Scope of Macro Economics: - The Scope of Macro Economics Can be presented in the below chart.



Explanation:- Scope of Macro Economics can be explained below.

1. Macro Economics has become popular only after the publication of J. M. Keynes "The General theory of Employment, Interest and Money" in the year 1936.
2. Macro Economics studies the causes of Inflation and suggests measures to control it.

Macro Economics studies problems faced by modern Economies like poverty, Unemployment and Income inequalities etc.

4. Macro Economics deals with the theory of distribution like The Theory of Consumption, The Theory of Investment etc.

5. Macro Economics studies the causes of Business cycles, The Monetary and fiscal policies etc.

6. Macro Economics studies the general price level and its fluctuations over a period of time.

Importance of Macro Economics :-

1. Macro Economics Study is more useful to the Governments for achievement of maximum social benefit.

2. The study of Macro Economics helps to understand the problems of poverty, unemployment, inflation etc., and suggests how to solve them.

3. The study of Macro Economics helps to evaluate the overall functioning of an Economy in order to distribute National Income among different sections of the society.

4. Macro Economics provides solutions to overcome the problems of Business cycles and helps to understand their occurrence

5. Macro Economics Studies Economic growth and stagnation how developing countries can use their resources to maximize their growth.

6. Macro Economics study facilitates International comparisons by examining information on National Income Consumption and saving for different countries.

7. Critically Examine the wealth definition of Adam Smith.

Introduction: —

"The classical Economist Adam Smith defined Economics as the science of Wealth. Adam Smith's famous book "An Enquiry into the Nature and Causes of Wealth of Nations" in the year 1776, Economics saw the light of the day. Adam Smith was the father of Economics. Adam Smith and other classical Economists like J.B. Say, J.S. Mill have also regarded Economics as the study of Science of Wealth.

Important Features of wealth definition: —

1. The main objective of Human activity is the Acquisition of wealth.
2. Wealth refers to produced goods.
3. Man is treated as selfish to accumulate more and more wealth.
4. Absolute freedom to the people in an Economic matters helps economic development.

Adam Smith strongly believed that Invisible hand helps Economic development.

Criticisms :-

1. Many Economists criticized wealth definition. Carlyle, Ruskin and others criticized that Economics must discuss ordinary man's activities and not those of Economic man.
2. Marshall criticized that wealth is only a means to an end, but not an end itself.
3. Adam Smith's definition covers only materialistic human activities and not the immaterialistic activities like the services of doctors and lawyers.
4. wealth definition concentrated mainly on the Production Side and neglected distribution Side.
5. critically Examine Marshall welfare definition of Economics.

Ans. Introduction :-

Alfred Marshall, A famous Neo-Classical Economist his famous book "The principles of Economics" explained about the welfare definition. According to Marshall "Economics is on one side a study of wealth and on the other and more important side a part of the study of man".

Important Features of Welfare definition :-

1. Marshall assumed that Economics must be a science even though it deals with the ever changing forces of human nature.

2. Economists studies only Economic aspects of human welfare and it has no concern with the political, social and religious aspects of human welfare.

3. Marshall definition considered those human activities which are increased welfare.

4. Welfare definition has given more importance to man and his welfare.

5. Marshall gave first priority to human being and second priority to wealth.

Criticism :- Welfare definition was criticized by Robbins.

1. Robbins has objected ~~that~~ the word welfare. Economists has nothing to do with welfare. ex:- Alcohol is injurious to health.

2. Welfare is a psychological feeling and it is not fixed and definite.

3. Robbins has taken serious objection for not considering

Scarcity resources.

⑥ Critically Examine the Robbins Scarcity definition of Economics.

Ans Introduction :-

Robbins, in the year 1932 gave a new definition of Economics in his famous book "An Essay on the Nature and Significance of Economic Science". According to Robbins "Economics is the science which studies human behaviour as a relationship between ends and scarce means which have alternative uses".

Important Features of Scarcity definition :-

1. Unlimited wants :- human wants are unlimited. The fulfilment of one want gives rise to number of new wants.

limited means :- The means to satisfy these wants are scarce. For Example money, Time and the productive resources are limited in relation to the demand for the them.

3. Means have alternative uses :- Scarce means are capable of alternative uses. For Example Land can be used for growing Paddy or Cotton etc.

4. Ends differ in Importance :- These ends vary in importance. Some ends are more important, while some ends are less important.

5. choice problem :- human wants are unlimited, while means are limited and have alternative uses, while differ in importance. We have make a choice between more important and less important wants.

Criticism:-

1. Robbins is not first to develop the concept of scarcity. Many earlier writers like Menger, Carlyle etc. emphasized the role played by scarcity in Economics.

2. Robbins definition is not applicable to a dynamic society, where changes take place.

3. Dr. J. M. Robinson took serious objection to scarcity of resources. How best utilize them is more important than the idle resources in 1930.

4. Robbins introduced the welfare concept indirectly in his definition.

Q Discuss about Scarcity and choice as fundamental problem of Economies.

Ans. The problem of Scarcity :- We live in a world of scarcity. People want and need variety of goods and services. This applies equally to the poor and the rich people. It implies that human wants are limited but the means to fulfil them are limited. At any time only a limited amount of goods and services can be produced. This is because the existing supplies of resources are extremely inadequate.

The problem of choice :- We live in a world of scarcity, a society can produce only a small portion of goods and services that its people want. Therefore, scarcity of resources gives rise to the fundamental Economic problem of choice. There are number of problems that can arise from choices that are made by people, whether they are individuals, firms or government.

Fundamental problems of an Economy :-

There are certain fundamental problems in any type of Economy with which Economists are concerned. The following are the basic Economic problems.

1. What to produce and in what quantities? :- This problem involves selection of goods and services to be produced and the quantity to be produced of each selected commodity. Every Economy has limited resources and thus cannot produce all the goods. Produce more of one good usually means less of other goods.

For example production of more grapes is possible only by reducing production of other goods. An economy has to decide which of the consumer goods and which of the capital goods are to be produced. After deciding the goods to be produced economy has to decide the quantity of each commodity that is selected.

2. **How to produce?** :- This problem refers to selection of technique to be used for production of goods and services. A commodity can be produced by using different techniques of production. Generally techniques are classified into two types i.e. Labour Intensive Techniques and Capital Intensive Techniques. In Labour Intensive Techniques, more labour and less capital is used. In Capital Intensive Techniques, more capital and less labour is used. India - LIT, USA - CIT is used.

3. **For whom to produce?** :- This problem refers to selection of the category of people who will ultimately consume the goods, i.e. whether to produce goods for more poor and less rich or more rich and less poor. Goods are produced for those people who have the paying capacity. The capacity of the people to pay for goods depends upon their level of Income.

4. **How efficient the productive resources are in use?** :- Efficient use of resources refers to the ways using the available resources in an efficient way to satisfy the wants of the people.

It implies that an economy is producing efficiently that increase in the production of one good will reduce the production of another good.

5. whether available resources are fully utilized? : - Natural resources are fully utilized in developed economies because of the availability of modern technology as well as skill labour. Developed economy has high level of efficiency and productivity. But Developing Countries and less developed Countries are faced by scarcity of resources.

6. Is the Economy growing or static over a period of time? :- Economic growth, the process by which a nation's wealth increases over a period of time. Growth can be best be described as a process of transformation. Real economic growth of less than 2% annually is considered stagnation. Static economics studies only a particular point of equilibrium.

Q. What is meant by Equilibrium? explain partial and General Equilibrium analysis in Economics.

Introduction: - The concept of equilibrium is employed in almost every theory of Economics in the fields of price, Income and growth. Stigler defines "Equilibrium is a position from which there is no net tendency to move. In Economics, Equilibrium implies a position of rest characterized by absence of change. In other words Equilibrium indicates a state of internal,

Equilibrium can be classified into two types.

2. Partial Equilibrium

General Equilibrium

1. Partial Equilibrium :- The famous Neo-classical Economist Marshall has used partial equilibrium analysis. An equilibrium that pertains to a single variable is partial equilibrium. Generally in Economic analysis number of variables are involved. When we consider only two variables and establish the cause and effect relationship between the two, the analysis is called partial equilibrium analysis. This analysis assumes that the values of other variables remain the same. Let us take the Law of demand which postulates a negative relationship between price of a good and quantity demanded of it.

Partial Equilibrium analysis depends on the assumption that other things remaining the same. Generally a change in one sector will have a lot of influence on the other sectors of the economy. In this context, the partial equilibrium analysis is of a very limited use. It is related to Micro aspects, while general equilibrium analysis is related to macro aspects of the economy.

2. General Equilibrium :- The General equilibrium analysis was introduced by French Economist Walras. J.R. Hicks and Samuelson have extended this method. General equilibrium

method considers all economic variables, relationship between variables, the interdependence between variables and influence of these on the economy is examined.

According to Stigler "The General equilibrium method is a study the inter-relationship between different sectors of the economy."

Assumptions :-

1. ~~perfect~~ Perfect Competition both in factor market and goods and services market.
2. There is no change in income and tastes of individuals in the economy.
3. All productive services are homogeneous.
4. Full employment of labour and other resources.
5. All firms operative in similar cost conditions.

Despite the above assumptions the General equilibrium analysis helps to understand the functioning of the whole economy.

UNIT-II
THEORY OF CONSUMPTION

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1. What is meant by demand and Demand function? Explain the determinants of demand.

Ans. Introduction :- Generally Demand is treated as a Synonym for 'Desire'. The demand for a good or service plays a vital role in the determination of prices of goods and services. The concept of demand means that the consumer is willing and able to purchase the commodity which he desires. It is understood that the word demand has the following features:

- i. Desire for the commodity.
- ii. Willingness to pay the price of the commodity.
- iii. Ability to purchase the commodity.

Demand Function :- Demand function means the relationship between quantity demanded of a commodity and the factors determine the demand is called demand function. It can be expressed the below equation.

$$D_n = f [P_n, P_{sc}, Y, I]$$

D_n = Demand for good n

P_n = Price of good n

P_{sc} = Prices of Substitutes and Complementaries

Y = Income of the consumer

I = Taste and preferences of the consumer

f = functional relationship

Determinants of Demand :-

1. Price of the commodity :- The demand for a commodity is inversely related to its price. If the price of a commodity decreases its demand will increase and the price of a commodity increases its demand will decrease. More will be demanded at a lower price.
2. Prices of Substitutes and Complementaries :- Demand is also influenced by changes in the prices of related goods either substitutes or complementaries. For example Coffee and Tea are substitute goods. In case of substitute goods there exists a positive relationship between price and quantity demanded. Car and petrol are complementary goods. In case of complementaries there exists a negative relationship between the price and the quantity demanded.
3. Income of The Consumer :- Income of the consumer is another important determinant. An increase in the income of the consumer leads to an increase in the purchasing power or quantity demanded. If the consumer income decreases demand also decreases.
4. Tastes and preferences :- Demand for a commodity may change due to change in tastes, preferences and fashions etc. Tastes vary from person to person. Tastes do not remain the same forever. Advertisements also influence the demand for a particular commodity. An increase in the use of cell phones reduces the demand for land line phones.

Population:- Size of population of a country is another important determinant of demand. A change in the size of population will affect the demand for certain goods. For instance, larger the population more will be demand for certain goods like food, clothes, transport etc.

6. Technological changes:- Due to technical progress, new discoveries enter the market. As a result old goods are substituted by new goods. For example the demand for 'LED TVs' reduced the demand for Normal TVs.

7. Change in weather:- Demand for a commodity may change due to a change in climatic conditions. For Example during summer period cool drinks, cotton clothes and Air-Conditioners demand is increases. During winter period demand for woollen clothes increases.

8. State of Business:- During the period of prosperity the demand for commodities will expand and during the depression period demand will contract.

2. Explain the Types of demand?

Ans Introduction:- The concept of demand means that the consumer is willing and able to purchase the commodity which he desires. It is understood that the word demand has following features:

i. Desire for the commodity

ii. Willingness to pay the price of the commodity

- iii. Ability to purchase the commodity
- iv. The demand is always at a price.
- v. The demand is always per unit of time.

Types of Demand :- The concept of demand can be classified into three types :

1. Price Demand
2. Income Demand
3. Cross Demand

1. Price Demand :- Price demand explains the relationship between price and quantity demanded of a commodity. Price demand states that there is an inverse relationship between price and quantity demanded of a commodity. Price demand can be expressed the following equation.

$$D_n = f [P_n]$$

D_n = Demand for Commodity n

P_n = Price of Commodity n

f = functional relationship

2. Income Demand :- Income demand explains the relationship between Consumer's Income and various quantities of goods and services demanded at various levels of income assuming other factors remain the same. An increase in the income of the consumer causes an increase in the quantity demanded of a commodity. The functional relationship is shown

In the following formula:

$$D_n = f(Y)$$

D_n - Demand for good n

Y - Income of the consumer

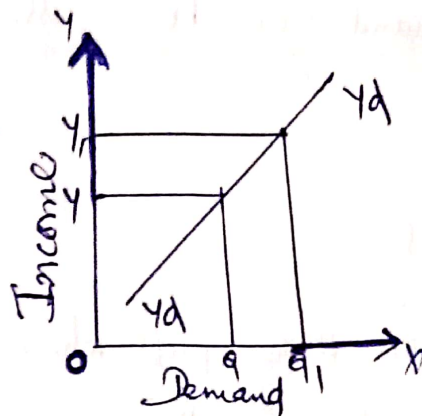
f - functional relationship

According to income demand goods are classified into two types:

- Superior goods/Normal goods
- Inferior goods

a. Superior goods: - In case of superior or normal goods quantity demanded will increase when there is an increase in the income of consumer. In this situation there is a positive relationship between income of the consumer and quantity demanded. It is shown in the below diagram.

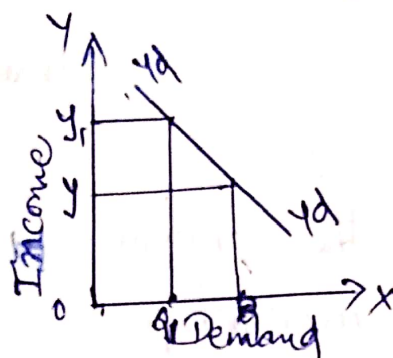
Superior goods



b. Inferior goods: - In case of inferior goods quantity demanded will decrease when there is an increase in the income of the consumer. In this situation there is a negative relationship between income of the consumer and quantity demanded.

It is shown in the below diagram.

Inferior goods



3. Cross Demand :- Cross demand means the relationship between quantity demanded of a commodity and price of related goods is known as cross demand. It can be expressed the below equation.

$$D_x = f(P_y)$$

D_x = Demand for good ~~xx~~

P_y = Price of good y

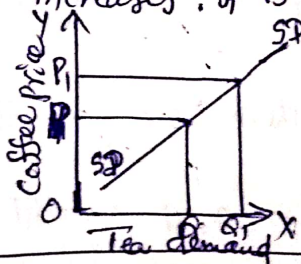
f = functional relationship

Cross demand can be classified into

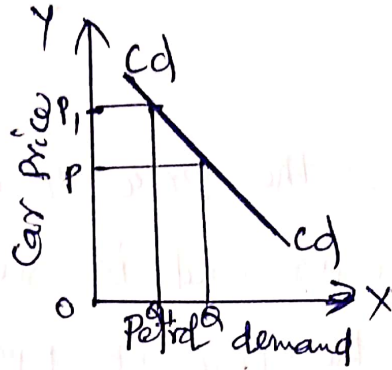
two types :

- Substitute goods
- Complementary goods

a. Substitute goods :- Substitutes are those goods which satisfy the same want. For example Tea and Coffee, Thumsup and Sprite etc. In case of substitute goods the price is increases and the demand of another good is increases. It is shown in the below diagram.



Complementary goods : — Complementaries are those goods which satisfy the same want jointly. For example Car and Petrol, Lock and Key etc are Complementaries. In case of Complementary goods the price is increases, the demand of another good is decreases. It is shown in the below diagram.



Q. Why the demand curve has a negative slope or downward from left to right?

Ans. Introduction : — The concept of demand means that the consumer is willing and able to purchase the commodity which he desires.

It is understood that the demand has the following features.

- i. desire for the commodity.
- ii. willingness to pay the price of the commodity.
- iii. Ability to purchase the commodity.
- iv. The demand is always at a price.
- v. The demand is always for unit of time.

Reasons for the downward or Negative slope of demand curve : —

1. Old and New buyers : — If the price of the good falls, the real income of the old buyers will increase. Consequently, the demand for the good will increase. In the same way new buyers,

will be able to buy it after a fall in its price. As a result, the demand curve downwards from left to right.

2. Income Effect: - The real income of a consumer rises due to a fall in the price of a commodity. He spends the increased income on the same commodity and thus demand increases.

3. Substitution Effect: - When the price of a commodity falls, it becomes relatively cheaper and is substituted for other goods. For instance, if the price of Pepsi rises relatively to Thumsup, the consumer buys more of the Thumsup, which has become relatively cheaper.

4. Law of diminishing marginal utility: - According to this law, if a consumer consumes more of a particular good, the utility that he gets from additional units will diminish. The consumer will prefer to pay less price for additional units of a good as the utility of additional units diminishes. As a result, the demand curve has a negative slope.

5. Multiple use of a commodity: - There are some commodities which have multiple uses like milk, coal and electricity. If the prices of these commodities ^{will} fall, there will be a greater demand for these goods rather than those which are restricted to a particular use.

Explain the Exceptions to the Law of Demand?

Introduction: - Prof. Marshall defines the law of demand as, "The amount demand increases with a fall in price and diminishes with a rise in price, when other things remain the same."

Exceptions to the Law of demand: - The Law of demand is a general statement stating that price and quantity demanded of a commodity are inversely related. But in certain situations more will be demanded at a higher price and less will be demanded at a lower price.

The following important exceptions to the law of demand.

1. Giffen's paradox: - Sir Robert Giffen [1837-1910] observed that poor people will demand more of inferior [Ragee, Jowar etc] goods, if their prices rise. He observed that when the price of bread increased, workers in England purchased more of bread, by reducing the consumption of meat whose price is constant. Giffen noticed that people spent a higher portion of their income on bread substituting bread for meat. Goods of this type are known as Giffen goods. For example Ragee, Jowar, Bajra, Broken etc.

2. Veblen Effect [Prestigious Goods]: - Veblen [1857-1929] is most famous for his book "The theory of Leisure class". Veblen pointed that there are some goods like Diamonds, Gold, prestigious goods etc. which are determined by very rich people for their social prestige.

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If the prices of these goods fall poor people also can
rich people stop buying these goods after a fall in their
as these goods do not have any special status.

3. Speculative Effect: - If the price of a commodity increases,
then the consumer will buy more of it. If it is expected to increase
still further. For instance it takes place in the market for stocks
and shares.

When the prices of equity shares are falling, no
one wants to purchase more shares and rather try to dispose
off the shares which they are holding.

4. Illusion: - Sometimes, consumers develop a false idea
that a high priced good will have a better quality instead of
a low priced good. If the price of such goods falls, they feel
that its quality also deteriorates and they do not buy.

5. Define Elasticity of Demand? Explain the Types of Elasticity
of Demand?

Ans. Introduction: - The concept of Elasticity of demand explains
how much quantity demanded changes for a given change in
its price. Elasticity of demand means that the percentage change
in quantity demanded in response to the percentage change
in ^{price} of the variables [Price of the commodity, Income of the consumer,
prices of related goods]

the concept of Elasticity of demand can be classified into three Types.

1. Price Elasticity of Demand

2. Income Elasticity of Demand

3. Cross Elasticity of Demand

1. Price Elasticity of Demand:-

Alfred Marshall was developed

the concept of Price Elasticity of demand. Price elasticity of demand is the ratio of percentage change in quantity demanded of a good and the percentage change in its price. Marshall has suggested the following formula to measure price elasticity of demand.

$$\text{Price Elasticity of demand} = \frac{\text{Percentage change in quantity demanded}}{\text{Percentage change in Price}}$$

$$E_p = \frac{\Delta Q}{\Delta P} \times \frac{P}{Q} = \frac{\frac{\text{change in quantity demanded}}{\text{original quantity demanded}} \times 100}{\frac{\text{change in Price}}{\text{original Price}} \times 100}$$

$$= \frac{\text{change in quantity demanded}}{\text{original quantity demanded}} \times \frac{\text{original Price}}{\text{change in Price}}$$

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

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

$$\therefore E_p = \frac{\Delta Q}{\Delta P} \times \frac{P}{Q}$$

2. Income Elasticity of Demand :- Income elasticity demand explains the relationship between Income of consumer and the quantity demanded of a commodity. Income elasticity of demand means that the percentage change in income of the consumer and the percentage change in the quantity demanded of a commodity. It can be measured the following formula

$$\text{Income Elasticity of demand} = \frac{\text{Percentage change in quantity demanded}}{\text{Percentage change in Consumer's Income}}$$

$$E_y = \frac{\Delta Q}{\Delta Y} \times \frac{Y}{Q}$$

Income Elasticity of demand will be positive in case of superior goods and negative in case of inferior goods.

3. Cross Elasticity of Demand :- Cross Elasticity of demand refers to a change in the quantity demanded of one good in response to a change in the price of related goods, other things remaining constant. There are certain goods whose demand depends not only on their price, but also on the prices of related goods. It can be expressed the following formula.

$$\text{Cross Elasticity of demand} = \frac{\text{Percentage change in the quantity demanded of good } x}{\text{Percentage change in the price of good } y}$$

$$E_C = \frac{\Delta Q_x}{\Delta P_y} \times \frac{P_y}{Q_x}$$

What is price Elasticity of Demand? Explain the Types of price Elasticity of Demand.

Introduction :- Alfred Marshall developed the concept of price Elasticity of Demand. Price elasticity of demand means the ratio of percentage change in quantity demanded of a good and the ratio of percentage change in its price.

Price Elasticity of demand measures, other things remaining constant, change in the quantity demanded of a good in response to a change in its price. The price elasticity of demand can be measured the following formula.

$$E_p = \frac{\text{Percentage change in quantity demanded}}{\text{Percentage change in price}}$$

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

E_p = Price elasticity of demand

ΔQ = change in quantity demanded

ΔP = change in price

P = Price

Q = quantity

Types of Price Elasticity of demand :- Five Types

1. Perfectly Elastic demand [$E_d = \infty$]

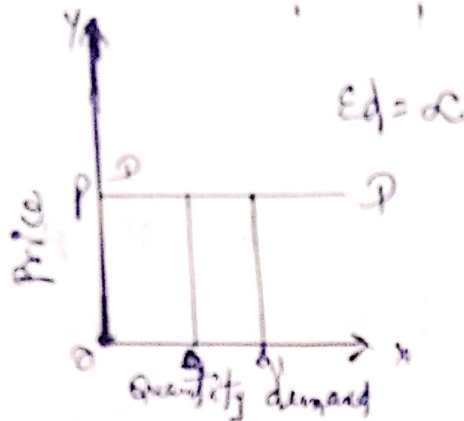
2. Perfectly inelastic demand [$E_d = 0$]

3. Unitary elastic demand [$E_d = 1$]

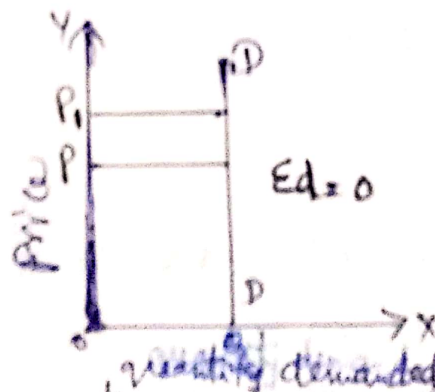
4. Relatively Elastic demand [$E_d > 1$]

5. Relatively inelastic demand [$E_d < 1$]

1. Perfectly Elastic demand:- Perfectly elastic demand is known as infinite elastic demand. A small change in price causes an infinite change in quantity demanded is known as perfectly elastic demand. It means quantity demanded of the commodity is perfectly flexible in case of perfectly elastic demand. This is shown in the below diagram.

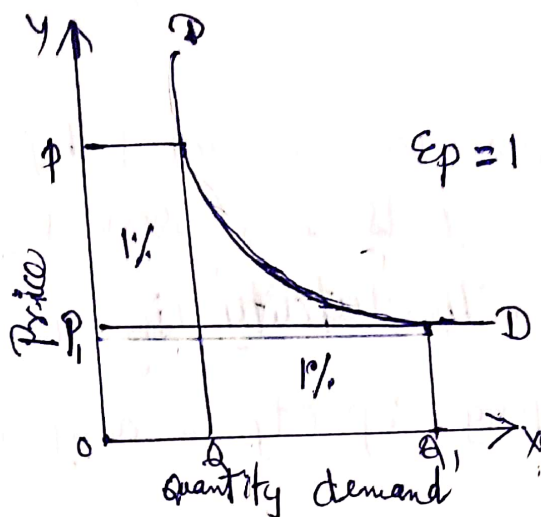


2. Perfectly Inelastic demand:- Perfectly inelastic demand is also known as Zero elastic demand. When a change in price causes no change quantity demanded is known as perfectly inelastic demand. The demand is non-responsive to change in price. For example Salt. This is shown in the below diagram.

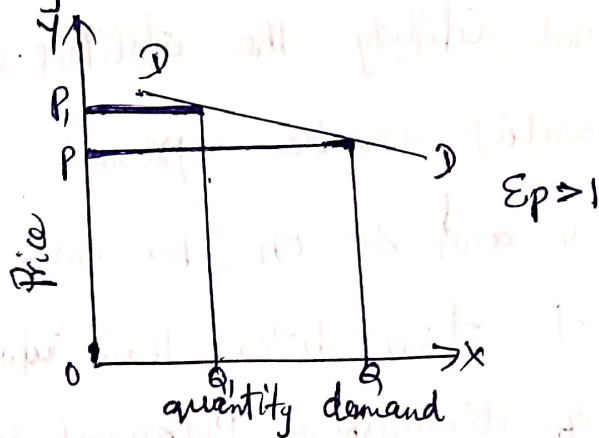


3. Unitary Elastic demand:- when the percentage change in price is accompanied by an equal percentage change in the quantity demanded it is called unitary elastic demand.

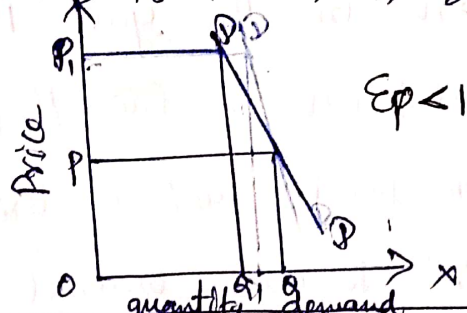
is shown in the below diagram. $\epsilon_p = 1$



4. Relatively Elastic Demand :- Relatively elastic demand is a situation where a small percentage change in the price of a commodity is accompanied by a greater percentage change in its quantity demanded. This is shown in following figure.



5. Relatively inelastic Demand :- Relatively inelastic demand is a situation where the percentage change in the price of a commodity is accompanied by a small percentage change in the quantity demanded. This is shown in below figure.



7. Explain the concepts of Cardinal utility and utility analysis?

Introduction - utility analysis was developed by Marshall. A consumer purchases and uses goods and services because they give him some utility. The term 'Utility' in Economics denotes "The want satisfying capacity of a good or service".

Cardinal Utility :- The concept of Cardinal utility was developed by Alfred Marshall. Utility is Cardinal in the sense that utility is a measurable and quantifiable entity. The numbers 1, 2, 3, 4 ---- etc are cardinal numbers. According to the concept of Cardinal utility, the utilities derived from the consumption of commodities can be expressed in terms of numbers such as 1, 2, 3, 4 and so on. For instance, the utility of one Apple is two times better than utility of one orange. The Law of diminishing Marginal utility and the Law of Equi-Marginal utility depends on Cardinal utility analysis.

Ordinal Utility :- The concept of Ordinal utility was developed by Hicks and Allen in the year 1934. The ordinal utility approach is based on the fact that the utility of a commodity cannot be measured, much or less compared. The numbers 1st, 2nd, 3rd, 4th etc are ordinal numbers.

The ordinal numbers are ordered or ranked. It means the utilities obtained by the consumer from different goods can be arranged in a social order such as 1st, 2nd, 3rd, 4th etc. Indifference curves analysis depends on ordinal utility analysis.

What is indifference curve analysis? Explain its assumptions?

Introduction: Indifference curves analysis was first used by Edgeworth. Hicks and Allen have developed the indifference curves analysis based on the assumption of ordinal utility. In this analysis, the nature of Indifference curves and how consumer attains equilibrium are explained.

Assumptions of Indifference curve analysis: -

1. **Rationality:** - The consumer is rational and possesses full information about all the relevant aspects of economic environment in which he lives so as to get maximum satisfaction.
2. **Scale of Preferences:** - All desires of a consumer are not of equal importance. Since his resources are limited and he cannot fulfill all his desires, he must choose more important desires for satisfaction.
3. **Ordinal Utility:** - Utility is ordinal in the sense that utilities derived from the consumption of commodities cannot be measured, much less compared. The numbers 1st, 2nd, 3rd, 4th etc are ordinal numbers. The ordinal numbers are ordered.

4. Completeness: - The consumer's scale of preferences is complete that he is able to choose any one of the combinations of commodities presented to him.

5. Transitivity of choice: - Consumer's choices are assumed to be consistent. It means that if a consumer prefers A to B and B to C, he must prefer A to C.

6. Diminishing Marginal Rate of Substitution: - It is the rate at which a consumer is willing to substitute one commodity (X) for another (Y), so that his satisfaction remains the same.

Indifference Curve: - On the basis of a consumer's scale of preferences, we can draw indifference curves. An Indifference Curve represents the satisfaction of a consumer from two commodities. It is drawn on the assumption that for all possible points on an indifference curve, the total satisfaction remains the same.

An indifference curve is drawn on the basis of an Indifference schedule. It may be defined as a schedule of various quantities of two goods which yields him same level of satisfaction.

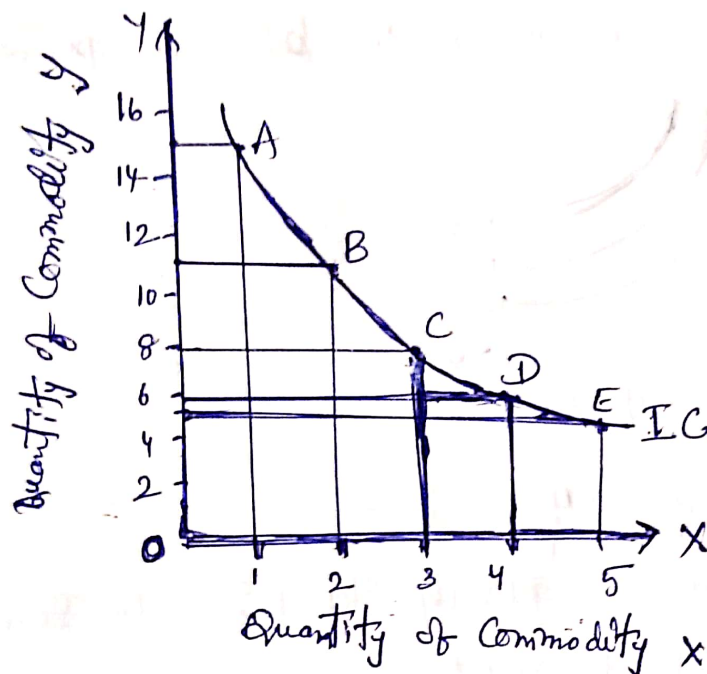
Indifference Schedule

Combinations	Commodity X	Commodity Y
A	1	16
B	2	11
C	3	8
D	4	6
E	5	5

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The above table shows five combinations of two goods, X and Y which give the same utility. The consumer's total satisfaction from A combination (1X+15Y) is the same as that of other combinations i.e. B, C, D and E. Since all combinations yields have the same level of satisfaction, the consumer is indifferent among these combinations.

Basing on the indifference schedule, we can draw an indifference curve.



In the above diagram Commodity X is measured on Ox axis and quantity increases from left to right. Commodity Y is measured on Oy axis and their quantity increase upwards. IC is indifference curve. Combinations of A, B, C, D and E are gave equal satisfaction.

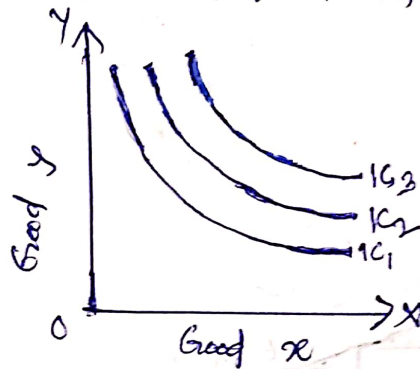
9. What is indifference curve? Explain the properties of Indifference Curves?

Ans. Introduction :- Indifference curves analysis was first used by Edgeworth. Hicks and Allen has developed indifference curves analysis

in the year 1934. An Indifference curve depicts the various alternative combinations of the goods which provide same level of satisfaction to the consumer.

Indifference Map :- We can draw similar indifference curves showing combinations of good x and good y which represents greater and lesser satisfaction.

A set of indifference curves is called indifference map, which represents various levels of satisfaction to the consumer. This is shown in the below diagram.

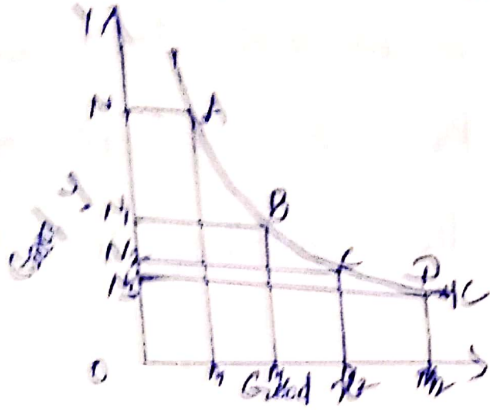


Properties of Indifference Curves :-

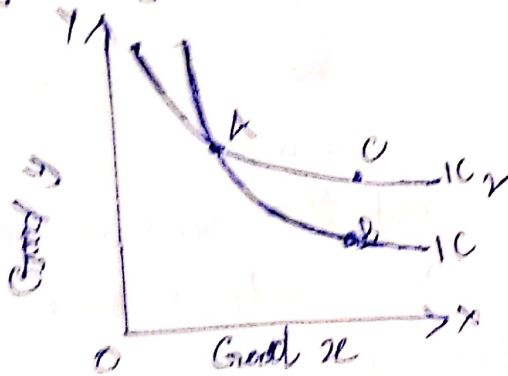
1. Indifference curves are negatively sloped :- Indifference curves slope downward from left to right. It implies that when the amount of one good combination is increased, the amount of other good is reduced. This is essential if the level of satisfaction is to remain the same on an indifference curve. This is shown in the below diagram.



Indifference curves are convex to the origin :- The Indifference curves are always convex to the origin. This property of Indifference curve is based on the assumption of the diminishing marginal rate of substitution. This is shown in the below diagram.



3. Indifference curves should not intersect each other :- Each Indifference curve represents a particular value of satisfaction. The following diagram explains the impossible nature of Indifference map.



In the above diagram the point 'C' on IC_2 indifference curve gives more satisfaction than that of the point 'B' on IC_1 indifference curve to the consumer. But these two indifference curves intersect each other at point 'A', but this is not possible.

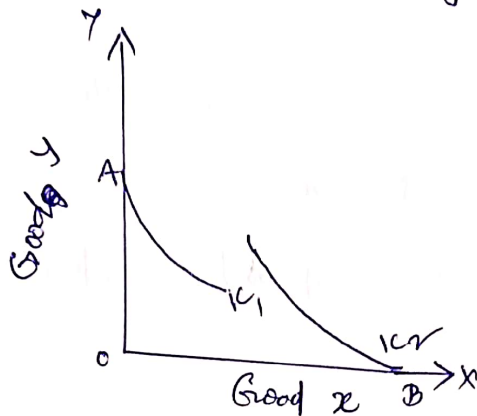
4. Higher Indifference curve represents higher level of satisfaction :- The Indifference curve shift to right side represents higher level of satisfaction to the consumer. This can be explained in the below diagram.



In the diagram the IC_2 Indifference curve lies above to the indifference curve IC_1 . Since IC_2 is the higher indifference curve, it gives more satisfaction to the consumer.

5. Indifference curves will not touch either X-axis and Y-axis :-

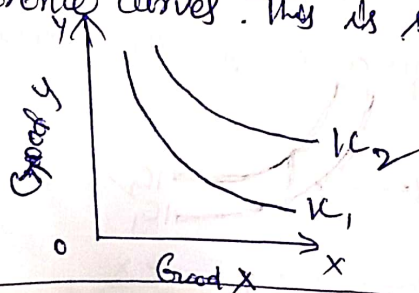
The indifference curve will not touch either X-axis or Y-axis, as we assumed that the individual is interested in different combinations of two Goods. The impossible slope of Indifference curve is shown in the below diagram.



In the above diagram IC_1 indifference curve touches Y-axis at point A, he will be satisfied with OA units of Y Good and no preference for Good X. Similarly at point B in the IC_2 curve, he will be satisfied with OB units of Good X and no preference for Good Y. Therefore, indifference curves will not touch either X-axis or Y-axis.

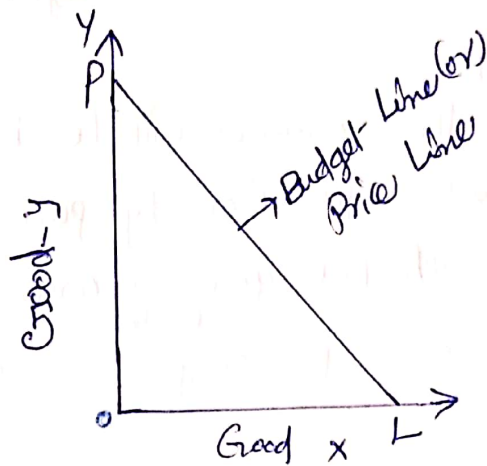
6. Indifference curves are not necessarily parallel to each other :-

The indifference curves are falling negatively inclined to the right, yet the rate of fall will not be the same for all indifference curves. This is shown in the below diagram.



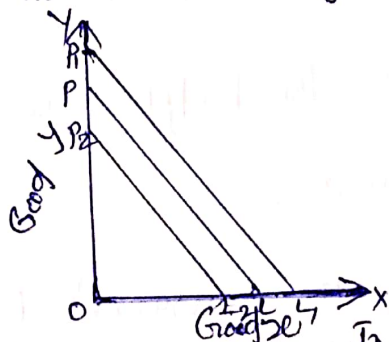
lies on indifference curve. **Budget line or price line? Explain changes in Budget line?**
Definition: The budget line shows all possible combinations of goods that a consumer can buy with the given money income at their given prices. This is shown in the below table and diagram.

Good x	Good y
5	0
4	2
3	4
2	6
1	8
0	10



In the above diagram we have taken on ox-axis Good x and on oy-axis Good y. Here PL is price line, the consumer spend his total income on Good-x, he can get 5 x-goods. On the other hand, If the consumer spend his total income on Good-y, he can get 10-y-Goods. The consumer is rational and wants to have both Good x and Good y.

Shift in Budget Line: The position of budget line depends upon the size of the money income of the consumer. If the consumer's income increases or decreases, shifts the budget line. This can be shown in the below diagram.



In the above diagram PL Budget line, shift in the budget line can be explained as follows. If the consumer income increases, budget line shifts from PL to PL₁, if the income decreases budget line shifts from PL to PL₂.

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Explain the Consumer's Equilibrium with the help of Indifference Curve Analysis?

Introduction : Indifference curves analysis was first used by Edgeworth in the year 1884. J.R. Hicks and R.J.D. Allen has developed the indifference curves analysis based on the assumption of ordinal utility.

The Consumer will be in equilibrium, when he gets maximizes his satisfaction by purchasing a combination of good X and good Y, with his given income and prices of two goods. Consumer's equilibrium position ^{will be} depends on the following assumptions.

Assumptions :-

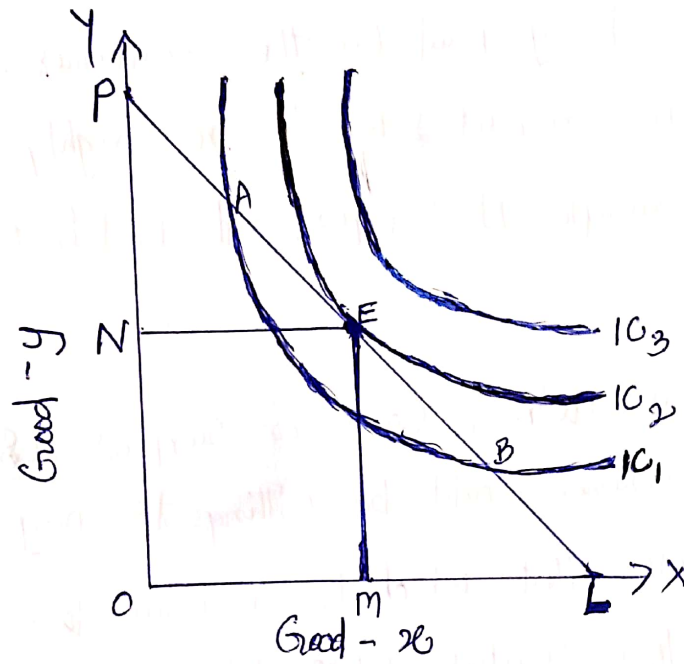
1. The consumer is a rational man, he wants to get maximum satisfaction with limited income.
2. The consumer income is remaining constant.
3. This analysis depends on ordinal utility.
4. The prices of two goods are also remaining constant.
5. There is no change in the tastes and habits of the consumer.

Conditions of Equilibrium :- There are two conditions that must be satisfied for the consumer to be in equilibrium. They are

1. At the point of equilibrium, the budget line must be tangent to the indifference curve.
2. At the point of equilibrium, the consumer's MRS_{xy} and the price ratio must be equal. i.e.
$$MRS_{xy} = \frac{P_x}{P_y}$$

Definition of Consumer's Equilibrium: -

The point where the consumer gets maximum satisfaction, where the budget line is tangent to the indifference curve and the marginal rate of substitution is equal to the prices of two goods will be defined as consumer's equilibrium. This is shown in the below diagram.



In the above diagram, we have taken on OX -axis is good x and on OY -axis good y . PL is budget line or price line. IC_1 , IC_2 , IC_3 curves are indifference curves. The consumer will be in equilibrium on IC_2 indifference curve at point E . That's why PL budget line must be tangent to the IC_2 indifference curve. The consumer purchases OM of Good x and ON of good y , he gets maximum.

Superiority of the Indifference curve Technique: -

1. The assumption of ordinal measurement of utility is more realistic.
2. It is an analysis of multi-goods model.
3. It is a constancy of marginal utility of money.

12. Explain the Concept of Consumers Surplus ?

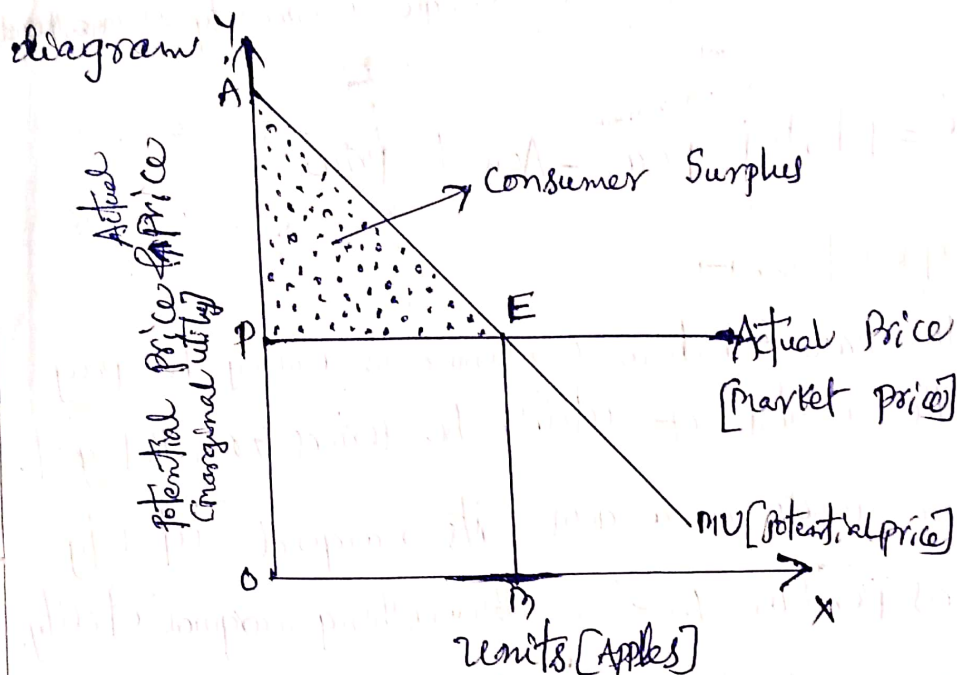
Ans. Introduction :- The concept of Consumers Surplus was first introduced by J.A. Dupuit, a French ~~Engineer~~ Economist in the year 1844. Marshall has developed the Concept of Consumer's Surplus in his famous book "The Principles of Economics". Consumer's surplus is the difference between the price which the consumer is willing to pay and the price actually paid by the consumer. Consumer's surplus is experienced in commodities which are highly useful but relatively cheap. For example News paper, Salt, Match Box, Postal stamp etc.

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

Assumptions :-

1. The Concept of Consumer's Surplus based on the assumption of Cardinal utility. Utility of a commodity is measured in money terms.
2. Marginal utility of money is constant.
3. Absence of differences in income, tastes, fashions etc.
4. Independent goods and Independent utilities.
5. Demand for a commodity depends on its price.
6. Marshall assumes that there is a definite relationship between expected satisfaction and actual satisfaction.

Consumer surplus can be illustrated



In the above diagram we have taken on ox-axis units of a Commodity and on oy-axis utility and price. MU is the marginal utility curve [willing price curve]. OP is the actual price and OM is the quantity of Commodity purchased. For OM units, the consumer is willing to pay OAEM. But the actual amount he pays is OPEM. Thus the consumer surplus is $OAEM - OPEM = PAE$ [shaded area].

Importance : -

1. The concept of Consumer Surplus is of great help in the formulation of various policies by the government for public welfare.
2. The concept of Consumer surplus is useful in measuring benefits from international trade.

Defines firm? Explain the objectives of firm?

INTRODUCTION:-

Economic theory of the firm developed in the 19th century is very popular due to its immense explanatory and productive value. Profits maximisation lies at the heart of the traditional theory. Even managerial and behavioural theories have not dispensed with the profits concept.

OBJECTIVES OF FIRMS:-

1. Profit maximisation:- Traditionally firms have been assumed to pursue the objective of maximisation of current profit instead of the long-run, maximisation of returns due to the assumption of stable demand and supply conditions. It is most widely used business objective of a firm. The rules for profit maximisation are (i) $MC = MR$, (ii) MC curves should cut the MR curve from below and (iii) $AR > AC$.
2. Sales maximisation:- W.J. Baumol findings of oligopoly firms in America revealed that they follow the sales maximisation objective subject to a profit constraint. Sales maximisation objectives popularises the product and boosts the moral of the employees.
3. Output maximisation:- According to Milton Z. Kafolgis output maximisation should be objective of a business firm. However, output maximisation without sales maximisation will not enable a firm

to survive for long actually both the objectives complementary rather than competitive.

output
Security

4. Utility maximisation:- Oliver & Williamson has developed the utility maximisation hypothesis. It aims at maximisation of managerial utility in term of leisure, better salaries, security, prestige and comforts of managers, the strength of the staff employed health etc.
5. Growth maximisation:- Mrs. Penrose was the first economist to suggest that managers of modern firms are interested in growth maximisation rather than profit maximisation following the suggestions of Penrose, Robin Marris developed the "Growth maximisation theory" of a firm aims at balanced state of growth that is, maximisation of the rate of growth and long run survival of the firm.

Q. Explain the concepts of production function?

Ans. Production function is purely technical concept. It shows the transformation of inputs into output at any particular time period. It represents functional relationship between quantities of inputs and the amount of output produced.

"Production is the name given to the relationship between rates of inputs of productive services and the rate of output of product" $\Rightarrow$ Stigler.

output takes the form of volume of goods ~~and~~ and services ~~and~~ inputs are different factors of production i.e., land, labour, capital, and enterprises etc.

* MATHEMATICAL FORM:-

The production function can be expressed mathematically as follows.

$$Q_x = f[L, K, R, N, T]$$

where;

Q_x = output

f = functional relationship.

L = Amount of labour.

K = Amount of capital.

R = Raw materials.

T = State of Technology.

N = Natural resources and land.
~~land.~~

Here, Q_x is the dependent variable and is determined by the inputs used, whereas, L, R, K, N, T , etc., are independent variables.

production function can also be defined in different way. It shows the minimum quantities at various inputs that are required to yield a given quantity of output.

The production function of a firm can be studied in the context of short period and also in the long period. Short period (or) short run is the period of time in which a firm can change the level of output only by varying variable factors of production (labour, raw material). It implies fixed factors such as land, building, capital etc. are fixed.

page - 4
matter
This is done when the law of variable proportion is derived. On the other hand long run is a period of time in which the factors of production are variable. The behaviour of production when all factors are varied is the subject matters of the law of returns to scale.

Q3) Explain the Cobb-Douglas production function?

Ans INTRODUCTION:- Cobb-Douglas production function, named after the two American Economists, C.W. Cobb and Paul H. ~~the~~ Douglas, is the most widely used production function in empirical studies. Originally the Cobb-Douglas production function was applied in the production process for the American manufacturing industry to compute the contribution of labour and capital to the output. The major finding of the study is that the share of labour was $\frac{3}{4}$ and that of capital was $\frac{1}{4}$ in the national income. After the II world war, it is used in the analytical studies of individual industries and firms. The Cobb-Douglas production function assumes that there are two inputs: labour and capital. It represents constant returns to scale and hence is linearly homogeneous. The Cobb-Douglas production function can be expressed in the following formula.

* mathematical form:-

$$P = A \cdot L^{\alpha} K^{\beta}$$

where 'P' represents the output, "L" Labour, "K" Capital and "A" is a positive constant. α and β the exponents of L and K indicate the representative production elasticities.

* CRITICISM:-

- 1) It cannot explain ~~the case~~ when there are more than two factors in the production process as it considers only two inputs i.e. Labour and Capital.
- 2) It explains ⁱⁿ the ~~case~~ ^{of} constant returns to scale ~~to scale~~ which are more common.
- 3) It is based on the substitutability of factors and is not suitable to explain ⁱⁿ the case of complementary factors.
- 4) The Cobb-Douglas production function is based on the assumption of perfect competition in the factor market and hence is not suitable to imperfect markets like monopoly.
- 5) The major problem with his production function is the excessive aggregation. The Cobb-Douglas production function was originally designed to suit the entire manufacturing sector.

4) Explain the law of variable proportions with a help of diagram and importance?

Ans: * INTRODUCTION :- The law of variable proportions is also known as the "law of diminishing returns". Economists like Ricardo, Malthus, Marshall gave more importance to this law. Ricardo's Rent theory, Malthus population theory were propounded on the basis of these laws. The law of variable proportions theory was started by Marshall. These theories explain the changes in the output in short period when we increase only one factor than the beginning we get increasing returns, later diminishing returns and finally negative returns keeping other factors constant.

DEFINITION :-

According to Marshall "an increase in the amount of labour and capital applied in the cultivation of _____ land causes in general a less than proportionate increase in the product raised unless it happens to coincide with an improvement in the art of agriculture".

* ASSUMPTIONS OF LAW :-

The law is based on the following assumptions.

* The state of technology and methods of production remains constant.

* These theories depend on short period.

- * It is possible to change one factor keeping other factors constant.
- * Labourers are homogeneous.

* EXPLANATION OF THE LAW:-

These theory can be explained with the help of one example.

Ex:- The farmer has cultivate some Acres of land and he wants to increase the output. By increasing the number of labourers keeping other factors constant. The change in total product, Average product and marginal product can be observed the following table.

* TABLE *

Variable Input (LABOUR)	Total Product	Average product	marginal Product	Stages
1	5	5	5	I stage
2	12	6	7	
3	18	6	6	
4	20	5	2	II stage
5	20	4	0	
6	18	3	-2	III stage
7	14	2	-4	

In the above table indicates three

three different concepts of productivity namely total product, Average product and marginal product.

Third stage
diminishing
but not

* TOTAL PRODUCT:- Total product refers to the total output produced per unit of time by all the labourers.

* Average product:- Average product refers to the product per unit of labour. It is obtained by total product is divided by the number of labourers employed. we get average product. It can be expressed the below equation.

$$Ap = \frac{\text{Total product}}{\text{No. of labourers}}$$

* MARGINAL PRODUCT:-

marginal product refers to the additional product obtained by the additional labour. It can be expressed the below equation.

$$MP = \frac{\Delta TP}{\Delta L}$$

ΔTP = change in Total product

ΔL = change in Labour

* THREE STAGES OF PRODUCTION:-

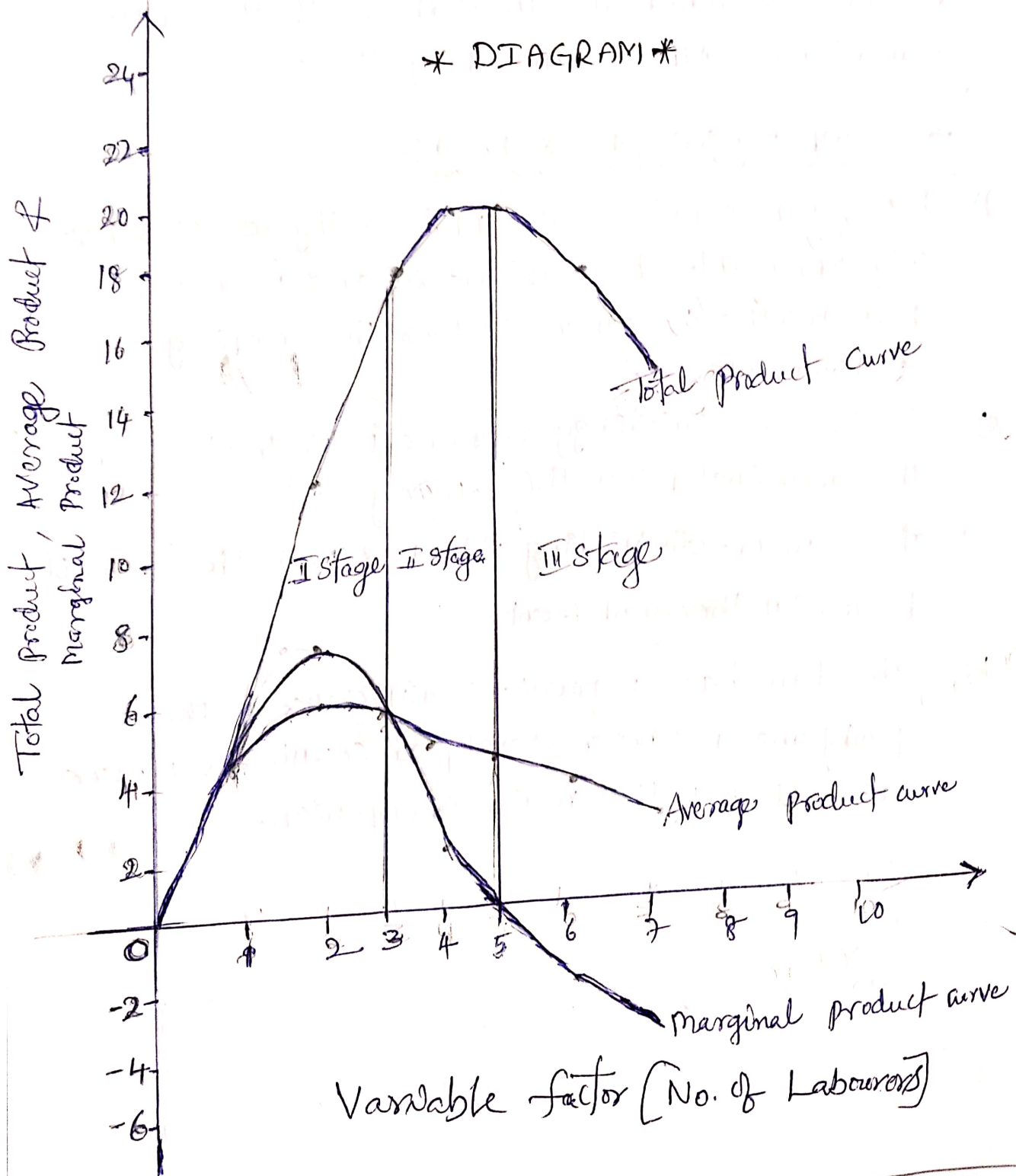
⇒ FIRST STAGE:- In the above table the number of labourers increasing the total production is increasing up to third labour and that time Average product is equal to marginal product. This is first stage. This is known as increasing returns.

⇒ SECOND STAGE:- ^{In the second stage} Increasing fourth and fifth labourers total product is maximum, average product is decreases and marginal product is ZERO. This is second stage and it is known as diminishing returns.

Third stage :- The third stage total product starts diminishing, average product continuously by declining but it's positive and marginal product is negative, this is known as negative returns.

In the above three stages we can explain below diagram.

* DIAGRAM *



In the above diagram we have taken on Ox -axis is No. of labour and on y -axis is total product, Average product and marginal product. In these diagram, the 1st stage, TP , AP , MP , are increasing. The 2nd stage TP is maximum AP is decreasing and MP is diminishing. When the third stage TP and AP are diminishing, MP becomes Negative.

* IMPORTANCE OF THE LAW:-

- 1) The law has universal applicability, as it is not only applicable to agriculture and industry, but also to other sectors like, mining, fishing, etc.....
- 2) The law of diminishing returns is also the basis of the marginal productivity theory.
- 3) The law of diminishing returns is also the basis of Ricardian theory of rent.
- 4) The law has a great significance to the problems of under developed countries where agriculture is the main occupation.

10/11
 WHAT IS MEANT BY RETURNS TO SCALE? EXPLAIN DIFFERENT KINDS OF RETURNS TO SCALE WITH SUITABLE TABLE AND DIAGRAM.

RETURNS TO SCALE:- the law of Returns to Scale

explain the relationship between factors of Production and production in long period, when all inputs

Factors of production are increased in the same conclusion. All factors are increased in the

beginning we get increasing returns to scale, later we get constant returns to scale and

finally we get diminishing returns to scale. The law of Return to scale is classified into

three types, they are:-

* Increasing Returns to scale

* Constant Returns to scale

* Diminishing Returns to scale.

1. Increasing Returns to scale:- The proportionate

change in factors of production is more than the proportionate change in output is known as increasing

returns to scale.

* Example:- If ~~the~~ we increase factors of production by 10%, the output increases by

more than 10%.

2. Constant Returns to Scale:- The proportionate change in factors of production is equal to proportionate change in output known as 'Constant returns to scale'.

* EXAMPLE:- If we increase factors of production by 10%, the output also will increase the 10%.

3. DIMINISHING RETURNS TO SCALE:- The proportionate change in factors of production is less than proportionate change in output is known as diminishing returns to scale.

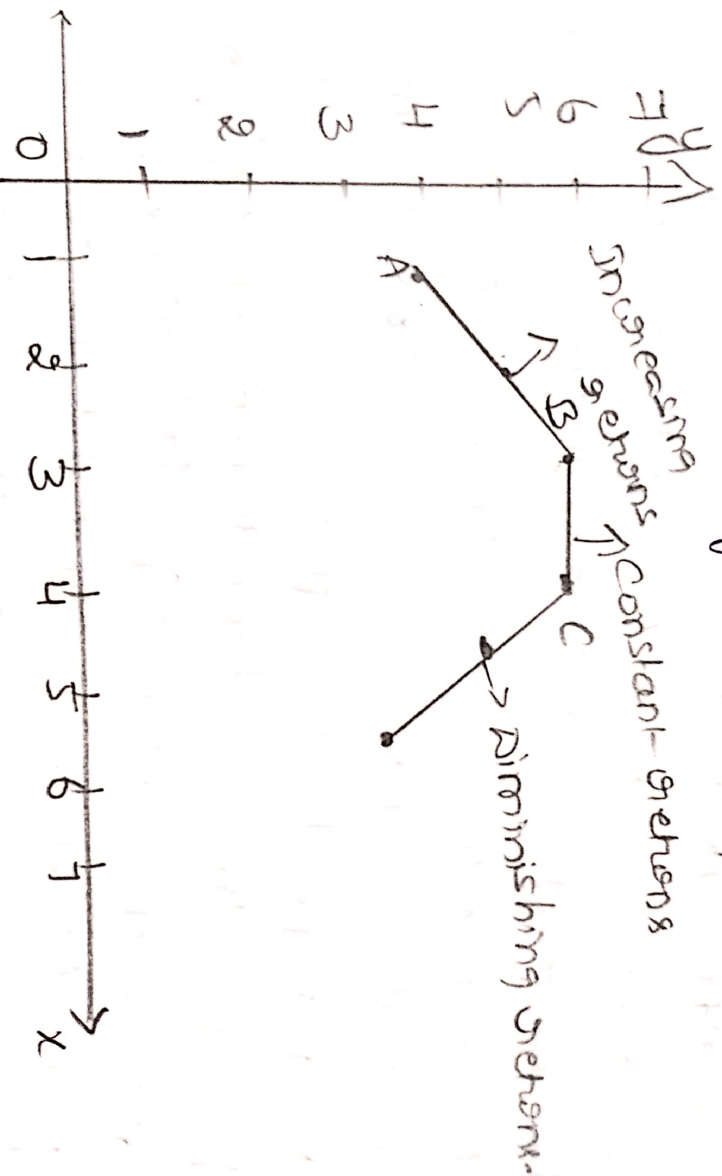
Example:- If we increase the factors of production by 10%, the output increases by less than 10%. In the above Returns to scale shown in the below table.

Table

Input combination (Capital + Labour)	Total Returns	Marginal Returns
1 + 2	4	4 } Increasing Returns
2 + 4 *	9	5 }
3 + 6	15	6 } Constant
4 + 8	21	6 }
5 + 10	26	5 } Diminishing Returns
6 + 12	30	4 }

the ab Quantities from to.

In the above table all inputs are changed in equal quantities, changes in output can be observed from total and marginal Returns. Output changes are very clear from the marginal Returns, in the beginning when inputs are doubled, such a change in output is called increasing returns. But in the third and fourth input combinations, output has increased in the same proportion. This is called constant returns. Later fifth and sixth input combinations are giving diminishing returns. In the above analysis we should see the below diagram



* INPUT COMBINATIONS *

In the above diagram we have taken $2x$ axis is input combinations and $10y$ axis is marginal returns. They increase 1st and 2nd input combinations the marginal returns are more than increase of inputs.

these indicates increasing returns. And we can increase third and fourth combination of inputs the returns are increased in same ratio. These indicates constant returns.

Finally they increase 5th and 6th combinations of inputs the returns are less than the combination of our inputs. These indicates diminishing returns.

Let us now understand the reasons for different kinds of returns to production. Increasing returns occur in the first phase because of certain advantages available to a firm. These are known as economies of scale or internal economies. As the firm expands its output it enjoys certain benefits like establish in better machines, division of labour, specialisation, sells products more easily and uses services of efficient managers etc. All these come under internal economies.

what is meant by economies of large scale? (or)
write about internal economies and external economies?

INTRODUCTION:- Assuming that the prices of factors of production to be constant, increasing returns to scale are associated with diminishing costs, constant returns to scale are associated with constant costs and diminishing returns with increasing costs.

Increasing returns to scale occur in the early stages of expansion as the firm enjoys internal and external economies of scale and diminishing returns, after a certain level of production, due to internal and external diseconomies of scale.

INTERNAL ECONOMIES:- Internal economies are the economies that occur to the firm from within the organisation. Due to large scale of production but they don't benefit the entire industry they are:-

1) TECHNOLOGICAL ECONOMIES:- Technological economies accrue to the firm due to higher investment. Higher investment results in more capital intensive, sophisticated technology, which increases output rapidly and lowers the cost of production, higher the capital intensity more is the output.

b) Managerial Economies:- Large scale production necessitates specialization and division of labour.

The division of production process into various processes and sub processes, which are headed by experts in the field results in intensive use of capital, avoidance of wastages and delays in production.

c) Marketing Economies:- As the size of the firm expands, its sales and purchases increase at considerable levels. Firms can realise economies through wholesale purchase of raw material at cheaper prices.

d) Financial Economies:- Large firms are credit worthy and can easily raise funds from the money market and the public at lower rates of interest. When compared to the smaller firms large firms not only have more capital for investment but also have more access to credit to meet their working capital requirements.

e) Risk Bearing Economies:- Large firms can face and sustain risks for a longer period compared to the smaller firms. In case of losses, the large firms also have the option to close down some loss making departments to make the firms more viable to continue production.

EXTERNAL
ECONOMIES

* EXTERNAL ECONOMIES:- External economies are those economies that accrue to the firms as an 'industry expands'. External economies are a result of expansion of output of an individual firm.

(a) ECONOMIES OF CONCENTRATION:- When firms are concentrated in one region or area, they get the benefit of well developed infrastructure. The economic infrastructure that is vital for the establishment of an industry is well developed and readily available. The firms established in these places enjoy well connected roads, developed transport, power, water, sanitation and banking facilities at cheaper rates.

(b) ECONOMIES OF SPECIALIZATION:- There are two types of economies of specialization that benefit the industry. They are:- in vertical disintegration and (ii) horizontal disintegration.

(i) VERTICAL DISINTEGRATION:- When the industry is located in a region, it can divide the production of a commodity into various stages and allocate it to individual firms. The individual firms can produce the parts, spare parts and do the other job work more efficiently.

(ii) HORIZONTAL DISINTEGRATION:- Based on the locational advantages, the large scale industry can specialize in the production of a specific product. For eg, a cotton textile industry can produce it's various products like sarees, dhotis, panting,

-Shifting bedsheets in different units located in different places.

(c) CHEAPER RAW MATERIALS AND CAPITAL EQUIPMENT:-

The expansion of an industry in a region may result in the exploration of new and cheaper sources of raw materials, machinery, capital equipment and tools which improve efficiency and also cuts down the costs.

(d) TECHNOLOGICAL ECONOMIES:- When the whole

industry expands, it may result in technological up-gradation and capital deepening. Technical progress changes the technological coefficient of production and enhances the productivity of the firms in the industry.

(e) AVAILABILITY OF SKILLED LABOUR:- When an industry

is concentrated in a region, the area gets ~~improved~~ to the requirements of the industry. Skilled and trained ~~labours~~ will be available.

(f) GROWTH OF ANCILLARY INDUSTRIES:- With the

growth of a large scale industry, a number of ancillary units producing raw materials, tools, machinery, parts and spares come up.

explain diff
Introduction

Explain different concepts of costs ?

Introduction:-

The supply of a commodity is influenced by the cost of producing that commodity. and also some profit to the entrepreneur. Cost analysis given the production conditions. ~~which is the behaviour of cost in other words. Cost analysis given the production conditions.~~

* Different concepts of costs:-

1. Money cost.

The expenses of production paid in terms of money is the money cost of production. It includes cost of machinery, buildings, fuel, transport, interest, insurance and labour costs etc. money costs include explicit costs and implicit costs. Explicit costs are also called paid out costs or expenditure costs. They are called the contractual payment made by the employer to the owners of factor of production. Implicit costs are the cost of resources and services which the employer pays to himself for the factors of production supplied by him his own resources and services etc.

{ money cost = explicit cost + implicit cost }

2. Real cost:-

The cost of real cost is purely subjective and it cannot be measured, as it cannot be computed. It has little significance in the price determination of a commodity. It is however, very important from social point of view. Adam Smith regarded pain and sacrifice of labour as the real cost of production.

3. Opportunity cost:-

Opportunity cost is also called as the alternatives ~~cost~~ ^{or} transfer cost. The supply of resource is limited and the limited resource ~~is~~ have alternative uses. When the production of one commodity they are not available for the production of another commodity.

~~Ex:-~~ If a labourer is paid Rs. 75 by firm A and what he gets ⁱⁿ from B is alternative cost.

4. Fixed cost:- Fixed costs to an economist are overhead costs. The overhead costs require a fixed outlay of funds. In perspective of the level of output, whatever is the volume of goods produced, rent, interest etc, must be paid.

5. Variable cost:-

Variable costs are the direct money costs incurred on raw materials, wages of labour, fuel, transport etc. They are the

finance costs incurred for the production of goods and services.

Total Costs:- Total cost is the total expenditure incurred in the production of the commodity and includes both fixed cost and variable cost. It can be expressed the below equation.

$$\text{Total cost} = \text{Total Fixed cost} + \text{Total variable cost}$$

7. Average cost:- Average cost is the cost of producing one unit of output of a commodity. It is also known as unit cost of output produced. It is obtained by dividing the cost of output produced by the number of units of output produced thus:-

$$AC = \frac{\text{Total cost}}{\text{Quantity}}$$

8. marginal cost:- marginal cost is the additional cost incurred for producing an additional unit of output. In other words average cost is the cost of producing the nth unit or the cost of the last unit of output mathematically,

$$MC_n = TC_n - TC_{n-1}$$

Explain the relationship between average and marginal costs?

Average costs:- Average cost is the cost of producing one unit of output of a commodity. It is also known as unit cost of output produced. It is obtained by dividing the total cost by the number of units of output produced, thus,

$$AC = \frac{TC}{Q}$$

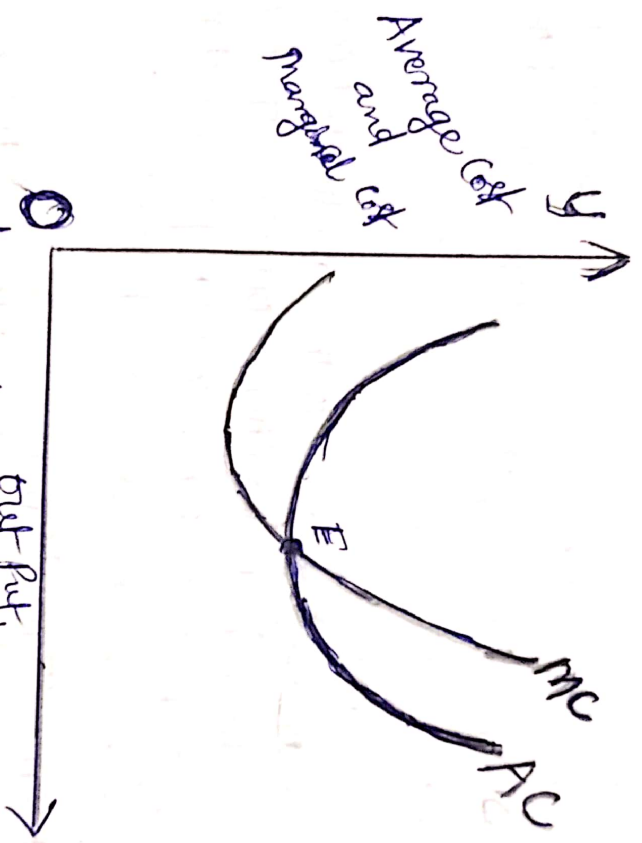
marginal cost:- marginal cost is the additional cost incurred for producing an additional unit of output. In other words marginal cost is the cost of producing the nth unit or the last of output mathematically,

$$MC_n = TC_n - TC_{n-1}$$

* Relationship between Average cost and marginal cost.
 Explain

In the marginal value is rising the Average value will rise and if the marginal value is falling the Average value will fall when the marginal values remains unchanged the Average value will be equal to marginal the relationship is purely mathematical and can be explained with an arithmetic illustration.

These can be explained the below diagram.



The above diagram shows the relationship between (MC) and (AC) curves, when the short-run "MC" curve lies below the "AC". The "AC" curve is also falling when the "MC" curve lies above the "AC". The "AC" curve is rising, the "MC" curve cuts the "AC" curve at its minimum point "E". At point "E" AC is equal to MC.

8/11
 Explain the concept of revenue. Explain the different concepts of Revenue?

Introduction:- For any firm, its revenue and cost together will determine its profits. Therefore, the study of the concepts of revenue is needed. The term revenue refers to the receipts of a firm by sale of certain quantities of a good or service at different prices. The firm desires to minimize the cost of producing an output.

DIFFERENT CONCEPTS OF REVENUE:-

There are three concepts of revenue and these are explained below:-

(a) Total Revenue (TR):- total amount of money or income received by the firm from the sale of a certain quantity of output is called total revenue. It is obtained by multiplying the price of a commodity by the number of units sold, i.e., $TR = P \times Q$ where

P = price of the good and

Q = the quantity of the good sold.

(b) Average Revenue (AR):- Average revenue is the revenue per unit of goods sold. It is computed by dividing the total revenue by the number of the units of a good sold. Thus,

$$AR = TR / Q = P \times Q / Q = P$$

It is clear from the above formula that the Average revenue at each level of output is equal to the price per unit.

(c) marginal Revenue:- It is the net addition to the total revenue by selling additional units of the goods i.e. the revenue which would be earned by selling an additional unit of the good. Marginal Revenue can be expressed as,

$$MR = \Delta TR / \Delta Q \text{ where,}$$

ΔTR = Change in total revenue and

ΔQ = Change in quantity.

~~Another form, $MR = TR_n - TR_{n-1}$~~

Explain the law of supply.

Introduction:- An economic supply analysis is an important as the demand analysis. The price

determination in any market. Condition requires the study of both demand and supply. The supply refers to the quantities of a good that the firms are able and willing to offer for sale at various prices. The quantities of a good, the firms are able to produce depend on available resources, and technology they can employ. How much of a commodity the firms are willing to offer for sale depends on expected profits.

Quantity supplied, supply refers to entire quantities of a commodity offered by the firms in a market for

at all possible prices during a period of time and market for sale at all possible offers to the quantity of a commodity offered for sale at a particular price "of the commodity at a point of time. Two important things are to be noted here with regard to concept of supply are,

- (i) supply is a flow concept.
- (ii) Quantity offered for sale may not be equal to the

Quantity actually sold.

LAW OF SUPPLY:- Normally, the supply is related to its price but it can be related to resources, technology scale of operating etc. However, law of supply is the relationship between the supply of a commodity and its price. The law of supply can be stated as "other things remaining constant, the quantity of a good produced and offered for sale will increase with a rise in price and decrease with a fall in its price". The quantity supplied of a commodity generally varies directly with the price. That is higher the price, larger is the quantity supplied and lower the price, smaller is the quantity supplied, this is because the producer or seller offers more quantity of good at higher price with an expectation of more profits and vice versa.

Supply Function:- The quantity of a commodity the firm is willing to offer for sale depends upon

- (i) The price of the commodity.
- (ii) Price of inputs used for the production.

(ii) the state of technology,
 (i) the number of firms producing and selling the commodity.

(v) The price of related goods produced.
 (vi) the future expectations regarding prices.

However, in law of supply, we are concerned with functional relation between supply and price of a particular commodity. For this we have to assume other things beings unchanged. Normally, the supply functions of a commodity is written as.

$$Q^S_x = f(P_x, T, P_1, \dots, P_{n-1}, f_p)$$

Q^S_x = Quantity supplied of x. P_x = price of good x

T = state of technology

$P_1, \dots, P_{n-1}$ = price of the related goods.

f_1 = prices of factors of production.

f = functional relation.

In a given time other things being unchanged the

quantity supplied depends upon one's price, thus;

$$Q^S_x = f(P_x)$$

The law of supply in accordance with supply function states that there is a direct relation between quantity supplied and its price. This can be supplied illustrated with the following schedule and diagram.

Production function is purely technical

concept. It shows the transformation of inputs into output at any particular time period. It is a purely technical relationship and does not involve any economic considerations.