

Biyani's Think Tank

Concept based notes

Business Economics

(B.Com. Part-I)

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Preface

I am glad to present this book, especially designed to serve the needs of the students. The book has been written keeping in mind the general weakness in understanding the fundamental concepts of the topics. The book is self-explanatory and adopts the “Teach Yourself” style. It is based on question-answer pattern. The language of book is quite easy and understandable based on scientific approach.

Any further improvement in the contents of the book by making corrections, omission and inclusion is keen to be achieved based on suggestions from the readers for which the author shall be obliged.

I acknowledge special thanks to Mr. Rajeev Biyani, *Chairman* & Dr. Sanjay Biyani, *Director (Acad.)* Biyani Group of Colleges, who are the backbones and main concept provider and also have been constant source of motivation throughout this Endeavour. They played an active role in coordinating the various stages of this Endeavour and spearheaded the publishing work.

I look forward to receiving valuable suggestions from professors of various educational institutions, other faculty members and students for improvement of the quality of the book. The reader may feel free to send in their comments and suggestions to the under mentioned address.

Author

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Chapter-1

Introduction

Q.1 Give an appropriate definition of Economics.

Ans.: The term economics is derived from two Greek words “OIKOS” and “NEMEIN” meaning the role or law of the household.

Economics is the study of how people and society, choose to employ scarce resources with or without the use of money, that could have alternative uses in order to produce various commodities and to distribute them for consumption, now or in the future among various persons and groups in society.

Q.2 How Economics is a Science and Arts?

Ans.: The term science has been defined as the systematized body of knowledge, which traces the relationship between cause & effect. Applying this definition to economics we find that economics is that branch of knowledge where the various facts relevant to it have been systematically collected, classified and analyzed.

An art is a system of rules for the attainment of a given end. An art is application of knowledge and practical application. Economics has all these features of being an art.

Q.3 How Economics is as a Normative and Positive Science?

Ans.: It deals with thing as they “ought to be”. It has no objection to discussion the moral rightness or wrongness of things. Economics is not only explaining facts as they are but also justifies them.

Positive Science deals with things as they are means “What is”. It explains their causes and effect but it remain strictly neutral as regards ends, it refuses to pass moral judgments.

Both can be distinguish as follows :

Basis	Positive	Normative
1.Expresses	What is	What ought to be
2. Based on	Cause & effect of facts	& Ethics
3. Deal with	Actual or realistic situation	Idealistic situation
4. Value judgment	Are not given	Are given

Q.4 What is Micro and Macro Economic?

Ans.: The term Micro derived from greek word “Mikros” which means small. It is concern with the study of individual decision units.

The term macro has been derived from greek word “Makros” which means large. It is that branch of economics analysis which studies the behaviour of not one particular unit, but of all units combined together.

Both can be distinguish as follows :

S.No.	Basis	Micro	Macro
1.	Study	Individual	Economy as a whole
2.	Deal With	Individual Units	Aggregate Units
3.	Tools	Demand & Supply of a Particular Commodities	Aggregate Demand and Aggregate Supply of Economy as a whole
4.	Central Problem	Price Determination of Commod-ities or Factors of Production	Determine Level of Inco-me & Employment
5.	Prices	Relative Prices Decide	Absolute Price Decide
6.	Type of	Particle Equi Analysis	General Equi Analysis

	Analysis		
7.	Scope	Narrow	Wider
8.	Understanding	Easier	Complex

Q.5 What is Economic Law?

Ans.: Economic laws are intellectual experiments carried out with the help of certain assumptions. It is a statement about the cause and effect relationship between two economic phenomenon which can be measured by money price.

Q.6 What is Business Economics?

Ans.: It is that branch of knowledge in which theories of economics analysis are used for solving business management problem and determination of business policies.

Characteristics of business Economic as follows :

- (i) Micro economic in nature
- (ii) Theory of firm or economics of firm
- (iii) Importance of macro economics too
- (iv) Pragmatic & applied approach
- (v) Perspective nature
- (vi) Decision making at managerial level
- (vii) Coordinating nature
- (viii) Both science and arts
- (ix) More refined subject
- (x) Facilitate plug.

Q.7 Point out the importance or significance of Business Economics?

- Ans.:**
- (i) Helpful in organizing
 - (ii) Helpful in planning

- (iii) Helpful in decision making
- (iv) Helpful in coordination
- (v) Helpful in foreword plug
- (vi) Helpful in cost control
- (vii) Helpful in demand forecasting
- (viii) Minimizing uncertainties
- (ix) Helpful in chalking out business policies
- (x) Helpful understanding external environment

Q.8 What are the scope of Business Economics?

- Ans.:**
- (i) Demand analysis and forecasting
 - (ii) Political planning and management
 - (iii) Cost analysis
 - (iv) Pricing policies and practices
 - (v) Profit management
 - (vi) Capital management
 - (vii) Decision theory under uncertainty
 - (viii) Sales promotion & strategy

Q.9 Identify the responsibility of Business Economist.

- Ans.:**
- (i) Maintain reasonable profit
 - (ii) Successful forecasting
 - (iii) Awareness and co-ordination
 - (iv) **SWOT** Analysis
 - (v) Establish himself in strategic position
 - (vi) Contact with sources and specialists of information.

Q.10 What is Deductive Methodology of Economics?

Ans.: It is also known as abstract, axiomatic, a priori analytical. The economist begins from the principle which are accepted as self evident or proved proposition and then draws conclusion as consequences of these principles through the process of valid reasoning moves from "General to Particular".

Deductive logic passes through following stages.

- (A) Perception and selection of premises from which the conclusions are to be derived. Assumptions are made.
- (B) Inferences are drawn from the premises originally selected.
- (C) It consists of a return to the real world by means of an interpretation that yields conclusion in term of concrete sensible world of physical reality.

Merits	Demerits
• Simple • Economical • Accurate & reliable	• Unrealistic assumption • Require more competence • It is based on false premises, then false conclusion. • Static analysis • Not applicable uniformly

Q.11 What is Inductive Methodology of Economics?

Ans.: It involve generalization of particular observation. It is also called experimental, statistical, historical and posterior method. In this, we move from "particular to General". The hypotheses set in an inductive logic are also subject to future enquiry and tests. If not found empirically correct, it can be changed or modified or dropped altogether.

Method is composed of two process - (A) Experimentation (B) Statistical Enquiries

Merits	Demerits
• Based on realistic foundation • Bridges the gap between theory & practice • More rational & practical	• Bias of investigator • Time consuming • Expensive • Deduction is also needed

Q.12 What is the meaning of Economic Problem and what are the reasons for its Emergence?

Ans.: Human wants are unlimited and the resources to satisfy them are scarce and are of alternative uses; therefore human behavior takes the form of choosing. This give rise to the problem of how it use scarce resources of alternative uses to attain maximum satisfaction. This is generally termed as economic problem.

Reason Responsible for Arising :

- | | |
|-------------------------------------|---------------------------------------|
| (i) Unlimited ends or wants | (ii) Scarce resources. |
| (iii) Alternative uses of resources | (iv) Difference in intensity of ends. |

Q.13 What do you mean by Business Policy?

Ans.: Business policy denote the various type of decision taken by the business firms with regard to production, pricing, sales, finance, personnel, marketing, etc. It effects the various business operations.

□ □ □

Chapter-2

Theory of Demand

Q.1. What is Demand?

Ans.: Meaning : The demand for any commodity at a given price is the quantity of it which will be bought per unit of time at that price.

Elements of Demand : According to the definition of demand here are three elements of demand for a commodity :-

- (i) There should be a desire for a commodity.
- (ii) The consumer should have money to fulfill that desire.
- (iii) The consumer should be ready to spend money on that commodity.

Thus we can define demand as the desire to buy a commodity which is backed by sufficient purchasing power and a willingness to spend.

Q.2 What are the Determinants of Demand?

Ans.: There are many economic, social and political factors which greatly influence the demand for a commodity. Some of these factors are discussed below :

- (1) **Price of the Commodity**
- (2) **Price of Related Goods**
 - (i) Complementary Goods
 - (ii) Substitute Goods

(3) **Level of Income and Wealth of the Consumer**

- (i) Necessaries
- (ii) Inferior goods
- (iii) Luxuries

(4) **Tastes and Preference**(5) **Government Policy**(6) **Other Factors :**

- (i) Size and Composition of Population
- (ii) Distribution of Income and Wealth
- (iii) Economic Fluctuations

Q.3 What is the Law of Demand?

Ans.: The law of demand states that, other things being equal, the demand for a good increases with a decrease in price and decreases in demand with a increase in price.

The term other things being equal implies the prices of related goods, income of the consumers, their tastes and preferences etc. remain constant.

Q.4 What is a Demand Schedule?

Ans.: Meaning : A Demand schedule is a list of the different quantities of a commodity which consumes purchase at different period of time. It expresses the relation between different quantities of the commodity demanded at different prices.

- (i) **Individual Demand Schedule :** It is defined as the different quantities of a given commodity which a consumer will buy at all possible prices:-

Price (Rs.)	Quantity Demanded
1	5
2	4
3	3
4	2

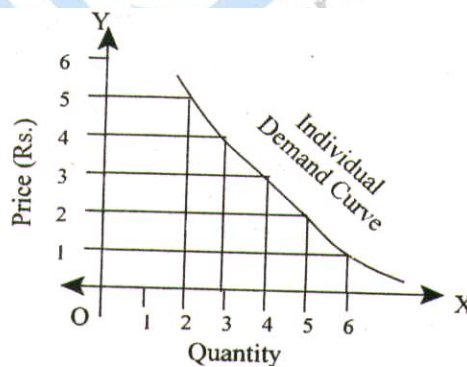
- (ii) **Market Demand Schedule:** Market demand schedule is defined as the quantities of a given commodity which all consumer will buy at all possible prices at a given moment of time:-

Price (Rs.)	A's Demand (1)	B's Demand (2)	Market Demand Schedule (1+2)
1	4	5	4+5=9
2	3	4	3+4=7
3	2	3	2+3=5
4	1	2	1+2=3

Q.5 What is a Demand Curve?

Ans.: Meaning : Demand Curve is simply a graphic representation of demand schedule. It expresses the relationship between different quantities demanded at different possible prices of the given commodity.

- (i) **Individual Demand Curve :** The graphic representation of Individual Demand is known as Individual Demand Curve.



Thus individual demand curve is the one that represent different quantities of a commodity demanded by a consumer at different prices.

- (ii) **Market Demand Curve :** The graphic representation of market demand schedule is known as Market Demand Curve.

Thus market demand curve is the one that represents total quantities of a commodity demanded by all the consumers in the market at different prices. It is the horizontal summation of the individual demand curves.

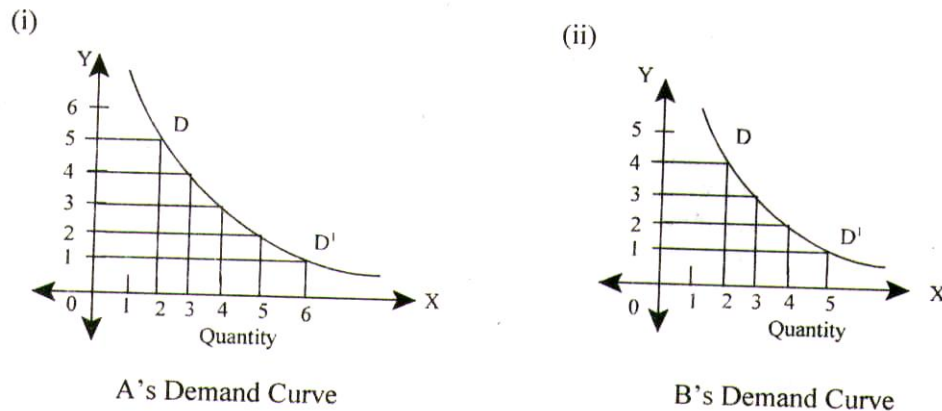


Fig.(i) shows A's Demand Curve, fig.(ii) shows B's Demand Curve and fig. (iii) shows the Market Demand Curve. Thus by adding the different points on individual demand curves one get the market Demand Curve.

Q.6 Why do Demand Curve slopes downwards?

Ans.: Reasons are:-

- (i) **Law of Diminishing Marginal Utility** : The law of demand is based on the law of diminishing marginal utility which states that as the consumer purchases more and more units of a commodity, the satisfaction derived by him from each successive unit goes on decreasing. Hence at a lesser price, he would purchase more. Being a rational human beings the consumer always tries to maximize his satisfaction and does so equalizing the marginal utility of a commodity with its price i.e. $Mu_x = p_x$.

It means that now the consumer will buy additional units only when the price falls.

- (ii) **New Consumers** : When the price of a commodity falls many consumers who could not begin to purchase the commodity e.g. suppose when price of a certain good 'x' was Rs. 50 market

demand was 60 units now when the price falls to Rs. 40, new consumers enter the market and the overall market demand rises to 80 units.

- (iii) **Several Use of Commodity :** There are many commodities which can be put to several uses e.g. coal, electricity etc. When the prices of such commodities go up, they will be used for important purpose only and their demand will be limited. On the other hand, when their price fall they are used for varied purpose and as a result their demand extends. Such inverse relation between demand and price makes the demand curve slope downwards.
- (iv) **Income Effect :** When price of a commodity changes, the real income of a consumer also undergoes a changes. Hence real income means the consumer's purchasing power. As the price of a commodity falls the real income of a consumer goes up and he purchases more units of a commodity eg. Suppose a consumer buys units wheat at a price Rs. 40/kg now, when the price falls to Rs. 30/kg. his purchasing power or the real income increase which induces him to buy more units of wheat.
- (v) **Substitution Effect :** As the price of a commodity falls the consumer wants to substitute this good for those good which now have become relatively expensive e.g. among the two substitute goods tea and coffee, price of tea falls then consumer substitutes tea for coffee. This is caused the 'Substitution effect' which makes the demand curve sloped downwards.

In a nutshell, with a fall in price more units are demanded partly due to income effect and partly due to substitution effect. Both of these are jointly known as the 'price effect'. Due to this negative price effect the demand curve slopes downwards.

Q.7 What are the exceptions to the Law of Demand?

Ans.: Exceptions to the law of demand refers to such cases where the law of demand does not operate, i.e., a positive relationship is established between price and quantity demanded.

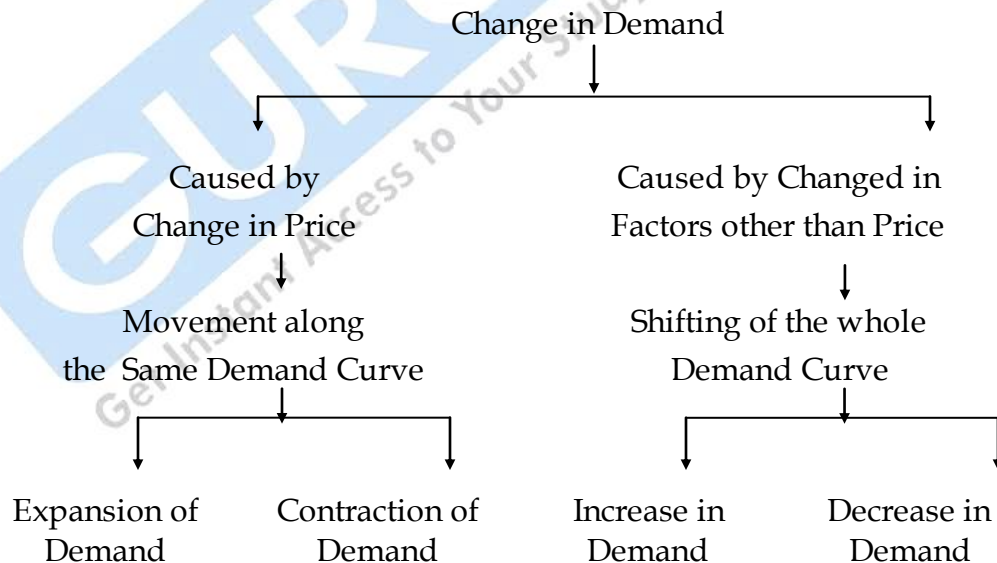
- (i) **Giffen Goods :** Sir Giffen made an interesting observation in 1845 during famine in Ireland. When price of potatoes went up, poor

people purchased more quantity of potatoes instead of less quantity as expected from the law of demand. The reason was that between two items of food consumption meat and potatoes- potatoes were still cheaper, with the result that the poor families purchased more of potatoes and less of meat. This is known as Giffen effect which is seen in cheap necessary foodstuffs. Again, the word 'Giffen' is not synonymous with 'inferior'. It simply refers to those goods which have a positive relationship with price.

- (ii) **Conspicuous Goods or Goods of Ostentation**
- (iii) **Conspicuous Necessities**
- (iv) **Future Expectations About Prices**
- (v) **Change in Fashion**
- (vi) **Ignorance**
- (vii) **Emergency**

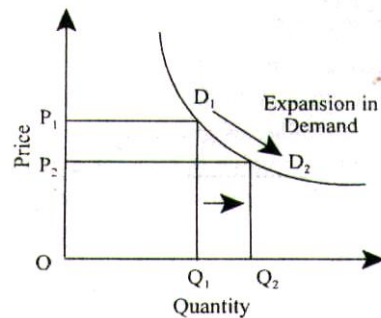
Q.8 What is meant by Change in Demand?

Ans.:



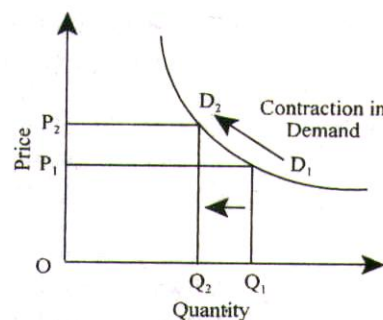
- (1) **Movement along the Same Demand Curve :** When due to change in price alone demand changes, it is expressed by different points on the same demand curve.

- (i) **Expansion of Demand :** When with a fall in price, demand for a commodity rises (other things being equal it is called expansion of demand. It is represented through the downward movement along the demand curve.



In this figure, D_1 D_2 is the demand curve of apples. Other things being equal, at price P_1 , Q_1 quantity of apple is purchased. As the price of the apple goes down say P_2 more quantity Q_2 of apples is purchased. This change in demand D_1 to D_2 along the demand curve shows Expansion of demand.

- (ii) **Contraction of Demand :** When with an increase in price, demand for a commodity falls (other things being equal) It is called contraction of demand. It is represented by upward movement along the demand curve.



In this figure, D_1 D_2 is the demand curve of apples. Other things being equal at price P_1 , Q_1 , quantity of apples are

purchased. As the price rises to P_2 only Q_2 quantity of apples are purchased.

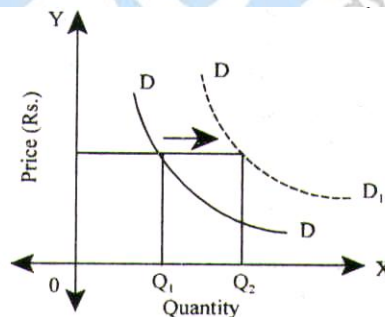
This change in demand from K_1 to K_2 along the demand curve shows contraction in demand.

(2) **Shifting of Whole Demand Curve:-** When due to change in factors other than price of the same commodity like change in taste, income etc. the demand changes, the entire demand curve shifts either upwards or downwards.

(i) **Increase in demand:-** When due to favorable change in factors other than the price the demand of the commodity rises it is called increase in demand. It is represented by a right ward shift in the demand curve.

Increase in demand takes place in two ways :-

- (a) When more purchase takes place at same price.
- (b) When same purchase takes place at more price.

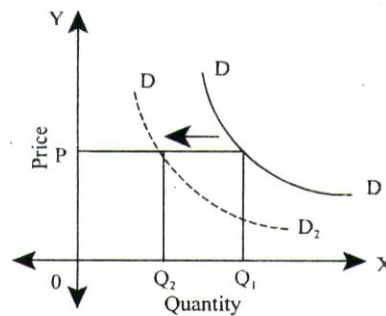


Here DD is the original demand curve where Q_1 quantity is bought at a P price. Due to the change in factors the quantity purchased increases to Q_2 at the same price P . This causes the demand curve to shift upward or to the right. This shift in demand curve is called increase of demand.

(ii) **Decrease in Demand :** When due to change in factors other than the price the demand of the commodity falls, it is called decrease in demand. It is represented by a left ward shift in the demand curve.

Decrease in demand takes place in two ways :-

- (a) When less purchase takes place at same price.
- (b) When same purchase takes place at less price.



Here DD is the original demand curve where Q_1 quantity is bought at P price. Due to the change in other factors the quantity purchased decreases to Q_2 at same price P. This cause the demand curve to shift downward or leftward. This shift in demand curve is called decrease in demand.

Q.9 What is Elasticity of Demand?

Ans.: Meaning : The elasticity of demand measures the responsiveness of the quantity demanded of a good to change in its quantitative determinant. Types Elasticity of demand are as follows :-

- (i) Price Elasticity of Demand
- (ii) Income Elasticity of Demand
- (iii) Cross Elasticity of Demand

Q.10 What is Price Elasticity of Demand?

Ans.: The Degree of responsiveness of the quantity demanded of a good to a change in its prices of goods.

Methods to measures the elasticity of demand.

- (1) % or Proportionate Method
- (2) Total Outlay or Total Expenditure Method

- (3) Point Elasticity or Geometric Method
 (4) Arc Elasticity Method
 (1) % or Proportionate Method :

$$E_p = \frac{\% \text{Change in Quantity}}{\% \text{Change in Price}}$$

$$E_p = \frac{\frac{\text{Change in Quantity}}{\text{Original Quantity}} \times 100}{\frac{\text{Change in Price}}{\text{Original Price}} \times 100}$$

$$E_p = \frac{\text{Change in Quantity}}{\text{Original Quantity}} \times \frac{\text{Original Price}}{\text{Change in Price}}$$

Symbolically;

$$E_p = \frac{\frac{\Delta q}{q} \times 100}{\frac{\Delta p}{p} \times 100}$$

$E_p \Rightarrow$ Price Elasticity

$q \Rightarrow$ Quantity

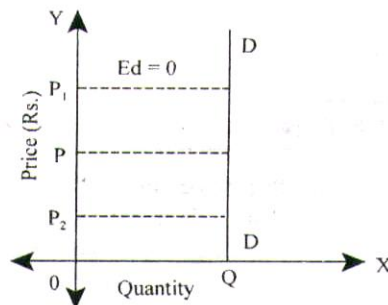
$p \Rightarrow$ Price

$$E_p = \frac{\Delta q}{q} \times \frac{p}{\Delta p} = \frac{\Delta q}{\Delta p} \times \frac{p}{q}$$

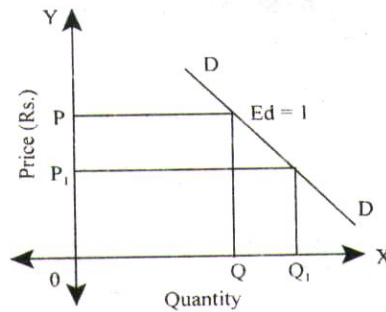
$\Delta \Rightarrow$ A very small change

There are five degrees of Price Elasticity of Demand :-

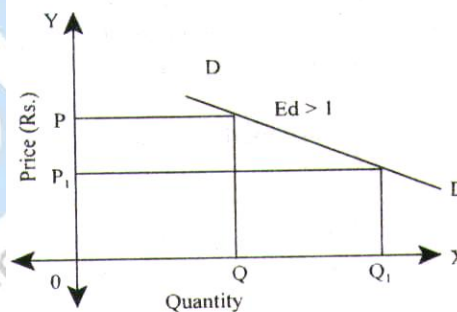
- (i) **Perfectly Elastic Demand :** A Perfectly elastic demand is one in which demand is infinite at the prevailing price. It is a situation where the slightest rise in price causes the quantity demanded of the commodity to fall to zero.



- (ii) **Perfectly Inelastic Demand** : Perfectly inelastic demand is one in which a change in quantity demanded. It is a situation where even substantial changes in price leave the demand unaffected.

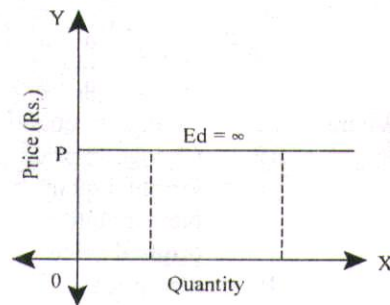


- (iii) **Unitary Elastic Demand** : unitary elastic demand is one in which the quantity demanded changes by exactly the same percentage as the price. It is a situation when change in quantity demanded in response to change in price of the commodity is such that total expenditure of the commodity, remains same.



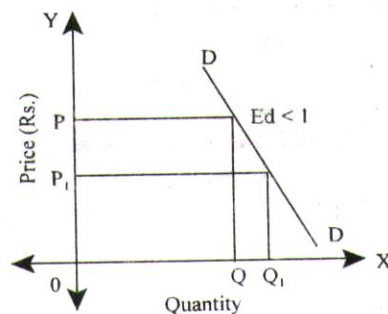
- (iv) **Greater than Unitary Elastic Demand or Elastic Demand** : A elastic demand is one in which the quantity demanded changes by a larger percentage than the price. It is a situation when change in quantity demanded in response to change in price of the commodity is such that the total expenditure on the commodity

increase when prices decreases and total expenditure decreases when price increases.



- (v) **Less than Unitary Elastic Demand or Inelastic Demand :** Inelastic Demand is one in which quantity demanded changes by a smaller percentage than the change in price.

It is a situation when change in quantity demanded in response to change in price of the commodity is such that total expenditure on the commodity decreases when price falls and total expenditure increases when price rises.



- (2) **Total Outlay Method :** Under this the elasticity of demand can be measured by considering the changes in price and the subsequent change in the total quantity of goods purchased and the total amount of money spent on it. This method gives only the nature of elasticity and not the exact numerical value.

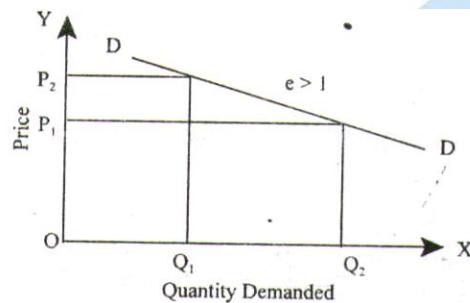
Degree of price elasticity of demand according to this method as follows :

- (i) **Elastic Demand** : The demand for a commodity is elastic when the total expenditure on it increases with a fall in price. eg.

Price (p)	Quantity (q)	Total Expenditure (p x q)
Rs. 10/kg	2kg	Rs.20
Rs. 5/kg	5kg	Rs.25

In other words elasticity of demand in this case is greater than unity.

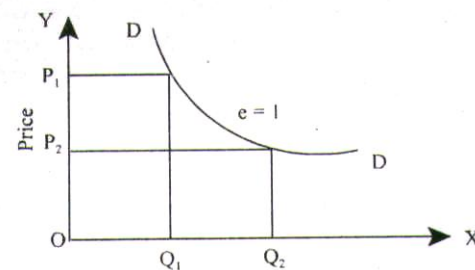
Diagrammatically :-



- (ii) **Unitary Elastic Demand** : here, with a fall in price the total outlay of the consumers on that commodity remains the same, though he purchase more in terms of units. Elasticity in this case equals to one.

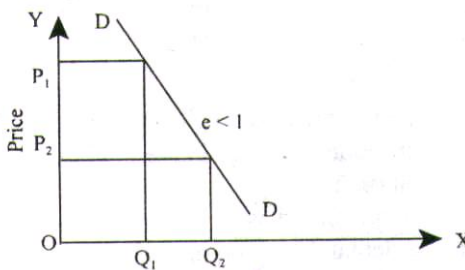
Price (p)	Quantity (q)	Total Expenditure (p x q)
Rs. 10/kg	2kg	Rs.20
Rs. 5/kg	4kg	Rs. 20

Graphically :-



- (iii) **Inelastic demand :** A commodity will have inelastic demand when with a fall in its price the total expenditure on it also falls. Here, the elasticity is less than unity. e.g.

Price (p)	Quantity (q)	Total Expenditure (p x q)
Rs. 10/kg	3kg	Rs.30
Rs. 4/kg	5kg	Rs.20



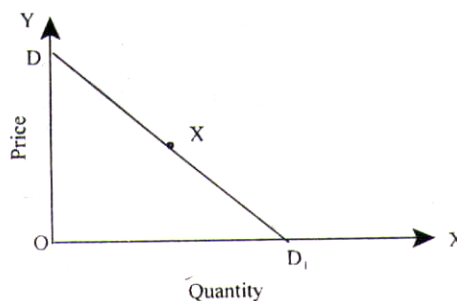
- (3) **Point Elasticity Method :** In this method we measure elasticity at a given point on the demand curve. Here we make use of derivatives rather than finite changes in price and quantity. Point elasticity can also be calculated as :-

Lower segment on the demand curve

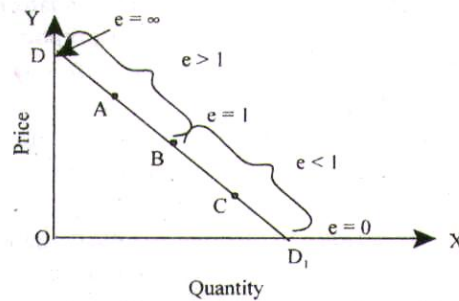
Upper Segment on the demand curve

The elasticity of demand at point x on the demand curve DD1 is

$$\frac{XD^1}{XD} \cdot$$



Again, elasticity of demand is different at various points on the demand curve. This may be graphically shown as :-



Thus we can see that as we move from point D1 to D2 the elasticity goes on increasing. At the mid-point it is equal to one at D it is infinity and at D1. it is zero.

- (4) **Arc Elasticity** : It is a measure of the average responsiveness to price change exhibited by a demand curve over some finite stretch

$$E_d = \frac{\frac{\text{Change in Quantity Demand}}{\text{Original Quantity plus Quantity after Change}}}{\frac{\text{Change in Price Demand}}{\text{Original Price plus Price after Change}}}$$

In notation form it can be expressed as :-

$$E_d = \frac{\frac{\Delta q}{q_1 + q_2}}{\frac{\Delta p}{p_1 + p_2}} = \frac{\Delta q}{\Delta p} \times \frac{p_1 + p_2}{q_1 + q_2}$$

$\Delta q \Rightarrow$ Change in quantity

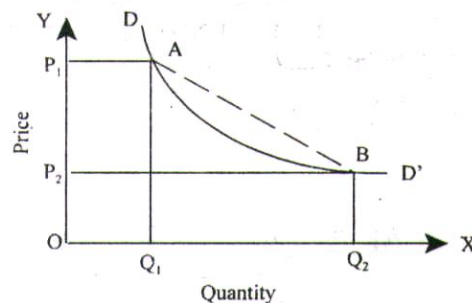
$\Delta p \Rightarrow$ Change in price

$q_1 \Rightarrow$ Original quantity

$q_2 \Rightarrow$ New quantity

$p_1 \Rightarrow$ Original price

$p_2 \Rightarrow$ New price



Q.11 What are the Determinants of Price Elasticity of Demand?

- Ans.:** (i) Nature of Commodity
 (ii) Substitute Goods
 (iii) Position of a Commodity in a Consumer's Budget
 (iv) Number of Uses
 (v) Time Period
 (vi) Consumer Habit
 (vii) Joint or Tied Demand
 (viii) Price Expectation

Q.12 What is Income Elasticity of Demand?

Ans.: Income elasticity of demand is the ratio of change in demand to the change in income.

$$E_i = \frac{\% \text{ Change in Quantity Demanded}}{\% \text{ Change in Income}}$$

$$E_i = \frac{\frac{\text{Change in Quantity}}{\text{Original Quantity}} \times 100}{\frac{\text{Change in Income}}{\text{Original Income}} \times 100}$$

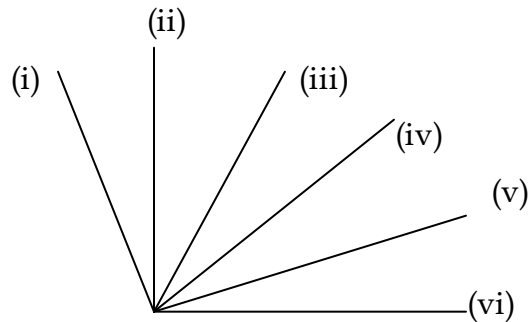
$$E_i = \frac{\text{Change in Quantity}}{\text{Original Quantity}} \times \frac{\text{Original Income}}{\text{Change in Income}}$$

Symbolically;

$$E_i = \frac{\frac{\Delta q}{q} \times 100}{\frac{\Delta y}{y} \times 100}$$

Where, $E_i \Rightarrow$ Income Elasticity
 $q \Rightarrow$ Quantity
 $y \Rightarrow$ Income
 $\Delta \Rightarrow$ A very small change

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

Q.13 What are the Degrees of Income Elasticity of Demand?**Ans.:**

- (i) **Negative Income Elasticity of Demand** : Negative Income Elasticity of Demand is one in which demand for a commodity falls as the income rises.
This holds good for inferior goods.
- (ii) **Zero Income Elasticity of Demand** : Zero income elasticity of demand is one in which demand of a commodity does not change as the income changes.
This holds good for essential goods.
- (iii) **Greater than Zero but less than One Income Elasticity of Demand** : Greater than zero but less than one income elasticity of demand is one in which demand for a commodity rises less than in proportion to a rise in income.
- (iv) **Unitary Income Elasticity of Demand** : Unitary income elasticity of demand is one in which the demand for a commodity rises in the same proportion as the rise in income.
- (v) **Greater than Unitary Income Elasticity of Demand** : Greater than unitary income elasticity of Demand is one in which the demand for commodity rises more than in proportion to rise in income.

Q.14 What is Cross Elasticity of Demand?

Ans.: The cross elasticity of demand is the responsiveness of demand for commodity X to change in price of commodity Y and is represented as

follows :-

$$E_c = \frac{\text{Proportionate Change in the Quantity Demanded of Commodity X}}{\text{Proportionate Change in the Price of Commodity Y}}$$

Symbolically:

$$E_c = \frac{\Delta q_X}{\Delta p_Y} \cdot \frac{p_Y}{X}$$

The relationship between X and Y commodities may be substitute as in case of tea and coffee or complementary as in the case of ball pens and refills.

- (i) Cross elasticity = Infinity where Commodity X is nearly a perfect substitute for Commodity Y
- (ix) Cross Elasticity = Zero where Commodities X and Y are not related
- (x) Cross Elasticity = Negative where Commodities X and Y are complementary

Thus, if E_c approaches infinity, means that commodity X is nearly a perfect substitute for commodity Y. On the other hand, if E_c approaches Zero it would mean that the two commodities in question are not related at all. E_c shall be negative when commodity Y is complementary to commodity X.

Q.15 What are the factor affecting Elasticity of Demand?

Ans.: (i) **Nature of Commodity :** Ordinarily, necessities like salt, Kerosene, oil, match boxes, textbooks, seasonal vegetables, etc. have less than unitary elastic demand. Luxuries like air conditioner, costly furniture, fashionable garments etc. have greater than unitary elastic demand. The reason being that change in their price has a great effect on their demand. Comforts like milk, transistor cooer, fans etc have neither very elastic nor very inelastic demand. **Jointly Demanded Goods** like car & petrol, pen & ink, camera & films etc. have ordinarily in elastic demand for example rise in price of petrol will not reduce its demand if the demand for cars has not decreased.

- (ii) **Availability of Substitutes** : Demand for those goods which have substitute are relatively more elastic. The reason being that when the price of commodity falls in relation to its substitute, the consumer will go in for it and so its demand will increase. Commodities have no substitute like cigarettes, liquor etc. have inelastic demand.
- (iii) **Different Uses of Commodity** : Commodities that can be put to a variety of uses have elastic demand, for instance, electricity has multiple uses. It is used for lighting, room-heating, air-conditioning, cooking etc. If the tariffs of electricity increase, its use will be restricted to important purpose like lighting. It will be withdrawn from important uses. On the other hand, if a commodity such as paper has only a few uses, its demand is likely to be inelastic.
- (iv) **Postponement of the Use** : Demand will be elastic for those commodities whose consumption can be postponed for instance demand for constructing a house can be postponed. As a result demand for bricks, cement, sand etc. will be elastic. Conversely goods whose demand can not be postponed, their demand will be inelastic.
- (v) **Income of Consumer** : People whose incomes are very high or very low, their demand will ordinarily be inelastic. Because rise or fall in price will have little effect on their demand. Conversely middle income groups will have elastic demand.
- (vi) **Habit of Consumer** : Goods to which a person becomes accustomed or habitual will have inelastic demand like cigarette, coffee tobacco. Etc. It is so because a person cannot do without them.
- (vii) **Proportion of Income Spent on a Commodity** : Goods on which a consumer spends a very small proportion of his income, e.g. toothpaste, needles etc. will have an inelastic demand. On the other hand goods on which the consumer spends a large proportion of his income e.g. cloth etc. their demand will be elastic.
- (viii) **Price Level** : Elasticity of demand also depends upon the level of price of the concerned commodity. Elasticity of demand will be

high at higher level of the price of the commodity and low at the lower level of the price.

- (ix) **Time Period :** Demand is inelastic in short period but elastic in long period. It is so because in the long run, a consumer can change his habits more conveniently in the short period.

Q.16 What is the importance or significance of Elasticity of Demand?

- Ans.:** (i) **Helpful in Price Determination :** The concept of elasticity helps a monopolist in fixing prices for his product. He will fix a higher price in those markets where there is inelastic demand for his product. Conversely, he will fix a lower price for the same product in some other segments of the market where there is elastic demand for that particular product. In this way he can discriminate the price to maximize his profit.
- (ii) **Useful for Government :** Government fixes a higher tax rates in case of goods having inelastic demand and a lower tax rate for good having elastic demand.
- (iii) **useful in International Trade :** It helps to calculate the terms of trade and the consequent gain from foreign trade. If the demand for home product is inelastic, terms of trade will be profitable to the home country.
- (iv) **Helpful in Forecasting Demand :** It is possible to forecast the demand for a particular commodity by analyzing its states of elasticity.
- (v) **Elasticity of Demand :** Elasticity of demand also helps in taking decision regarding devaluing or revaluing a country in terms of foreign currency.

Chapter-3

Demand Forecasting

Q.1 What is Demand Forecasting?

Ans.: A forecast is tomorrow's expectation based on yesterday's achievement and today's plans.

Phillip Kotler : "The company forecast is the expected level of sales based on chosen market plan and assumed marketing environment."

Characteristics :

- (i) Explain potential demand for the commodities for specified future period of time.
- (ii) It is near expectation.
- (iii) It may in physical or monetary.
- (iv) At firm or industry level. At short period or long period.
- (v) Based on past achievement.
- (vi) Statistical tool are used.
- (vii) Based on today's plan for future.
- (viii) Based on experience.

Objectives :

- (1) **Short Period :** Micro level means firm or industry level for short time.
 - (i) **Production Planning :** Over production may leads price of commodity goes down & vice versa, which can be avoided.

- (ii) **Input Planning** : Uninterrupted supply of raw material & labour & other factor of production.
- (iii) **Pricing Policy** : Manage in way so the price are not low in a boom & vice versa.
- (iv) **Sales Targeting** : Decide region-wise sales representative of firm.
 - Appraise and decide their performance.
 - Watch firm competitive in market.
- (v) **Financial Planning** : Working capital require for short period or one cycle.
- (vi) **Optimum Capacity Utilization**
- (2) **Long Period** :
 - (i) **Expansion Planning** : Depends on future potential demand.
 - (ii) **Long Term Input Planning** : Gradual and regular supply of inputs.
 - (iii) **Cost Consciousness** : Demand forecast make scale of operation who generate economies of diseconomies.

Q.2 What are the determinate of Demand Forecasting?

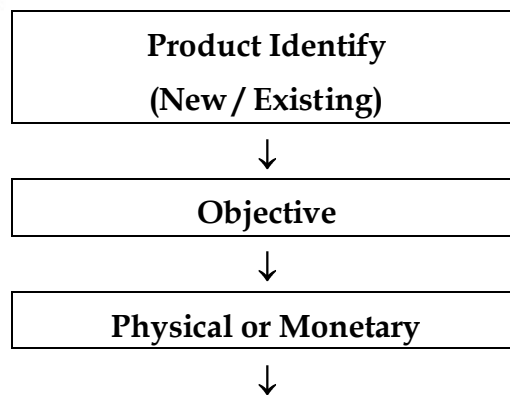
Ans.: Determinate of Demand Forecast are as follows :-

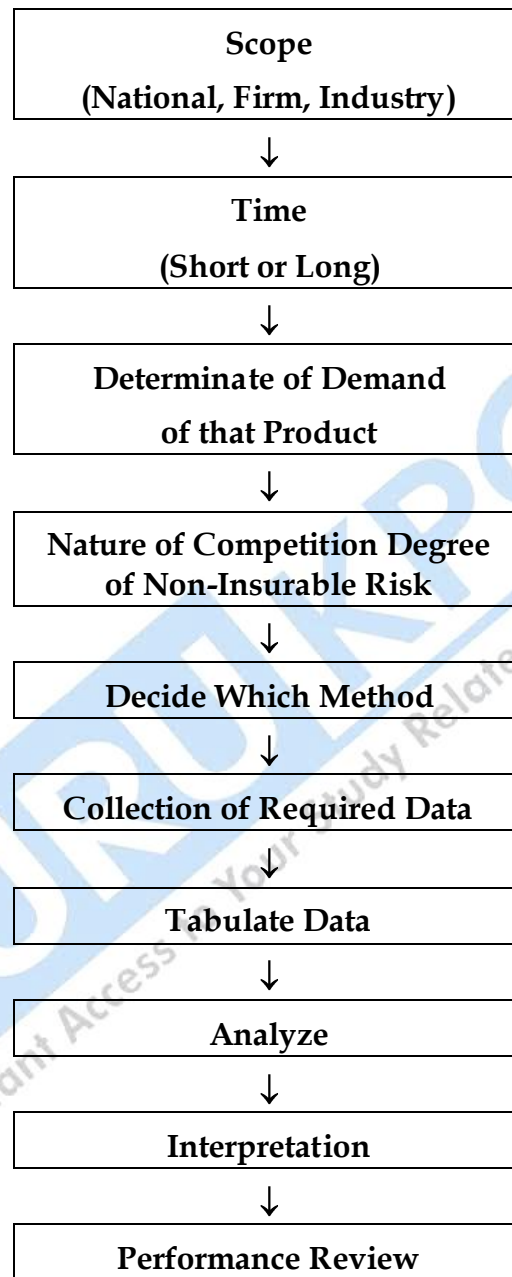
- (i) **Time Dimension** : According to objective of short operation or long planning period.
- (ii) **Level of Forecasting** : At national level, at firm level and at industry level.
 - At national level, we need federation or association whose use secondary sources.
 - At firm level, managerial decision.
- (iii) (a) **General Demand Forecast** : Done at whole firm level.
- (b) **Specific Demand Forecast** : Done at commodity-wise, region-wise, sector-wise etc.

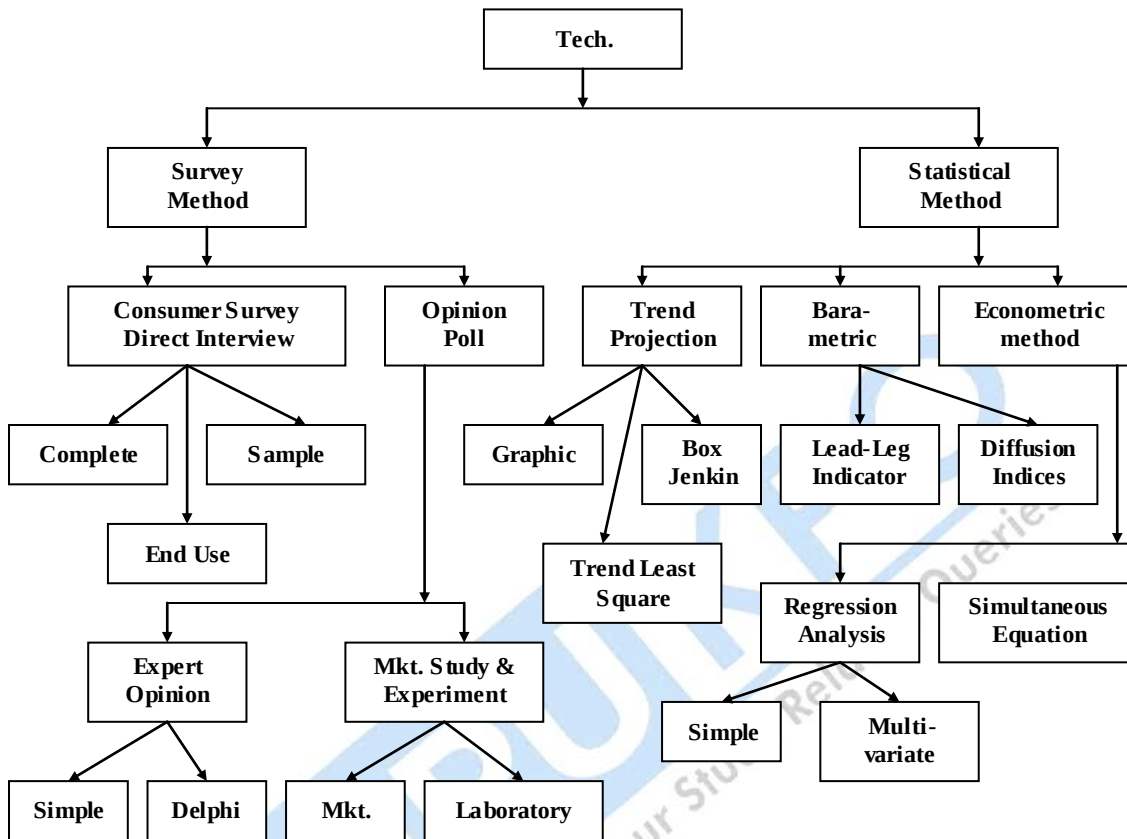
- (iv) **Classification of Goods :** According to nature of commodity -
- Durable, Nondurable,
 - Capital, Consumable,
 - Defense Time,
 - Piece Time,
 - Single Use,
 - Multiple Use,
 - Export-Import Good etc.
- (v) **Commodity Position in the Market :** Demand forecasting of existing product is easy rather than new one.
- (vi) **Others :**
- (a) Type of risk involved
 - (b) Nature of competition
 - (c) Uncertainties
 - (d) Relating to market
 - (e) Govt. policies
 - (f) Society environment
 - (g) Eco-political environment

Q.3 Give the different phases of Demand Forecasting.

Ans.: Phases of Demand Forecasting (Process) :







Q.4 Explain some important method of Demand Forecasting.

Ans.: Methods of Demand Forecasting :

- (1) **Survey Method :** Survey methods are generally used where the purpose is to make short run forecast of demand. Under this method consumer surveys are conducted to collect information about their intentions and future purchase plans.

This method includes :-

- (i) Survey of potential consumers to elicit information on their intentions and plan.
- (ii) Opinion pole of experts i.e., opinion survey of market experts and sales representatives and through market studies and experiments.

- (a) According to consumer's survey method, the experts on a particular product approach the buyers to know about the particular product under study. In this method, the burden of forecasting goes to the buyers.
- (b) Opinion survey method is also known as sales force opinion method. Salesmen are considered to be the nearest persons to the consumers.

Thus it is assumed that salesman have the most accurate information regarding the choice of the consumers. The firm collects information from all its salesman and then forecast is made.

Advantages :

- It does not require mathematical calculations.
- It is based on the first hand knowledge.
- It is also useful for estimating demand of new products.

Demerits :

- It is a subjective method.
- It is only suitable for short term forecasting.
- Salesman may lack vision.

- (2) **Delphi Method :** Delphi method of demand forecasting is an extension of the expert opinion method. This method is used to consolidate the divergent expert opinions and to arrive at a compromise estimate of future demand.

In this method, the experts are provided information estimates of forecasts of other experts along with the underlying assumptions. The experts may revise their own estimates in the light of the forecasts of other experts.

- (3) **Market Studies and Experiments :** An alternative method of collecting necessary information regarding demand is to carry out market studies and experiments on consumer's behaviour under actual, though controlled, market conditions. Market experiments can be replaced by consumer clinics or controlled laboratory experiments.

Demerits :

- They are very expensive.
- Experiments can be conducted on a small scale.
- It is short term and conducted in controlled condition.

- (4) **Trend Projection Method :** It is also called as secular or long-term trend. It is the basic tendency of the output and sales of a firm to grow or decline over a period of time. Trend projection method is a classical method of business forecasting. This method is essentially concerned with the study of movements of variable through time. The use of this method requires a long and reliable time series data. Several methods can be used to measure the trend. Some of them are :

- (i) **Graphical Method :** According to this method, all the values of output and sale for different years are plotted on a graph and a smooth freehand curve is drawn passing through as many points as possible.

Merits :

- It is a simple method.
- It is a dynamic method.
- Comparison is easy.
- To understand, It requires no much knowledge.

Demerits :

- It is slightly subjective.
- Accuracy is not possible.
- It may give misleading result.

- (ii) **Regression Method :** This method establishes the relation between quantity demand and more or more independent variable.

It can be expressed as : $y = a + bx$

Where, $x, y \Rightarrow$ Variables

$a, b \Rightarrow$ Constants

Merits :

- Helps to study dependence of one variable on the other.
- Used in policy formation.
- Highly useful method for research.

Demerits :

- Only applied in linear dependence.
- May not reveal accurate results.

(iii) **Least Square Method :** It is a mathematical procedure of fitting a curve. The equation for the line of the best fit is :

$$y = a + bx$$

Where, y => Sales

a b => Values to be estimated

x => Unit of time

In order to solve the equation, we have to make use of the following normal equations :

$$\sum y = na + b\sum x$$

$$\sum yx = a\sum x + b\sum x^2$$

(5) **Leading Indicator Method :** There are three types of time series method i.e., leading series, coincident series and lagging series. The leading series are the data on variables that move up or down ahead of some other series. The coincident series moves along with some other series as bank rates. The rate at which private money tenders accepts deposits and lend to individuals are lagging series.

□ □ □

Chapter-4

Theory of Consumer's Behavior

Q.1 What is Utility?

Ans.: Utility is the capacity of a commodity to satisfy human wants. It is defined as a "**want satisfying power of a commodity**". It is a subjective concept and has no material existence. It is not inherent in a commodity but depends upon the mental make up of the consumer. The same commodity may have different degrees of utility for different persons. Utility cannot be equated with usefulness. A commodity may not be useful, yet it may have utility for a particular person.

Features of Utility :

- (i) **Utility is subjective in nature**
- (ii) **Utility is relative and variable**
- (iii) **Utility is not measurable**
- (iv) **Utility, usefulness and pleasure**
- (v) **Utility is Abstract**

There are two approaches for **measurement of utility** :

- (i) Measurement of utility in terms of money is called **Cardinal Utility Approach**. The amount of money which a consumer is prepared to pay for a commodity in the indirect measurement of its utility.
- (ii) Measurement of utility in term of ordinal numbers like I, II, III and so on it is **Ordinal Approach**. In ordinal approach we may say that I is preferable to II etc.

Types of Cardinal Utility : Utility is of two types :-

- (i) **Total Utility :** It is the amount of utility derived from the consumption of all the units taken together at a time.
- (ii) **Marginal Utility :** It is the additional utility derived from additional unit of a commodity.

The total utility and marginal utility are closely related with each other. Their relationship can be illustrated as below:-

Relationship between Total Utility and Marginal Utility

Number of Apples	Total Utility	Marginal Utility
1	30	30
2	55	25
3	75	20
4	90	15
5	100	10
6	105	5
7	105	0
8	100	-5
9	90	-10
10	75	-15

The above table reveals the following :-

- (a) The marginal utility, before the point of satiety, is always positive, but with the consumption of every additional unit of a commodity, it goes on diminishing.
- (b) The marginal utility accruing from the consumption of the various units of a commodity, no doubt, goes on diminishing, but the total utility accruing to the consumer goes on increasing at a diminishing rate.

- (c) The marginal utility falls to zero at the point of satiety, but the total utility remains constant and stops increasing further from this point onward. Thus, we can say that the total utility becomes maximum when the marginal utility falls to zero.
- (d) If the consumption of the commodity continues even beyond the point of satiety, then the marginal utility accruing from the various units becomes negative, and the total utility starts diminishing. Thus, we conclude that the total utility is maximum when the marginal utility falls to zero and when the marginal utility becomes negative, the total utility also starts diminishing.

Q.2 What is Marginal Utility Analysis?

Ans.: This theory was propounded by Prof. Alfred Marshall. Through this theory he explained how a consumer spends his income on different commodities so as to attain maximum satisfaction. The theory is based on certain assumptions which are as follows :-

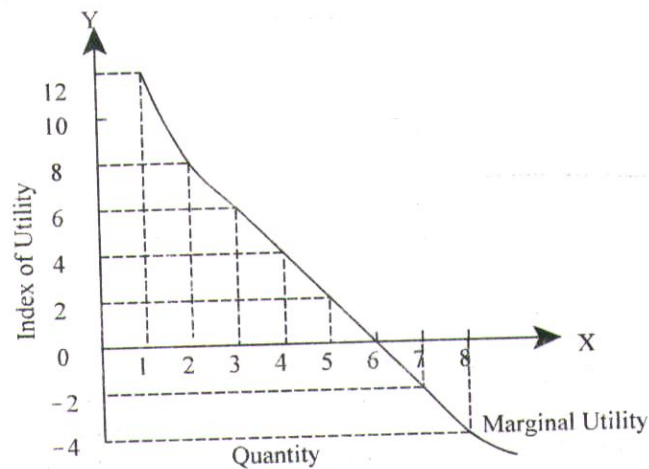
- (1) The Cardinal Measurability of Utility
- (2) Constancy of the Marginal Utility of Money
- (3) The Hypothesis of Independent Utility
- (4) Rationality

Q.3 What is the Law of Diminishing Marginal Utility?

Ans.: The law is based on an important fact that although total wants are unlimited, each single want is individually satiable. It means that since each want is satiable, the intensity of want goes on diminishing as the consumer goes on increasing the units of consumption. This law is also known as '**Gossen's First law.**'

To put it on Marshall's Word, "The additional benefit which a person derives from a given increase of his stock of thing diminishes with every increase in the stock that he already has."

Units	Total Utility	Marginal Utility
1	12	12
2	20	8
3	26	6
4	30	4
5	32	2
6	32	0
7	30	-2
8	26	-4



The above table shows the total and marginal utilities derived by a consumer on consumption of a certain good. When the 1st unit is taken, total utility, is 12 units and marginal utility is also 12 units. Further, as he goes on 5th unit, the total utility increases, but at a diminishing rate, i.e. 20, 30, 32..... but marginal utility falls with every successive unit of consumption i.e. 8,6,4,2 when 6th unit is taken no addition is made to total utility and marginal utility falls to zero. Further, when units taken are increased to 7th and 8th units, total utility falls and marginal utility turns negative. This means that now at this stage the consumer may also derive

dissatisfaction instead of satisfaction. Hence, the consumer would restrict his consumption to 6th unit.

It can be seen from the given figure that the marginal utility curve goes on declining continuously, the law of diminishing marginal utility applies almost to all commodities. However, few exceptions are there as pointed out by some economists.

Exception to the Law :

- (i) Rare Commodities (ii) Alcohol (iii) Music
- (iv) Miser Man (v) Complementary Goods

Limitations of the law : The law of diminishing marginal utility is applicable only if the following hold good :-

- (i) The different units consumed should be identical in all aspects.
- (ii) The law may not apply to articles like gold, cash etc.
- (iii) The presence or absence of complementary or substitutes may affect the utility.
- (iv) The commodity should be consumed in standard units e.g. if first unit of water is given to a thirsty person by spoon, the second unit should be also given in spoon.
- (v) There should be continues consumption i.e. there should be no time gap or interval between the consumption of one unit and the other unit.

Q.4 Explain Law of Equi-Marginal Utility with its application and limitations.

Ans.: The consumer will distribute his money income between the goods in such a way that the utility derived from the last rupee spent on each good is equal. Means consumer is in equilibrium position when marginal utility of money expenditure on each good is the same. The marginal utility of money expenditure on a good or the utility of the last rupee spent on the good is equal to the marginal utility of the good divided by the price of that good.

Assumption of the Law :

- (i) Measurability
- (ii) Rationality
- (iii) Constancy of marginal utility of money
- (iv) Law of Diminishing Marginal Utility goods
- (v) No change in taste, preference, income & fashion
- (vi) No change in price of substitute & complementarily goods
- (vii) Divisibility of goods

$$MU_{Money} = \frac{MU_x}{P_x}$$

Consumer will be equilibrium in respect of the purchase of two goods x and y when,

$$\frac{MU_x}{P_x} = \frac{MU_y}{P_y} = MU_{Money}$$

Thus with several goods to buy with a given money income the consumer will maximizing utility and be equilibrium when the following condition prevails.

$$\frac{MU_x}{P_x} = \frac{MU_y}{P_y} = \dots\dots\dots = \frac{MU_n}{P_n} = MU_{Money}$$

MU of Goods X and Y

Units	MU_x	$\frac{MU_x}{P_x}$	MU_y	$\frac{MU_y}{P_y}$
1	20	10	24	8
2	18	9	21	7
3	16	8	18	6
4	14	7	15	5
5	12	6	12	4
6	10	5	9	3

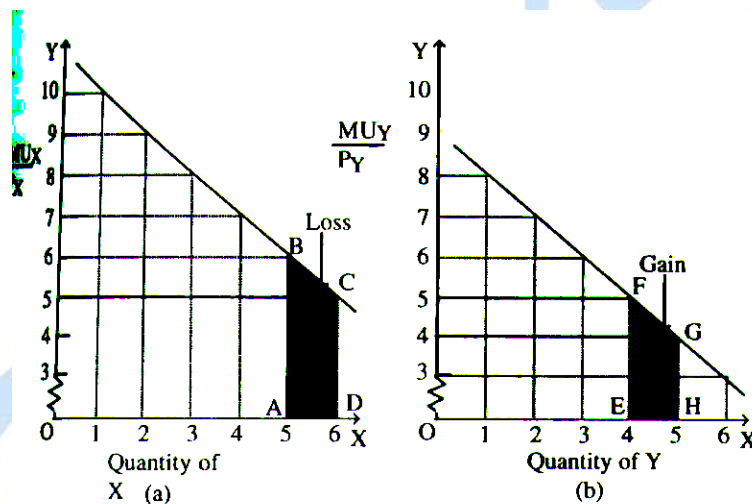
If the price of goods x and y be Rs.2 and Rs.3 respectively and the consumer has Rs.24 to spend on the two goods. It is clear that weighted

MU_x is equal to 5 units when the consumer purchases 6 units of goods x and weighted MU_y is equal to 5 units when the consumer purchases 4 units of goods y. Therefore, consumer will be in equilibrium when he is buying 6 units of goods x and 4 units of goods y. Thus in the equilibrium position where he maximizes his utility.

$$\frac{MU_x}{P_x} = \frac{MU_y}{P_y} = MU_{Money}$$

$$\frac{10}{2} = \frac{15}{3} = 5$$

Consumer equilibrium can be depicted graphically :-



When the consumer is buying OH of x and OK of y, then

$$\frac{MU_x}{P_x} = \frac{MU_y}{P_y} = MU_{Money}$$

This law of equi-marginal principle is applicable to :-

- (i) **Organization of Production**
- (ii) **Optimum Distribution of Factor Rewards**
- (iii) **Apportionment of General Resources**

Limitation :

- (i) Utility is not measurable.
- (ii) Marginal utility of money is not constant.
- (iii) Indivisibility of goods restricts the applicability of the law of equi-marginal utility.
- (iv) The law of equi-marginal utility is concerned only with one budgeted period.
- (v) The actual behavior of the consumer is not guided by the law of equi-marginal utility.

Q.5 What is Consumer's Surplus?

Ans.: Concept : Very often the price which a consumer pays for a commodity is less than what he is willing to pay for it, so that the satisfaction which he derives is more than the price paid for it. This extra satisfaction is termed as Consumer Surplus.

Definition : According **Alfred Marshall**, "The excess 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".

Thus, Consumer's surplus is the excess of utility obtained by the consumer over foregone or disutility suffered. It is measured by the difference between the maximum price which the consumer is willing to pay for a commodity and that which he actually does pay.

Symbolically

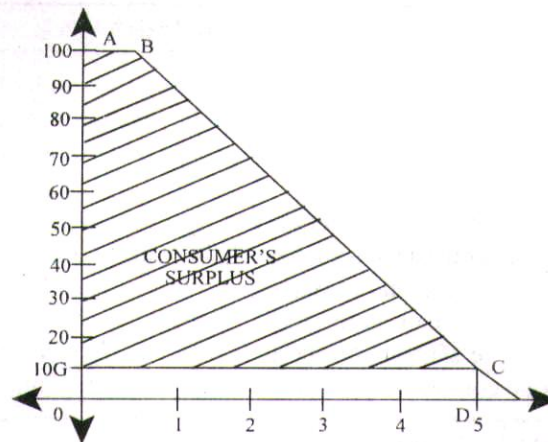
Consumer Surplus = (What a consumer is ready to pay) - (What is actually pays)

- Value in use - Value in exchange
- $\sum MU_x - (\text{Price} \times \text{No. of units})$
- $\sum MU_x(TU) - \sum P_x Q_x$

Marshall makes use of the demand curve to illustrate the concept of consumers surplus.

Unit of a Commodity	Marginal utility to the consumer	Price of the product	Consumer's surplus
1	100	10	$100-10=90$
2	80	10	$80-10=70$
3	55	10	$55-10=45$
4	35	10	$25-10=25$
5	10	10	$10-10=0$
	280	50	$280-50=230$

Thus from the above table it is clear that the consumer was willing to pay Rs. 280 for 5 units of a commodity. But he had to pay only 50. Thus the consumer's surplus is Rs. $280-50=$ Rs. 230.



In the given diagram ODCBA represents the total utility and OGCD represents the amount of utility made. Thus GCBA represents the consumer's surplus.

The concept of consumer's surplus is based on the law of diminishing marginal utility. This law states that with every successive increase in the quantity of a commodity consumed its marginal utility falls. This means that a rational consumer would restrict his consumption where marginal utility is equal to price. It means that the consumer will be in equilibrium when he purchases as many units of a good at which marginal utility is equal to price. Since the price is fixed for all the units of the good he gets

extra utility for his purchases except for there one at margin. This extra utility or surplus for the consumers is called 'Consumer's Surplus.'

Assumption :

- (i) Utility is measurable
- (ii) The marginal utility of money is assumed to be same.
- (iii) The utility of a commodity is dependent on its supply.
- (iv) The commodity in question has no close substitute.
- (v) $MU_m = \text{Constant}$
- (vi) Price of commodity given

Usefulness/Advantage :

- (i) It helps to make economic comparisons about the people's welfare between two places or countries.
- (ii) The concept is useful in understanding the pricing policies of a discriminating monopolist.
- (iii) It helps in evaluating the economic effect of a tax or bounty on a commodity.
- (iv) It helps to measure the benefits from international trade.

Limitations :

- (i) The assumption that utility and satisfaction bear definite relationship is not correct.
- (ii) The assumption that marginal utility of money is constant is most unrealistic.
- (iii) It is quite impossible to say that a commodity will have no close substitute.
- (iv) Consumer surplus cannot be measured in case of luxuries and bare necessities of life.
- (v) The assumption that in measuring the consumers surplus all determinants of demand except the price remains constants does not hold true.

Q.6 What is the concept of Indifference Curve Analysis?

Ans.: Every consumer has a scale of preference between two or more goods. A scale of preference consists of a number of alternative combinations of two or more things which gives the consumer the same amount of satisfaction. He also assumes the consumer to be rational and aware of his preference for any two or more goods. Since all the alternative combinations of the two goods give the consumer the same satisfaction. If he chooses one combination he is indifferent about the other combinations.

Combination	Commodity X	Commodity Y	Satisfaction
1	2	20	2000 calories
2	3	16	2000 calories
3	4	15	2000 calories
4	5	12	2000 calories
5	6	9	2000 calories

All the five combinations of commodity X and Commodity Y yield the same satisfaction to the consumer. It is a matter of indifference which of the five combinations the consumer prefers. The total satisfaction of all the combination is same.

Assumption :

- (i) **Rational Being**
- (ii) **Utility is Ordinal**
- (iii) **Diminishing Marginal Rate of Substitution** : Marginal rate of substitution (MRS) is the rate at which one commodity is substituted by the other, provided the utility derived is constant. In other words, it is the rate at which the consumer is prepared to exchange goods x and goods y. It can be better understood with the help of the following schedule:

Combinations	Commodity X	Commodity Y	Diminishing Marginal Rate of Substitution (DMRS)
A	1	10	4
B	2	6	3
C	3	3	2
D	4	1	-

The above table explains the Marginal Rate of Substitution (MRS). Initially, at combination A, the consumer origins up 4 units of y to get an additional unit of x, while both combinations give the same satisfaction. Hence, here the MRS is 4. Similarly, at combination B, the consumer is willing to spare 3 units of y and similarly, at combination C, the consumer is willing to spare 2 units of y and at combination D he is willing to agree to spare 1 unit of y. Thus, MRS goes on diminishing.

Reason for Declining MRS :

- (a) As the consumer goes on increasing consumption of good x, the intensity of desire for it falls. Thus sacrifices less and less quantity of Y for every increase in the commodity X.

The goods are imperfect substitutes of each other. Had they been perfect substitutes, the increase and decrease would affect each other and MRS would remain same.

Preference are Consistent and Transitive

Q.7 What is an Indifference Curve?

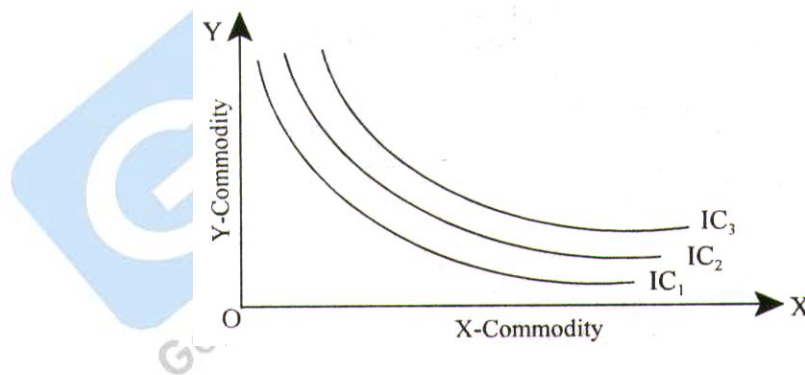
Ans.: The curve on which locus of various combination of two goods giving the same level of satisfaction are depicted, at which consumer is indifferent means he can either choose one point and other as all points given him same satisfaction because of this indifference or neutral state of consumer these curve are called Indifference Curve (by J. R. Hicks and R. G. D. Allen).

Properties of Indifference Curve :

- (i) **An Indifference Curve has Negative Slope :** It means that it slopes downwards from left to right which denotes that if the quantity of one commodity (y) decrease, the quantity of the other (x) must increase, if the consumer is to stay on the same level of satisfaction. The level of equal satisfaction is possible only on the negatively sloped curve.

If it is assumed that indifference curve is horizontal to x-axis, it would mean that either of the two (y in the above case) shall remain constant in terms of quantity and more units of x shall be consumed. But this is not possible as utility is quantitative. Similarly, Indifference curve cannot be parallel to y-axis for the same reason.

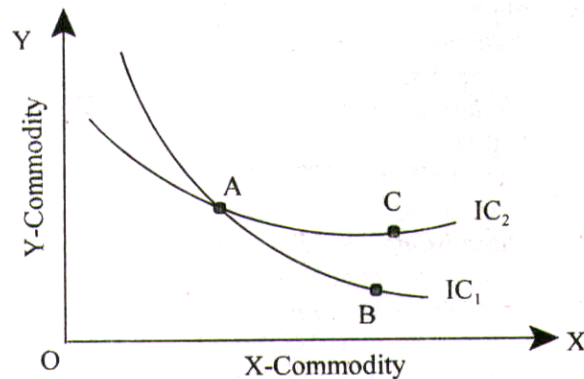
Again, if it is assumed that the indifference curve is positively sloped, it would mean that more units of both the commodities are consumed at all combinations. As the number of unit increase the level of satisfaction also rises. Hence this case is also not possible as utility is a cardinal concept.



- (ii) **Indifference Curves do not Intersect :** If they did at the point of intersection it would imply two different level of satisfaction, which is impossible. This can be made clear from the given figure.

In the figure, there are two indifference curves IC₁ and IC₂ which intersect at point A. Since, A and B lie on the same IC, the level of satisfaction is same. Same is the case with A and C. But it should be

noticed that point A shows two different levels of satisfaction as it lies both on the higher and lower indifference curves. Such a situation is not possible. Hence, indifference curves can never intersect.

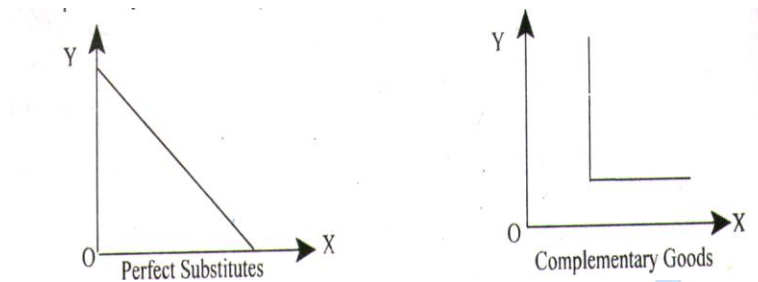


- (iii) **Indifference Curves are always Convex to the Origin :** This implies that the slope of an indifference curve decreases (in absolute terms). As we move along the curve from the left downwards to the right the marginal rate of substitution of the commodities is diminishing.

It has been observed that as more units of commodity (say x) is substituted for another commodity (Say y) the consumer is unwilling to part with less and less of the commodity (x) which is substituted with Y. This is called diminishing marginal rate of substitution (MRS). Hence, indifference curve are convex to the origin.

- (a) The indifference curve can never be concave to the origin as this shape will show increasing MRS.
- (b) It can not be a straight line with negative slope as it will show perfect substitutes and would name that the consumers over spends all income on one commodity. In actual practice, this does not happen.
- (c) It cannot be in the shapes of a right angle as it would mean that the two commodities are complementary. In this case

the indifference curve analysis breaks down as there is no possibility of substitution between the commodities.



- (iv) **A Higher Indifference Curve represents a Higher Level of Satisfaction than the Lower Indifference Curve :** It means that the further away from the origin an indifference curve lies, the higher the level of utility it denotes: bundles of goods on a higher indifference curve are pertained by the rational consumer.
- (v) **Indifference Curve need not be Parallel :**
 - (a) MRS is not equal at every time.
 - (b) IC based not on cardinal measurability
- (vi) **IC never touches any of two Axis (X and Y) :** When it happens means consumer purchase only one commodity which against the combination of two goods.

Q.8 What is a Budget Line?

Ans.: A budget line which is also known as Consumption Possibility Curve represents the different possibilities of the two goods which the consumer can afford with his given income. On the one hand it shows the **money income** of the consumer and on the other hand it shows the relative **price ratio**.

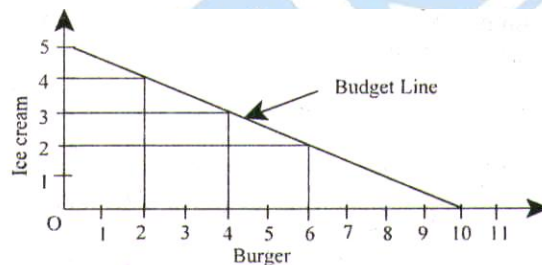
For Example : Let us suppose that a consumer has Rs. 100 to spend on ice cream and burgers which cost Rs. 10 and Rs. 20 respectively. He has 3 alternative possibilities before him :-

- (i) He may decide to buy burgers only in which case he can buy 5 burgers ($100/20$).
- (ii) He may decide to buy ice creams only in which case he can buy 10 ice creams ($100/10$).
- (iii) He may also decide to buy both ice creams and burgers which can be as follows:

(iv)

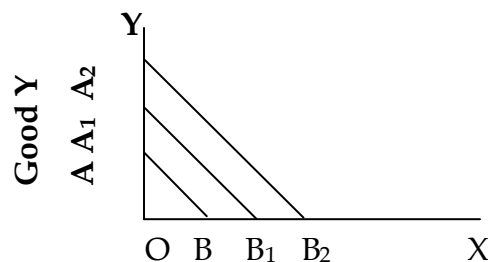
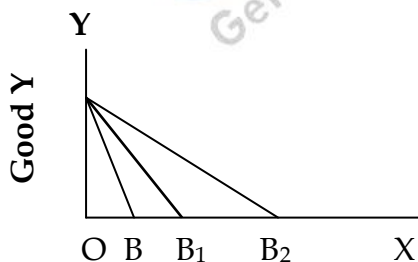
Burger	4	3	2	1
Icecream	2	4	6	8

These different possibilities when represented on a graph is known as budget line.



Shifting in Budget line : When total income in consumer changes budget line shifts. Upward when money income increase and vice-versa.

Rotation of Budget line : When price of commodity change the budget line rotate. Budget line rotate inward when price increases and vice-versa.



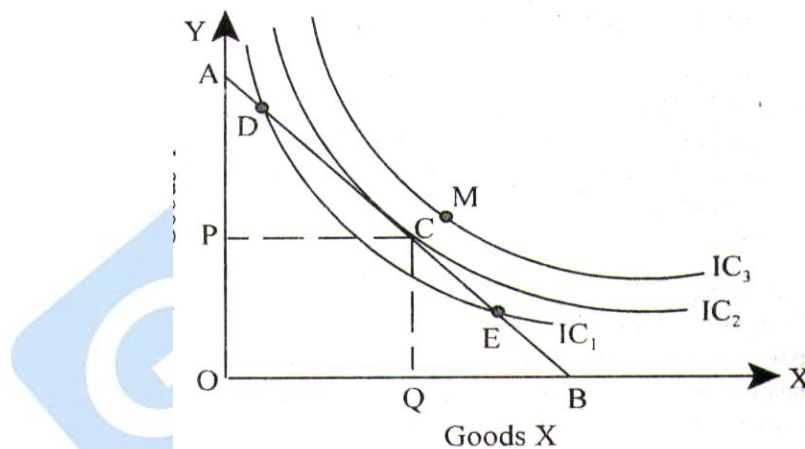
Q.9 What is Consumers Equilibrium?

Ans.: Consumers Equilibrium : A consumer is said to be in equilibrium when he is deriving maximum possible satisfaction from the given commodities and is not in a position to rearrange his purchases of goods, say x and y.

Assumptions in Consumers Equilibrium :

- (i) The consumer has an indifference map, which depicts his scale or order of preference for various combinations of two goods, say x and y.
- (ii) He has fixed income to spend on x and y completely.
- (iii) Prices of goods x and y are given and do not change.

Consumers equilibrium is illustrated in the figure given below :-



In order to determine consumer's point of equilibrium we make use of indifference map and budget line together.

In the given figure :-

- (a) AB is the budget line of the consumer.
- (b) IC1, IC2 and IC3 are different indifference curves, showing different levels of satisfaction.

In case he spends all his income on commodity x, he can buy OB quantity and similarly, if he spends his entire income on Y he can purchase OA quantity of it. However, if he wants to consume both the goods together he will try to reach a situation of equilibrium where sacrifice made by him equals the satisfaction derived.

Again, a rational consumer will try to reach the highest possible indifference curve while staying in his budget line or affording capacity.

As shown is the figure, the consumer has at his options combinations D, C and E, but he would option for combination at C because it will provide higher satisfaction in comparison to point. D and E since both these points are lying on the lower indifference curve i.e. IC1, further, points D and E are part of IC, the lower indifference curve and as known higher the IC, higher is the level of satisfaction.

It can also be seen the point M is another level on the further higher. But it is beyond the buying capacity of the consumer as can be seen. Hence, the consumers points of equilibrium is determined at point C where he will consume OQ units of goods x and of units of goods Y. At point C,

Slope of Indifference Curve = Slope of Budget Line

i.e.
$$\frac{M_x}{M_y} = \frac{P_x}{P_y}$$

For every act of consumer there will be a separate equilibrium position of the consumer. The condition that must be fulfilled by a consumer to be in equilibrium are :-

(i) $MRS_{xy} = \frac{P_x}{P_y}$ and (ii) Diminishing MRS

Hence, conclusively it can be said that given the indifference map and his budget line, the equilibrium is defined by the point of tangency of the budget line with the highest possible indifferent curve.

Q.10 What are the use of I.C. Analysis? Explain with criticism.

Ans.:

Importance :	Criticism :
(i) Use in consumer equilibrium	(i) Convexity
(ii) Use in production function	(ii) Irrationality
(iii) Use in international trade	(iii) Short run preference or ordering
(iv) Use in taxation	(iv) D.M.R.S.
(v) Use in consumer equilibrium	(v) Selling cost is not considered
(vi) Use in consumer surplus	(vi) Speculation demand consideration
(vii) Use in public finance	(vii) Ecogenuous environmental change those creates change in behavior
(viii) Use in deciding rationing & subsidies	
(ix) Use in portfolio investment decision	
(x) Use in index numbers	

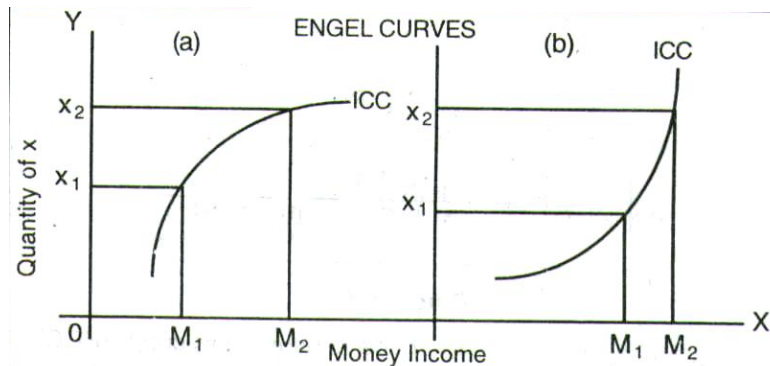
Q.11 What is change in Consumer Equilibrium.

Ans. : There is change in consumer equilibrium points due to change in Income of the consume & relative price ratio of commodity than it is called change in equilibrium.

- (i) **Price Consumption curve (PCC) :** PCC is locus of various combination points of consumer at various level of relative price ratio keeping money income constant.
- (ii) **Income consumption curve (ICC) :** ICC is the locus of various equilibrium points of the consumer at various level of money income, keeping relative price ratio constant.
- (iii) **Substitution effect :** When income, taste preference remain constant & price of both-commodity are changed & consumer rearrange purchase in manner that the consumer is neither better off nor worse off.

Q.12 What is Engel Curve?

Ans. : An Engel Curve shows the relationship between equilibrium quantity of one commodity purchased by the consumer and the level of his money income.

**Q.13 Point out Application, uses, scope, Importance of IC Analysis?**

Ans. : Important uses of IC Analysis as follows :

1. Use in production analysis
2. Use in exchange
3. Use in International Trade
4. Use in Taxation
5. Use in Consumer Equilibrium
6. Use in consumer surplus
7. Use in public finance
8. Use in deciding Rationing & subsidies
9. Use in portfolio Investment

Chapter-5

Supply Analysis

Q.1 What is Supply and Its Determinants?

Ans.: Meaning : “The supply of good is the quantity offered for sale in a given market at a given time at various prices”.

Thus, the important features of supply may be concluded as:-

- (i) It is the quantity of commodity offered for sale in the market at various prices.
- (ii) It is flow and is always measured in terms of time.

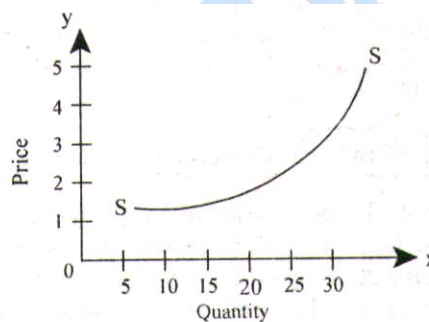
Determinants of Supply are follows :

- (i) Price of the Good
- (ii) Price of Related
- (iii) Price of Factors of Production
- (iv) State of Technology
- (v) Government Policy
- (vi) **Other Factor :** Includes various individual policies, exchange policies, trade policy etc. Time is another important factor influencing supply e.g. it is quite difficult to adjust the supply to the changing conditions in the short period. But such adjustments in supply become easy if the time period is long. Again, transparent and infrastructural facilities positively effect the supply of a good.

Q.2 What is the Law of Supply?

Ans.: In the Words of Dooley, "The law of supply states that other things remaining the same, higher the prices the greater the quantity supplied and lower the prices the smaller the quantity supplied".

Supply Schedule	
Price	Quantity Supplied
Rs. 1/kg.	5 kg.
Rs. 2/kg.	10 kg.
Rs. 3/kg.	15 kg.
Rs. 4/kg.	20 kg.
Rs. 5/kg	25 kg.

**Assumption of the Law :**

- (iv) It is assumed that incomes of buyers and sellers remain constant.
- (v) It is assumed that the tastes and preferences of buyers and sellers remain constant.
- (vi) Cost of all the factors of production is also assumed to be constant.
- (vii) It is also assumed that the level of technology remains constant.
- (viii) It is also assumed that the commodity is divisible.
- (ix) Law of supply states only a static situation.

Criticisms of Law of Supply :

- (i) It Explains Only the Static Situation

- (ii) Expectation of Change in the Prices in
- (iii) It does not Apply on Agricultural Products
- (iv) It does not Apply on Artistic
- (v) It does not Apply on the Goods of Auction

Q.3 Why Supply Curve upward sloping?

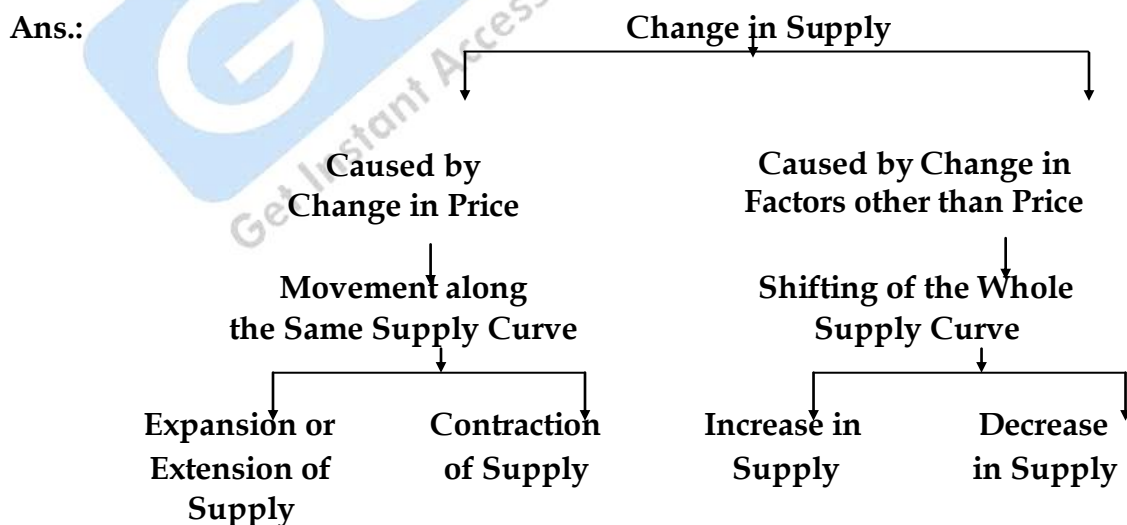
Ans.: The following reason are responsible through which supply increase with increase in price & vice-versa :-

- (i) Seller become ready to offer more goods from their old stocks.
- (ii) Producer increase their production in view of high profit possibilities.
- (iii) New firms enter the market visualizing higher profit which in turn, increase supply & vice-versa.

Exception of the law of supply :

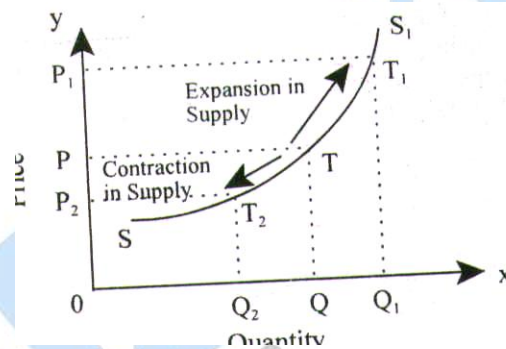
- (1) Social distinction goods
- (2) Antique goods
- (3) Labour supply curve
- (4) Agriculture commodity
- (5) Perishable commodity

Q.4 What is meant by Change in Supply?



- (1) **Movement along the Same Supply Curve :** When due to change in price alone, the supply changes it is expressed by different points on the same supply curve.
- (i) **Expansion of Supply :** When supply of a commodity increases on an increase in its price, it is called expansion. It is shown by upward movement of supply curve.
 - (ii) **Contraction of Supply :** when supply of a commodity decrease on a falls in its price, it is called contraction of supply, It is shown by downward movement of supply curve.

Both expansion and contraction of supply is shown as under :-



Original supply of commodity is OQ, at price OP.

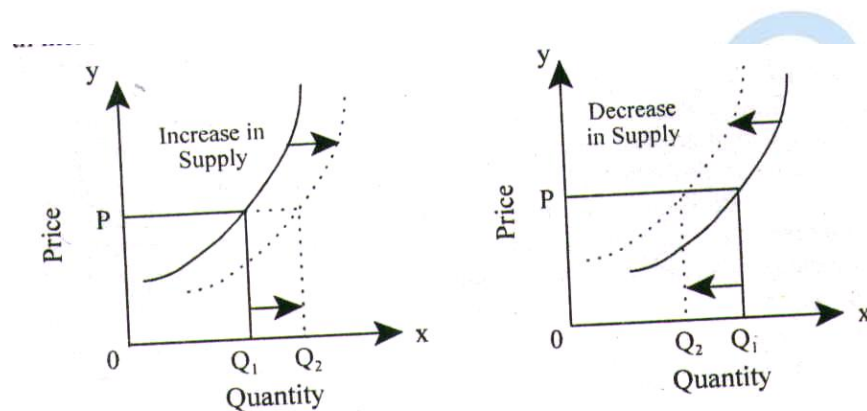
When the price increases to OP_1 , the supply increase to OQ_1 i.e. T_1 on supply curve. This is expansion of supply. When the price falls to OP_2 supply decreases to OQ_2 i.e. T_2 on supply curve. This is contraction of supply:

- (2) **Shifting of the Whole Supply Curve :** When due to change in factors other than price of the same commodity like change in income, change in taste etc, the supply changes it makes the supply curve shift either leftward or rightward of the original supply curve. This is called shifting of the supply curve.
- (i) **Increase in Supply :** When supply of a commodity increases due to change in any factor other than price it is called

increase in supply. It is shown by rightward shift of supply curve.

- (ii) **Decrease in Supply** : When the supply of a commodity decreases due to a change in any factor other than price, it is called decrease in supply. It is shown by leftward shift of the supply curve.

Both increase and decrease in supply is shown as under :-



Q.5 What is Elasticity of Supply?

Ans.: According to Samuelson, 'Elasticity of Supply is the degree of responsiveness of supply of a commodity to a change in its price.'

It is measured by dividing the percentage change in the quantity supplied of a commodity by the percentage change in its price. It can be expressed as follows :-

$$E_s = \frac{\% \text{ Change in Quantity Supplied}}{\% \text{ Change in Price}}$$

$$E_s = \frac{\frac{\text{Change in Quantity Supplied}}{\text{Original Quantity}} \times 100}{\frac{\text{Change in Price}}{\text{Original Price}} \times 100}$$

$$E_s = \frac{\text{Change in Quantity Supplied}}{\text{Change in Price}} \times \frac{\text{Original Price}}{\text{Original Quantity}}$$

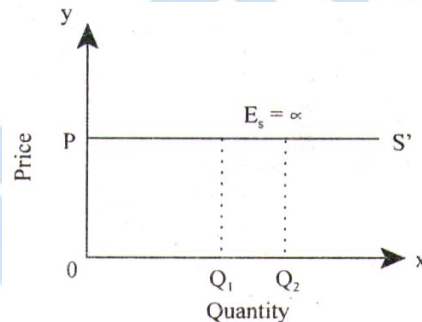
Symbolically,

$$E_s = \frac{\Delta q}{q} \div \frac{\Delta p}{p} = \frac{\Delta q}{q} \times \frac{p}{\Delta p} = \frac{\Delta q}{\Delta p} \times \frac{p}{q}$$

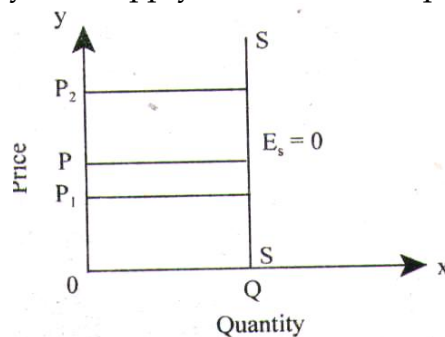
Where q $\Rightarrow$ Quantity
 P $\Rightarrow$ Price
 Δq $\Rightarrow$ Change in quantity supplied
 Δp $\Rightarrow$ Change in price

Q.6 What are the various degrees of Supply Elasticity?

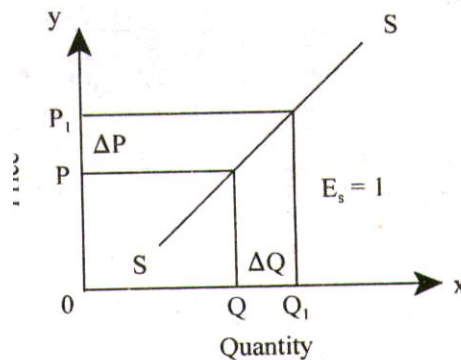
Ans.: (i) Perfectly Elastic Supply : Under this, supply tends to be infinitely elastic. It happens when nothing is supplied at a lower price but a small increase in price causes the quantity supplied to increase to an infinite extent indicating that the producers are ready to supply any quantity at that price. Here, the supply curve becomes parallel to x axis, i.e. $E_s = \infty$



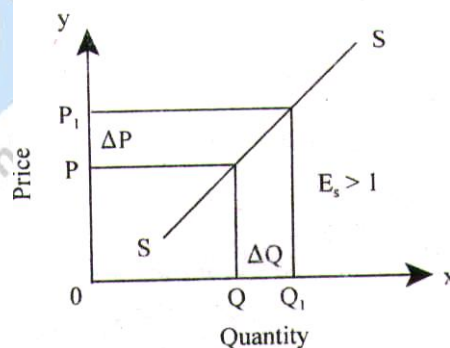
(ii) Perfectly Inelastic Supply : At times, the supply of a commodity may not change at all to any change in price. Such a commodity is said to have zero elasticity of supply or perfectly inelastic supply. Graphically, the supply curve drawn is parallel to Y axis.



- (iii) **Unit Elastic** : When the proportionate change in the quantity supplied is equal to the proportionate change in price, the supply of the commodity is said to be of unit elasticity. Here, the coefficient of elasticity of supply is equal to one, i.e. $E_s = 1$. As given in the figure, relative change in the quantity supplied (Δq) is equal to the relative change in the price (Δp).

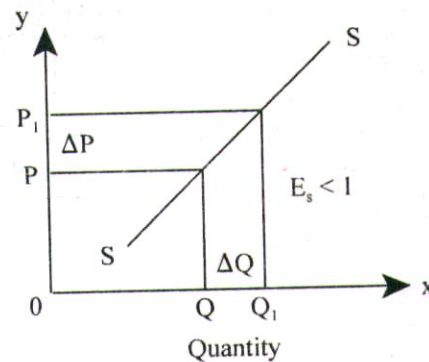


- (iv) **More than Unit Elastic Supply or Relatively greater Elastic Supply** : Elasticity of supply is said to be more than unity when a small change in price leads to a substantial change in commodity supplied. It means that relative change in commodity supplied is more than the relative change in price.



- (v) **Less than Unit Elastic Supply or Relatively less Elastic Supply** : In this case a substantial change in price leads to a very small change in quantity supplied. It means that the quantity supplied is

lesser in proportion than the change in price of the commodity.
Thus, $E_s < 1$.



Q.7 How is Elasticity of Supply measured?

Ans.: (i) **Percentage Method :**

It is depicted as follows :

$$E_s = \frac{\text{Proportionate Change in Quantity Supplied}}{\text{Proportionate Change in Price}}$$

$$E_s = \frac{\frac{\text{Change in Quantity}}{\text{Original Quantity}} \times 100}{\frac{\text{Change in Price}}{\text{Original Price}} \times 100}$$

$$E_s = \frac{\text{Change in Quantity}}{\text{Change in Price}} \times \frac{\text{Price}}{\text{Quantity}}$$

$$E_s = \frac{\Delta q}{q} \div \frac{\Delta p}{p} = \frac{\Delta q}{q} \times \frac{p}{\Delta p} = \frac{\Delta q}{\Delta p} \times \frac{p}{q}$$

Where $q \Rightarrow$ Original quantity supplied

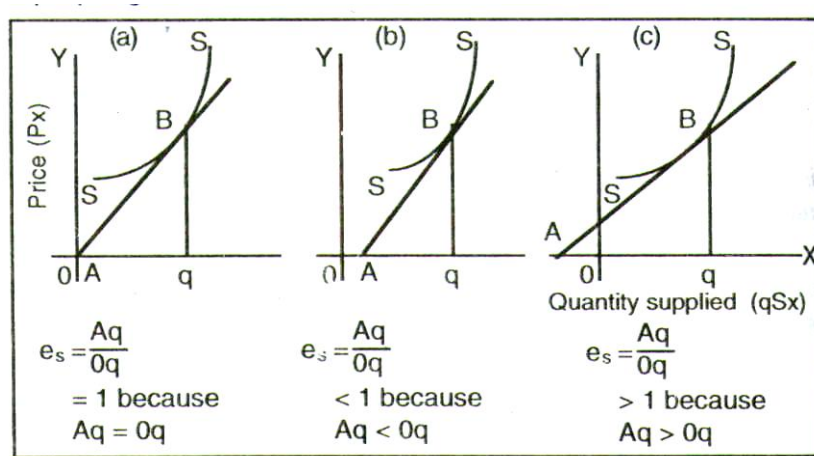
$p \Rightarrow$ Original price

$\Delta q \Rightarrow$ Change in quantity supplied

$\Delta p \Rightarrow$ Change in price

(ii) **Geometric Method (Point Method) :**

Measuring the elasticity at a particular point of the supply curve is known as point elasticity of supply.

(iii) **Arc Method :** It is a measure of the average responsiveness to price change exhibited by a supply curve over some finite stretch of the curve.

$$E_d = \frac{\frac{\text{Change in Quantity Supply}}{\text{Original Quantity plus Quantity after Change}}}{\frac{\text{Change in Price Supply}}{\text{Original Price plus Price after Change}}}$$

In notation form it can be expressed as :-

$$E_d = \frac{\frac{\Delta q}{q_1 + q_2}}{\frac{\Delta p}{p_1 + p_2}} = \frac{\Delta q}{\Delta p} \times \frac{p_1 + p_2}{q_1 + q_2}$$

$\Delta q \Rightarrow$ Change in quantity supply

$\Delta p \Rightarrow$ Change in price

$q_1 \Rightarrow$ Original quantity supply

$q_2 \Rightarrow$ New quantity supply

$p_1 \Rightarrow$ Original price

$p_2 \Rightarrow$ New price

Q.8 What are the factors affecting the Elasticity of Supply?**Ans.: (i) Nature of the Commodity**

- (i) For perishable goods, its supply will not respond in an effective manner to the change in price. So it have an inelastic supply.
- (ii) For durable goods, its supply will respond effectively and it will have an elasticity of supply.

(ii) Production Time**(iii) Techniques of Production****(iv) Estimates of Future Price**

□ □ □

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Chapter-6

Meaning of Production : Factors of Production

Q.1 What is production?

Ans.: Meaning : Production means creation or addition of utilities. Any activity that makes a product more useful is called production.

Definition : According to Fairchild, 'production consists of creation of utility in wealth'. A.J. Brown, 'production includes any activity and the provision of any service, which satisfies or is expected to satisfy a want'.

Q.2 What are the various forms of utility creation?

Ans.: The creation of utility is done in the following way :-

- | | | |
|------------------------|-----------------------|---------------------|
| (1) Form Utility | (2) Place Utility | (3) Time Utility |
| (4) Possession Utility | (5) Knowledge Utility | (6) Service Utility |

Q.3 What are the Factors of Production?

Ans.: According to Prof. Behharn, 'All goods and services which help in the process of production are called factors of production'.

- (i) Land (ii) Capital (iii) Labour (iv) Entrepreneur.

Q.4 What is land?

Ans.: Land is one of the indispensable factors of production. Land refers to the upper surface of earth only. But in economics. It includes not only the

upper surface of earth but also other free gifts of nature which includes mountains, hills water resources, mines, air, light etc.

Land includes all the natural resources used in production process.

Characteristics of Land:

- (i) Land is the free gift of nature
- (ii) Limited in Supply
- (iii) Land is Heterogeneous
- (iv) Land is not Mobile
- (v) Land is Indestructible
- (vi) Land is a Passive Factor of Production
- (vii) Land is Subject to the Law of Diminishing Returns

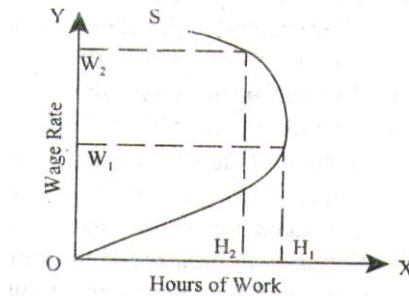
Q.5 What is Labour?

Ans.: It induces both mental and physical efforts which are taken to produce the goods. It is different from the other factors of production, as it has a 'Human element' in it. In economics, labour is that person who gets a reward in return for services rendered on the work he has done. Reward given to a worker is known as a 'wage'.

Characteristics of labour :

- (i) Labour is Inseparable from Labourer Itself
- (ii) Labourer Sells his Labour Power
- (iii) Labour is Perishable
- (iv) Labour has Less Bargaining Power
- (v) Labour Power Differs from Labourer to Labourer
- (vi) Productivity or Efficiency of Labour may be Increased
- (vii) Labour is Less Mobile
- (viii) **Backward Sloping Labour Supply Curve :** A labour has to choose between the house of work and hours of leisure. There exists a direct relationship between the supply of labour and the wage rate.

As the wage rate increases, labour increases the hours of work, reducing the hours of leisure. However, after a certain level, even if the wage increases, labourer does not increase his hours of work any more, rather increases his hours of leisure. This leads to a backward sloping supply curve of labour.



Q.6 What is Capital?

Ans.: That part of wealth used in production process and income generation.

It is produced source of production.

Characteristics of Capital :

- (1) Only the wealth may be capital. If a commodity is not wealth, it cannot be capital. A commodity must possess following three characteristics to be wealth:
 - (i) Utility,
 - (ii) Scarcity,
 - (iii) Transferability.
- (2) Only the man made wealth is capital. Free gifts of nature such as land, water resources, mineral resources cannot be capital.
- (3) Only that part of wealth is capital which is used in production process or which yields income. If a part of wealth is not utilized in production process, it cannot be capital.
- (4) All the capital is wealth but all the wealth is not capital.

Classification of Capital :

- 1 Real Capital and Human Capital

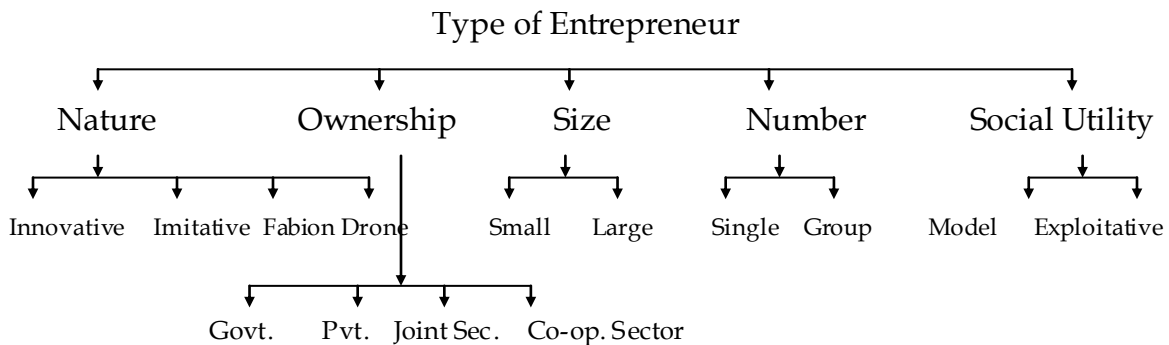
- 2 Individual Capital and Social Capital
- 3 Fixed Capital and Circulating Capital
- 4 Tangible Capital and Intangible Capital
- 5 Productive Capital and Consumption Capital
- 6 Specific and Non-specific Capital
- 7 Sunk and Floating Capital
- 8 Physical and Personal Capital
- 9 Remuneration and Auxiliary Capital
- 10 National and International Capital
- 11 Internal and Foreign Capital
- 12 Private and Social Capital

Capital Formation through following Stages : It represents the excess of income over consumption. When savings of an economy are invested further in the economic process with a view to attain more production, it is known as capital formation.

- (1) **Creation of Saving**
- (2) **Mobilization of Savings**
- (3) **Investment of Saving**

Q.7 Who is an Entrepreneur?

Ans.: The task of organization is undertaken by a specialized class of people in modern industry who are generally known as entrepreneurs. The fundamental function of the enterprise/entrepreneur is to visualize the possible situations which can be easily utilized for the expansion of the productive capacity so that the standard of living of the people may be raised rapidly. For this he takes efforts to organize production by bringing together land, labour and capital.



- (1) **Functions of an Entrepreneur** :- An entrepreneur performs the following main functions :-
- (i) Planning and Initiating Business
 - (ii) Organizing the Business
 - (iii) Risk Bearing function
 - (iv) Innovations
- (2) **Problems of Entrepreneur** : An enterprise faces a number of problems from its inception till its closure. Some of them are discussed as under:
- (i) **Problems Relating to Objectives**
 - (a) Organic Objectives
 - (b) Economic Objectives
 - (c) Social Objectives
 - (d) Human Objective.
 - (e) National Objectives
 - (ii) **Problem Relating to Locations and Size of the Plant**
 - (iii) **Problems Relating to Finance**
 - (iv) **Problems Relating to Marketing**
 - (v) **Problems Relating to Legal Formalities**

Chapter-7

Production Function in Short-run and Long-run

Q.1. What is Production function?

Ans.: Production function means functional relationship between physical inputs of factors of production and physical output of a firm. It indicates maximum rate of output that can be obtained from different combinations of productive factors during a certain period of time and for a given state of technical knowledge and marginal ability.

$$P = f(a, b, c, d \dots)$$

Whereas,

P = Quantity of production

a b c d ... = Quantities of various factors of production

F = Function of (depends upon)

Two things are important to be noted in this respect :-

- (i) Production function should be considered with reference to a particular period of time.
- (ii) Production function is determined by the state of given technology. If there is any change in technological know how, production function will also change.

Nature or Characteristics of Production Function :

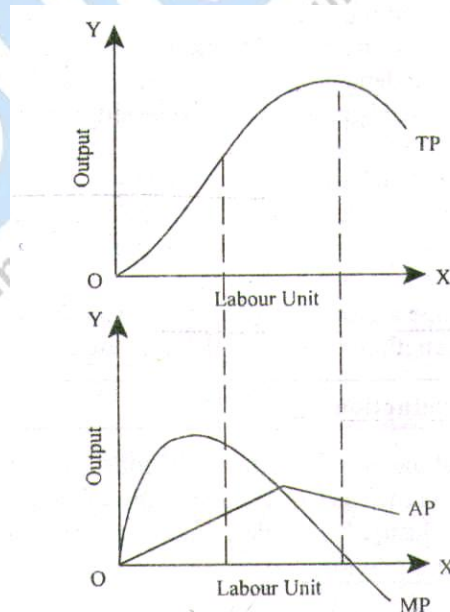
- (i) It shows relationship between physical **quantities** of output and input.

- (ii) It is totally independent of the **price** of product and also of the factors of production.
- (iii) It should be considered with a given state of **technology**.
- (iv) It should be considered with reference to a particular **period of time**.
- (v) Change in inputs is essential to change a production function. Quantity of a factor of production should be measured in terms of the length of time for which it is used.

Q.2 What are the various concepts of Product?

Ans.: Concept of Product :

- (1) **Total Product (TP) :** TP is the total quantity of goods produced by a firm during a specific time period. It can be increased by increasing the quantity of variable factor. As shown in the figure, the T.P curve starts from the origin, increases at increasing rate, rises at a decreasing rate, reaches, the maximum and then starts falling :



- (2) **Marginal Product (MP)** : MP is the change in the T.P by producing one more unit of output. That is, it is the difference made to T.P from the use of an additional unit of variable factor (labour).

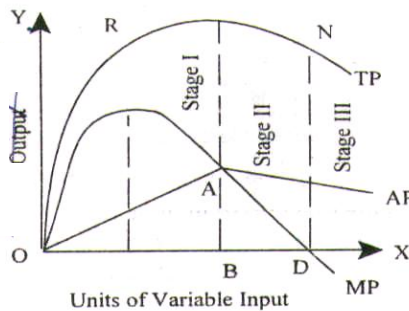
$$MP = T.P_n - T.P_{n-1}$$

Where n = Number of units produced

- (3) **Average Product (AP)** : It is the amount of output per unit of the various factor employed.

$$AP = \frac{\text{Total Output}}{\text{No. of Labour Input}}$$

Or $AP = TP/n$



Q.3 What is the Cobb-Douglas Production Function?

Ans.: It considers only two inputs of production labour and capital.

$$Q = KL^\alpha C^b \dots C^{1-\alpha}$$

Whereas,

Q = Quantity of Output

L = Quantity of Labour

C = Quantity of Capital

K = Positive Constants

- (i) This function assumes that there are only two inputs of production: Labour and capital and all the units of an input are identical and homogenous.

- (ii) 75% of increase in production is due to labour and 25% is due to capital.
- (iii) Nature of this function is linear and homogeneous i.e. if the quantity of labour and capital is doubled, quantity of production will also be double.
- (iv) This function assumes perfect competition in the market.
- (v) Returns to scale applies to manufacturing industry.

Criticisms of Function :

- (i) This function considers only two inputs of production.
- (ii) This function is based on the assumption of constant returns to scale which is not a real assumption.
- (iii) This function is based on the assumption of perfect competition in the market which is also not a real assumption.
- (iv) This function assumes that all the units of an input of production are identical and homogeneous which is also not very much practical.

Q.4 What is the Law of Variable Proportion (Law of Diminishing Return)?

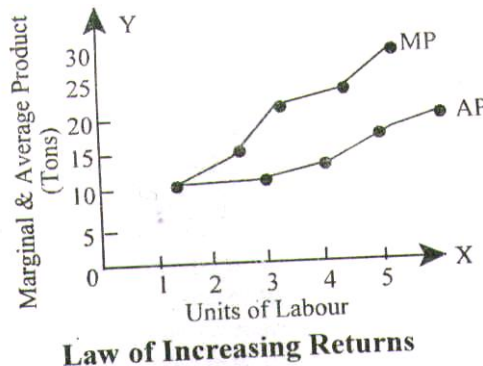
Ans.: As we increase the quantity of any one input (say labour) which is combined with a fixed quantity of other inputs, the marginal productivity of a variable inputs starts declining after a limit.

Assumptions :

- (a) Technology is constant.
- (b) All units of the variable factor (say labour) are homogenous.
- (c) There must be always some fixed inputs.

In the short run output may be increased by using more of the variable factor(s), which capital (and possibly other factors as well) are kept constant. The marginal product of the variable factor(s) will decline eventually as more and more quantities of this factor (S) are combined with other constant factor(s). The expansion of output with one factor (atleast) constant is described by the law of (eventually) diminishing

returns of the variable factors, which is often referred to as the law of variable proportions.



From the figure it is clear that the total product (TP) curve increases to a point and then decline. AP and MP curves first rise and then fall, the fall in MP being more than that of AP curve.

Thus the entire law can be understood in three stages as :-

1st Stage - Law of Increasing Returns :

Meaning : When increase in output is in greater proportion than increase in inputs, it is known as the law of increasing returns. This law explains that when the quantity of a variable factor of production is increased, marginal product shows an increasing tendency or in other words, total product increases at an increasing rate.

The law of increasing returns is the state of production when the quantity of one or more factors of production is kept constant and the quantities of other variable factors are gradually increased, and corresponding return to an additional unit of variable factor goes on increasing.

In the above figure, units of labour are shown on x-axis and Marginal and average products are shown on y axis, MP is Marginal product curve and AP is average product curve. Both the MP and AP are increasing as the units of labour are increased. It implies that total product is increasing at an increasing rate.

Causes of the Operation of Law of Increasing Returns :

- (1) Economies of Division of Labour and Specialization
- (2) Saving of Time and Improvement in the Technique of Production
- (3) Economies of the Use of Specialized Machinery
- (4) Managerial Economies
- (5) Economies of Buying and Selling

Limitations of the Law of Increasing Returns :

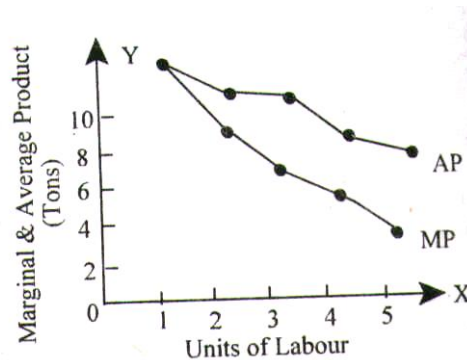
- (1) **This Law Applies Only at Initial Stage :** Law of increasing returns applies only at the initial stage of production because at this stage, an increase in the variable factors of production leads generally to improved productivity of labour and capital. Very soon this law ceases to operate.
- (2) **This Law Cannot Continue Indefinitely :** This law will apply only upto the optimum ratio of factors of production is achieved.

2nd Stage - Law of Diminishing Returns :

"With a fixed amount of any one factor of production, successive increases in the amount of the other factors will after a point, yield a diminishing increment of the product leads average and marginal product will eventually decline."

Product Schedule

Unit of Labour	Total Product (Tons)	Average Product (Tons)	Marginal Product (Tons)
1	10	10	10
2	19	9.5	9
3	27	9	8
4	33	8.25	6
5	37	7.4	4



Law of Diminishing Returns

In above figure, units of labour are shown on x-axis. Marginal and average products are shown on y-axis. MP curve and AP curve are also shown. Both the MP and AP curves are declining as and when the units of labour are increased. It implies that total product is increasing at a diminishing rate.

Conditions or Causes of the Operation of Law of Diminishing Returns :

- (1) Fixity of One or More Factors of Production
- (2) Scarcity of Productive Resources
- (3) Going Beyond the Optimum Combination of Factors of Production
- (4) Factors of Production are not Perfect Substitutes for One Another

Limitations of the Law of Diminishing Returns :

- (i) It is assumed that the state of technology remains unchanged.
- (ii) It is assumed that the organizational structure and managerial efficiency of the firm remain unchanged.
- (iii) It is assumed that there are some inputs whose quantity may be kept fixed and the quantity of other inputs may be changed, as required. This law will not apply if all the factors of production are proportionately changed.
- (iv) All the units of variable factor are homogenous.
- (v) The law is concerned with the physical quantity of product only and not with its value.

- (vi) It is essential for the operation of this law that optimum combination of resources of production must have already been achieved because this law applies only after this stage.
- (vii) It is also assumed that the factors of production, particularly variable factors, are divisible as required.

3rd Stage - Law of Negative Returns :

It explains the situation in which total product starts to decline and marginal product becomes negative. No producer likes to get this situation. He would discontinue to increase the quantity of variable factors of production because as soon as the quantity of variable factors of production is increased under this stage, total product starts to decline and marginal product turns to be negative. This situation starts only after the point of maximum total product. This satiation can be improved by reducing the quantity of variable factors of production.

Stages in the Law of Variable Proportion

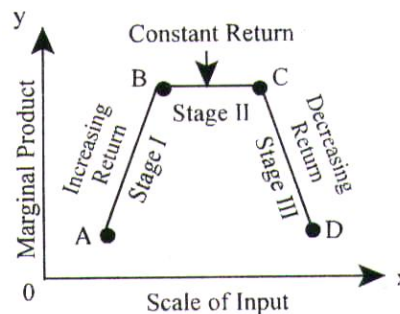
Stage	Term used	TP	AP	MP	Reference Point
Stage I	Increasing Returns to the factor	Starts from origin, increases at an increasing rate and then increases at a decreasing rate	Starts from the origin and then increases till its maximum point	Increases, reaches a maximum & then starts falling	From origin to point b
Stage II	Diminishing Returns to the factors	Increases at a decreasing rate till it reaches the maximum point	Falls continuously	Falls continuously till it is equal to zero	From point b to point d
Stage III	Negative returns to the factor	Falls	Falls continuously	It is negative	Point d onwards

Q.5 What is the Law of Returns to Scale?

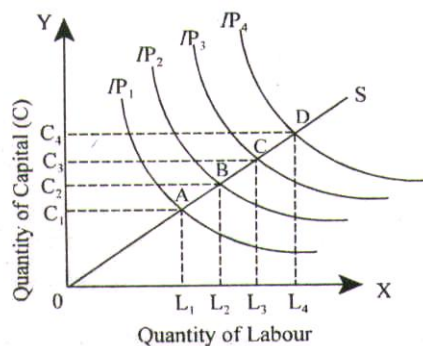
Ans.: Factors of production can broadly be divided into two parts: Variable and fixed. In long run, all the factors of production becomes variable

simultaneously and in a certain ratio. When a firm changes the quantity of the factors of production in long-run, it is called a change in the scale of production and studied as returns to scale.

- (1) Increasing Returns to Scale
- (2) Constant Returns to Scale
- (3) Decreasing Returns to Scale



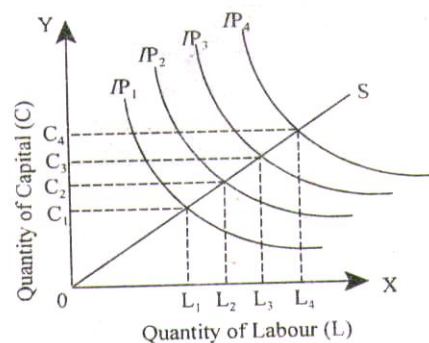
- (1) **Increasing Returns to Scale :** When quantity of all the factors of production is increased simultaneously in a certain ratio and as a result, the quantity of production increases in greater proportion, it is said to be increasing returns to scale. For example, quantity of all the factors of production is increased by 20% and as a result quantity of production increase by 25%.



In this diagram, quantity of labour (L) is shown on x-axis and the quantity of capital (C) is shown on y-axis. IP_1 , IP_2 , IP_3 and IP_4 , are

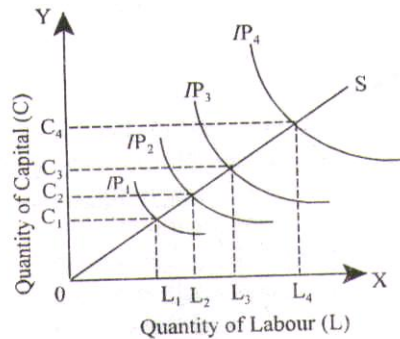
identical production lines. These lines represent equal increase in the quantity of labour and capital to get this equal increase in the quantity of production is continuously going on decreasing. In other words, proportionate increase in the quantity of production is more than proportionate increase in the factors of production. This stage is known as the stage of increasing returns to scale.

- (2) **Constant Returns to Scale :** When quantity of all the factors of production is increased simultaneously in a certain proportion and as a result, the quantity of production also increase in the same proportion, it is said to be constant returns to scale. For example, quantity of all the factors of production is increased by 20% and as a result, the quantity of production also increases by 20%.



In this diagram, quantity of labour (L) is shown on x-axis and the quantity of capital (C) is shown on y-axis. IP1, IP2, IP3 and IP4 are identical product lines. These lines represent equal quantity of production. These lines represent equal quantity of production. Increase in the quantity of labour and capital is also in the same proportion.

- (3) **Decreasing Returns to Scale :** When quantity of all the factors of production is increased simultaneously in a certain proportion and as a result, the quantity of production increases in less same proportion, it is said to be decreasing returns to scale. For example, the quantity of all the factors of production is increased by 20% and as a result, the quantity of production increases only by 15%.



In above diagram, quantity of labour (L) shown on x-axis and the quantity of capital (c) is shown on y-axis. IP1, IP2, IP3 and IP4 are identical product lines. These lines represent equal increase in the quantity of labour and capital to get this increase is continuously increasing.

Q.6 What are the Internal and External Economies and Diseconomies of Scale?

Ans.: Economies of scale state the benefits secured by a producer by expanding the scale of production. The underutilized resources can be used in a better way by expanding the scale of production in order to secure such benefits. Such economies may be classified as internal economies and external economies. Internal economies can be further divided into real and pecuniary economies as under :

Internal Economies : These are those associated with a reduction in the physical quantity of inputs, raw materials, etc. These can be divided into :-

- (1) **Production Economies :** These arise on a large scale in the following forms :-
 - (i) **Labour Economies :** Large scale production leads to specialization which saves time, leads to automation and also helps in attaining 'cumulative volume' economies.
 - (ii) **Technical Economies :** Such economies are associated with the 'fixed capital' which includes all types of machinery and other equipment. The main technical economies arise from :-
 - (a) Specialization and Indivisibilities of Capital

- (b) Set-up Costs
 - (c) Initial Fixed Costs
 - (d) Technical Volume/Input Relations
 - (e) Reserve Capacity Requirements
- (iii) **Inventory Economies** : These are also known as 'stochastic economies'. These are due to inventories in spare parts, in raw materials and in ready products. Lower is the stock of inventories, lesser will be the amount blocked in it, and thus the economies can be obtained.
- (2) **Marketing Economies** : These may arise on account of the following :-
- (i) **Advertising Economies** : When scale of production increases, the per unit cost of advertisement falls as a lump sum amount of money is spent on the advertising.
 - (ii) **Economies from Agreement** : Such economies accrue when large firm enter into exclusive agreement with the dealers who undertake the obligation for maintaining service departments.
 - (iii) **Model Change Economies** : Large firms are in a better position to bear the expenses involved in research and development of a new model or style of the product. This helps them to meet the changing demand of their customers and the competition of the rival firms.
3. **Managerial Economies** : These arise in the form of decentralization, teamwork, mechanization and adoption of time saving managerial techniques.
4. **Pecuniary Economies** : These are economies realized from paying lower prices for the factors of production and distribution of the product, due to :-
- (i) Lower prices for bulk buying of raw materials.
 - (ii) Lower cost of finance.
 - (iii) Lower cost of advertising at large scale.
 - (iv) Lower transport costs.

5. **External Economies** : Such economies are enjoyed by all firms due to expansion in the output of the whole industry. They are the following :-
- (i) **Economic of Localization** : Localization means concentration of firms producing identical goods at a particular place where regular electric supply, banking service etc. are available which brings down the average cost of all the firms.
 - (ii) **Economies of Disintegration** : This means that a particular firm specialization in a particular job of production which brings down the cost of production.
 - (iii) **Economies of Information** : As an industry develops, all firms jointly set up research institutions and associations. Eg. All India Textile Association, These help the firms in getting information at nominal expense.
 - (iv) **Economies of by Products** : By-products of one firm can be profitably used as raw materials by other firms. This helps to minimization of sizes of cost.

Diseconomies of Scale : Diseconomies of scale operate when the plant size increases beyond a certain limit which enhances the cost.

Internal Diseconomies :

- (i) **Production Diseconomies** : Sets in when factors of production are inefficiently utilized. When inferior factors of production are utilized, the cost starts rising again.
- (ii) **Managerial Diseconomies** : Operates when the management finds it difficult to control and co-ordinate the activities of all the departments, as the scale of operation crosses the limit.
- (iii) **Marketing Diseconomies** : Sets in when the marketing overheads increases more than proportionately with the increment in output.
- (iv) **Financial Diseconomies** : Begins to operate when the financial cost increases more than proportionately after the optimum scale of production due to more dependence on external finance.

External Diseconomies :

- (i) Diseconomies of Pollution
- (ii) Diseconomies of Transportation
- (iii) Diseconomies of Inflation

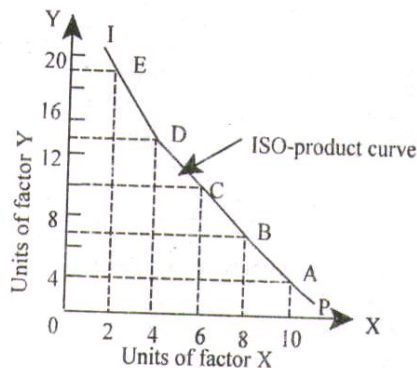
Q.7 What is production Optimization. How is it done?

Ans.: Every producer wants to achieve maximum production at minimum cost. For this purpose he wants to establish an optimum combination of the factors of production with which he can achieve his object. It is done by the help of ISO quant or ISO product curves and ISO cost lines.

ISO-product curve is a curve which represents all the possible combinations of two factors of production which produce equal amounts of production. A producer is indifferent to all these combinations.

Explanation with the help of Table and Diagram: A given output can be achieved by employing different combinations of factors of production. Let us assume that a firm can produce 10 units of a commodity by employing any of the following alternative combinations of two factors 'x' and 'y'.

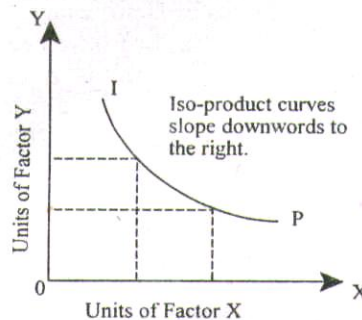
Combinations	Units of factor 'x'	Units of Factor 'y'	Output Units
A	10	4	$10x + 4y = 10$
B	8	6	$8x + 6y = 10$
C	6	9	$6x + 9y = 10$
D	4	13	$4x + 13y = 10$
E	2	18	$2x + 18y = 10$



In above diagram, units of factor 'x' have been presented on 'ox' axis and the units of factor 'y' has been presented on 'oy' axis. A, B, C, E, are the combinations of factor 'x' and factor 'y' which produce equal amount of production i.e., 10 units. A curve 'IP' has been drawn incorporating all these combinations. This curve is the ISO-product curve.

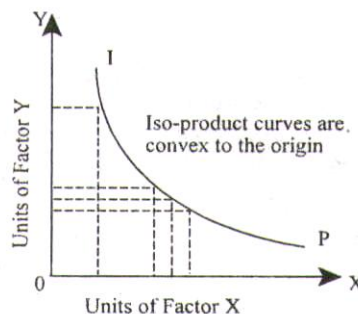
Properties of ISO-Product Curve :

- (1) **ISO-Product Curves Slope Downwards to the Right :** It implies that a decrease in the quantity of one factor of production must be associated with an increase in the quantity of another factor of production so that the same level of production may be maintained.



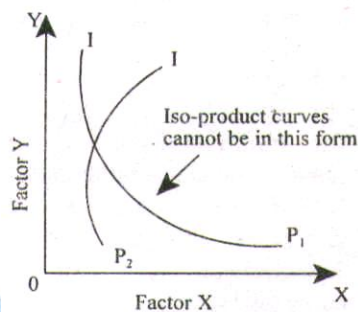
Thus, ISO-product curve can neither slope upward to the right, nor can it be horizontal.

- (2) **ISO-Product Curves are Convex to the Origin :** ISO-product curve are convex to the origin because the marginal rate of technical substitution (MRTS) diminishes along an ISO-product curve.

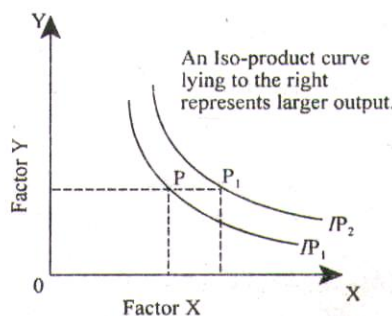


In this diagram illustrates that to obtain every additional unit of x less amount of y is given up.

- (i) If inputs are perfect substitute, then equal product curve will be a straight line.
 - (ii) If inputs are perfect complements, then it is in the shape of a right angle.
- (3) **ISO-Product Curves cannot Intersect Each Other** : ISO-product curves cannot intersect each other because all the ISO-product curves represent different levels of production.

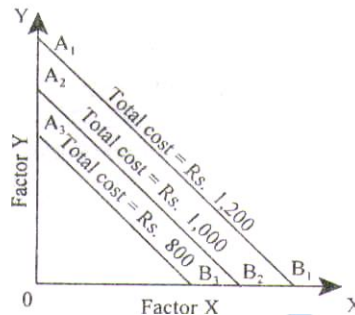


- (4) **An ISO-Product Curve Lying toward the Right Represents Larger Output** : An ISO-product curve lying to the right implies greater amount of both the factors of production. Therefore, it yields greater amount of production.



In this diagram illustrates two ISO-product curves. IP_2 uses greater amount of both the factors of production than IP_1 . As a result, it yields greater output.

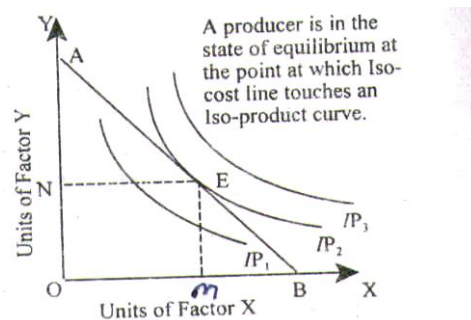
ISO Cost Lines : ISO-Cost line indicates different combinations of two factors of production which a firm can purchase at given prices with a given cost. ISO-Cost line is always a straight line. If total cost increase, ISO-Cost line moves to the right and if total Cost decreases, it moves to the left. It can be illustrated with the help of following diagram:



It represents various combinations of factor x and y which a firm can purchase for Rs. 1,000. If it wants to spend Rs. 1,200, ISO-cost line move to the right and A1, B1 becomes new ISO-cost line. If the firm wants to spend Rs. 800, ISO-cost line moves to the left and A2 B2 becomes the ISO-cost line.

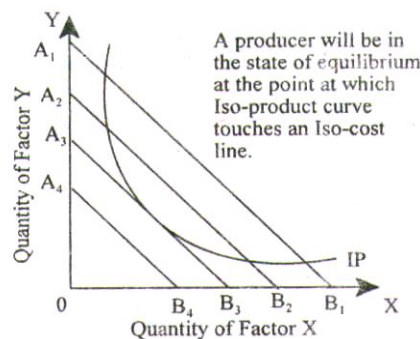
Equilibrium of a producer can take place in two different forms:-

- (1) **When ISO-Cost Line is Given :** If ISO-cost line is given for a producer, he will be at equilibrium at the point at which an ISO-Product curve touches the ISO-Cost line. It implies that the producer is not in a position to change his cost of production. They only thing he can do is that he can change the quantity of production. Naturally, he would lie to produce at the point at which his cost is minimum.



AB is the ISO-cost line. IP1, IP2 and IP3 are ISO-product curves. AB line touches IP2 at the point E. It will be the point of producer's equilibrium. At this point, the producer will use OM units of factor x and ON units of factor y and will get a given output at minimum cost. He would not like to work at IP1 because he will be working below his capacity at this curve. IP3 is out of his cost line, so would not be able to work at this curve also.

- (2) **When ISO-Product Curve is Given :** If ISO-product curve is given for the producer, he will be in equilibrium at the point at which this curve touches an ISO-Cost line. It implies that the producer is not in a position to change the quantity of production. The only thing he can do is that he can change the combination which will minimize his cost.

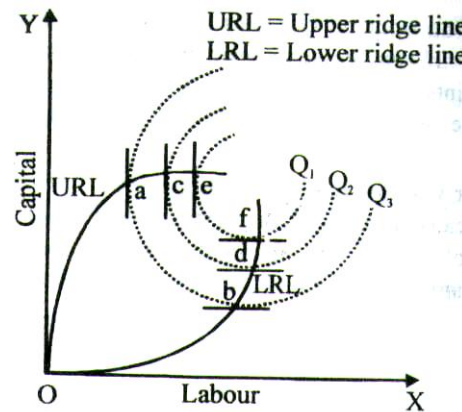


IP curve touches A_3B_3 line. It is the point of equilibrium. At this point, the producer will use OM quantity of factor x and ON quantity of factor y. At this point, the producer will get maximum production at minimum cost. The producer cannot produce at A_1B_1 and A_2B_2 cost lines because they are out of his reach. A_4B_4 is the cost line which is below always be working at the point of equilibrium.

Q. 8 What are the ridge line & Economic region of production?

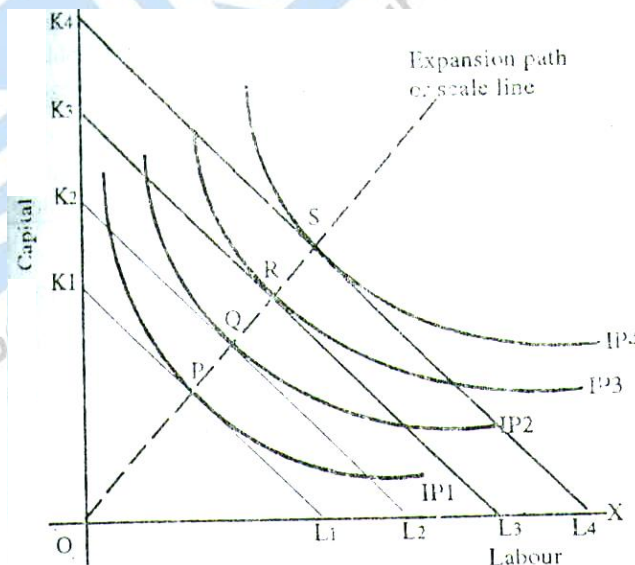
Ans.: Ridge line determine the economic region of production ridge line are the locus of point of ISO-product curve where marginal product curve where marginal product of factors of production is zero. Slope of ISO-product

curve is positive between the ridge lines but negative outside the ridge lines. Hence any level of output beyond the ridge lines is uneconomic.



Q. 9 What is scale line or expansion path?

Ans.: scale line is a 45° line showing the scale of production. A scale line shows the change in factor proportion when there is change in outlay (Expenditure) while factor prices are held constant. A scale line is locus of various equilibrium point of producer at various level of producer's outlay keeping input prices constant.

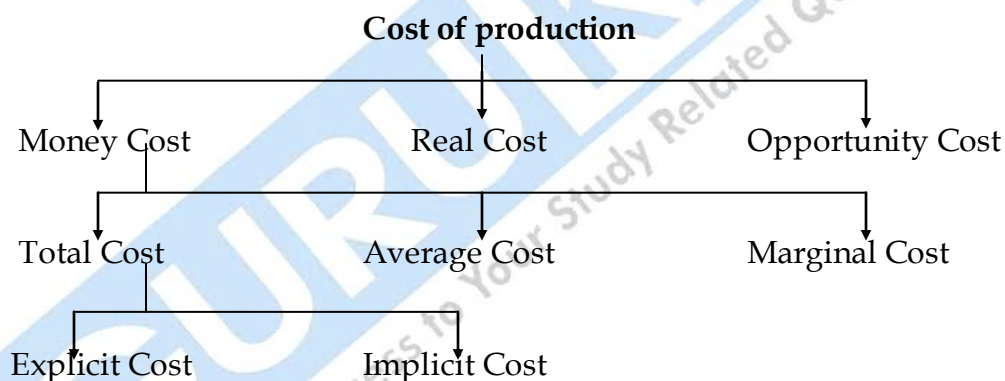


Chapter-8

Cost Analysis

Q.1 Describe Cost and Cost Concept.

Ans.: Production cost means all types of monetary expenditures incurred for the production of a commodity.



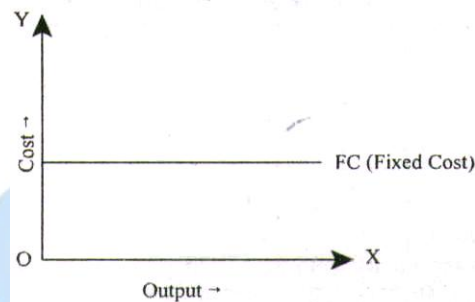
- (1) **Money Cost :** Money cost is also called nominal cost. It refers to all types of direct or indirect expenses incurred on the production of a commodity.
- (2) **Real Cost :** Real cost is a philosophical concept which implies all the efforts, service, pains and sacrifices made in producing a commodity.

The concept of real cost was defined by Prof. Marshall as “social cost”. Social cost implies the cost borne by the entire society in producing a commodity.

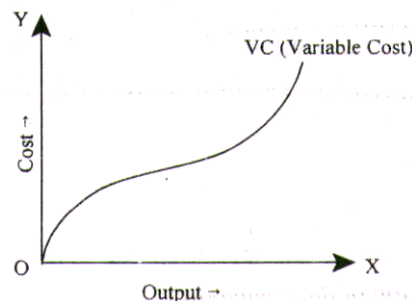
- (3) **Opportunity Cost** : Opportunity cost is also alternative cost or transfer cost. It refers to the cost of foregone alternatives.
- (4) **Total Cost** : According to Dooley, "Total cost of production is the sum of all expenditure incurred in producing a given volume of output. It is the sum total of fixed cost and variable cost.

$$\text{Total Cost} = \text{Fixed Cost} + \text{Variable Cost}$$

- (i) **Fixed Cost** : Fixed costs are those costs which do not change with any changes in the quantity of production or size of output during the period. They remain constant during the whole period at any level of output. Whether the production is zero or less or more fixed costs are also known as supplementary cost e.g. rent, interest payable, municipal cost taxes, salary, etc.



- (ii) **Variable Cost** : Variable cost are those costs which vary with the change in the quantity of output or production. These cost increase with and increase in output and decrease with a decrease in output. These costs are related to variable factor of production. They are also known as prime cost. e.g. Cost of direct labour, cost of raw material, transport cost, etc.



- (5) **Average Cost :** The ratio between the total cost of production and the quantity of a given level of output is the average cost of production of a given output level for a firm.

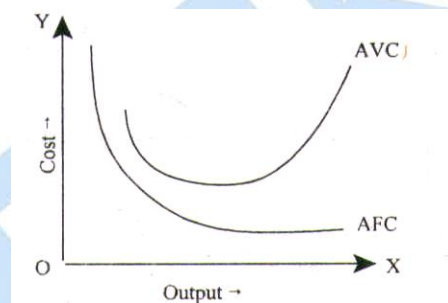
$$\text{Avg. Cost} = \frac{\text{Total Cost}}{\text{Output in Units}}$$

Average cost can also be defined as the sum of average fixed cost and average variable cost.

Average Cost = Average Fixed Cost + Average Variable Cost

$$\text{Avg. Fixed Cost} = \frac{\text{Total Fixed Cost}}{\text{Output in Unit}}$$

$$\text{Avg. Variable Cost} = \frac{\text{Total Variable Cost}}{\text{Output in Unit}}$$



Average cost varies with different rates of changes as the quantity of output level increase in the short run and in long run in accordance with the operating laws of cost in practice. Thus, average cost, periodically, is classified as:

- (i) Short-run Average Cost
 - (ii) Long-run Average Cost
- (6) **Marginal Cost :** An addition to the total cost on the production of an additional unit of a commodity is known as marginal cost of production.

According to Samuelson, "Marginal cost at any level of output is the extra cost for producing one extra unit more". These costs are classified into two categories as:

(i) Short-run Marginal Cost

(ii) Long-run Marginal Cost

$$MC = TC_{n+1} - TC_n$$

$$MC = \frac{\Delta TC}{\Delta Q}$$

where, MC => Marginal Cost

TC_{n+1} = Total Cost of n+1 units

TC_n = Total Cost of n units

ΔTC = Change in Total Cost

ΔQ = Change in Output.

(7) **Explicit Cost** : Explicit cost are also known as accounting cost.

According to **Leftwich**, "Explicit cost are those cash payments, which firms make to outsiders for their services and goods."

(8) **Implicit Cost** : Implicit costs are the cost of factors which are owned by the entrepreneur himself and are employed in his own business.

According to **Leftwich**, "Implicit costs are the cost of self owned self employed resources eg. Rent on own land, interest on own capital, salary for own services such as salary to managers, etc."

(9) **Economic Cost** : Economic costs are those cost which include the monetary payment under contract, actually incurred by a firm to pay the factor owners for the purchase or hire of services of factor inputs and the cost of self supplied factors of production which are generally not recorded into the books of accounts.

(10) **Direct Cost** : Direct cost are also known as traceable cost or assignable cost. These are the cost which can be readily identified by a firm. They are traceable to a particular product, plant or operation i.e. they are in direct relation to a plant or product e.g. cost of raw material, wages to workers etc.

Direct cost = Direct material cost + Direct labor cost + Direct expenses.

- (11) **Indirect Cost :** Indirect cost are also known as non traceable cost or non-assignable cost or common cost. These are the cost which cannot be easily identified. They are not visibly traceable to specific goods or services or operation i.e. they are not directly related to the goods or services e.g. expenses on power.

Indirect cost = Indirectly Material cost + Indirect labour cost + Indirect expenses.

E.g. wages for workers, payment for raw material, taxes, rent, interest, transport charges, advertisement expenses, etc.

- (12) **Semi-Variable Cost :** Semi-variable costs are those costs which remain constant upto a certain level of output and then start increasing proportionately. These costs arise where there is no clear identification of the cost i.e. whether it is a fixed cost or a variable cost. eg. Electricity charges and telephone charges as they are fixed up to a certain limit and then they vary according to the used units.
- (13) **Shut-down Cost :** Shut down costs are those costs which are incurred on the suspension of the plant operation. It means that these costs incur when there is a temporary closedown of the business activities. If the operation is continued, these costs could be saved. They cover the additional expenses incurred for looking after the property not disposed off. These costs are temporary in nature, e.g. temporary closure of making a bridge during the rainy session.
- (14) **Abandonment Cost :** Abandonment costs are cost of retiring a fixed asset from service. These costs arise on account of complete cessation or closure of the production activities and also due to disposal of asset.
- (15) **Outlay Cost :** Outlay costs are also known as actual cost or absolute cost. Outlay cost of a commodity are the actual expenditure incurred on the production of a particular commodity or service. They involve actual outlay of funds on wages, rent, material, interest, etc.
- (16) **Private Cost :** Private cost is the cost incurred by an individual firm privately for producing the goods and services. These costs are

born by the firm itself e.g. payment of wages, salaries to his workmen or staff, purchase of raw material, etc.

Private cost = Social cost – External cost.

Where external costs are the costs borne by others, other than the firm.

- (17) **Past Cost** : All such exp. Which are actual has been paid and entered in the financial account help to measure variance.
- (18) **Future Cost** : Cost which are borne by the firm for any future period help to decision for finance and evaluation.
- (19) **Out of Pocket Cost** : Cash payments required to done presently.
- (20) **Book Cost** : No need to paid by the firm in cash. Eg. Depreciation.+
- (21) **Controllable Cost** : It can control by management and organisation.
- (22) **Incontrollable Cost** : It beyond the control of management and organisation.
- (23) **Historical Cost** : Original cost on which machinery is firstly purchased.
- (24) **Replacement Cost (Substitution Cost)** : Additional amount required for purchasing new similar asset and plant after selling existing assets and plants.
- (25) **Urgent Cost** : Absolutely essential to keep the production of the firm continued.
- (26) **Postpone able Cost** : The cost which me be postpone for some time and it do not materially affect the production.

Q.2 What is Cost Function?

Ans.: Cost Function : The relationship between the cost of a product or commodity and various cost determinants is known as cost function.

$$C = f(O, S, T, U, P, \dots)$$

Where, C => Cost of Output

O => Size of Output

S => Size of Plant

T => Time Under Consideration

U => Utilization of Capacity

P => Price of Production Factors

Determinants of Cost

- (i) Size of Plant
- (ii) Prices of Inputs
- (iii) Level of Output
- (iv) Lot Size
- (v) Technology
- (vi) Managerial Efficiency
- (vii) Capacity Utilization
- (viii) Stability of Output

Q.3 Why is the average cost curve U-shaped?

Ans.: Average cost or average total cost is referred to the cost per unit of output. The mathematical expression of average total cost is:

$$\text{Average Cost (AC)} = \frac{\text{Total Cost (TC)}}{\text{Quantity of output level (Q)}}$$

The average cost may be divided into two periods, namely short run and long run. Short run average cost (SAC) is the sum total of short run average fixed cost (SAFC) and short run average variable cost (SAVC).

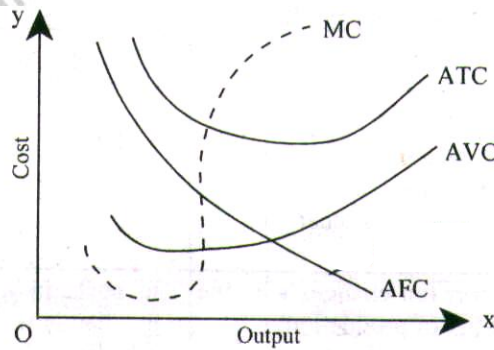
$$\text{SAC} = \text{SAFC} + \text{SAVC}$$

The average cost curve in the short run period is 'U-shaped'

Production Output (in Units)	Total Costs			Average Cost			MC
	VC	FC	TC	AVC	AFC	ATC	
0	-	100	100	-	-	-	-
1	20	100	120	20	100	120	20
2	35	100	135	17.50	50	67.20	15
3	45	100	145	15	33.33	48.33	10
4	55	100	155	13.75	25	38.75	10
5	70	100	170	14	20	34	15
6	85	100	185	14.57	16.67	30.83	15
7	105	100	205	15	14.29	29.30	20
8	135	100	235	16.88	12.50	29.38	30
9	175	100	275	19.44	11.11	30.55	40
10	225	100	325	22.50	10	32.50	50

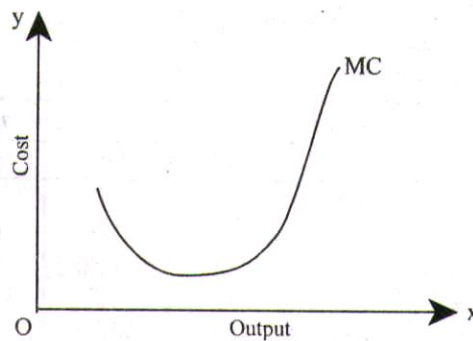
The above table shows that with an increase in production, the AFC continuously decreases. At initial level, it decreases rapidly and then gradually slows down. AFC drops continuously but never becomes zero because at any level, the total fixed cost (TFC) can never be zero even if the production is nil, and ATC decreases at the initial level but after sometimes it starts increasing. The MC is determined on the basis of TC, But the MC is affected due to the VC though the FC remains constant so initially it drops rapidly thereafter it starts increasing.

The graph shows that AFC is continuously decreasing. The AVC decreases at the initial level and thereafter it starts increasing, but ATC is always above the AVC.



Q.4 Why is MC Curve U-shaped?

Ans.: Marginal cost is an addition made to the total cost for producing one more unit of output. At initial level when a firm increases its output, the total cost and variable cost start increasing at a diminishing rate, because at initial level of production, the laws of increasing returns apply. At initial level, moreover, the firm enjoys many Economies that cause MC to fall down. As the output continues, marginal cost becomes minimum and then ultimately start rising due to the operation of law of Diminishing Returns. Thus initially MC falls and after reaching the minimum point starts rising. It is how the MC curve becomes U Shaped.

**Q.5 Importance of Short Term Cost Analysis in Business Decision Making.**

Ans.: Some importance are given below :-

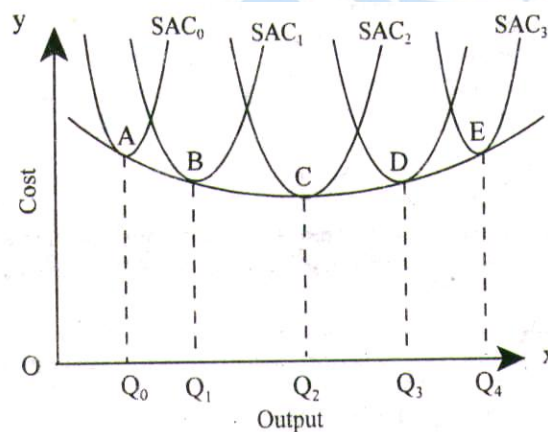
- (i) Regarding production decision
- (ii) Price determination
- (iii) Scale of production
- (iv) Use of mechanism
- (v) Regarding new proposal
- (vi) Unused capacity

Q.6 Explain the Average cost and marginal cost in the long run**Ans.: Long Run Average Cost :**

The average cost in long run is the total cost in long run divided by the level of output i.e.

$$\text{Long Run Average Cost (LAC)} = \frac{\text{Long Run Total Cost (LTC)}}{\text{Output (Q)}}$$

In long run, the firms can use different sizes of plants. The given level of output can be obtained from the particular to which it is appropriated. If such plant is put into operation, the production of goods can be obtained at the lowest average cost. The long run average cost curve can be obtained from the short run average cost curve; it is tangent to various short run average cost curves.



The graph shows that for producing OQ_0 level of output the corresponding point on LAC curve is 'A' at which the LAC curve is tangent to SAC_0 .

Thus, if a firm is at will to produce OQ_0 level of output, it has to build a plant corresponding to SAC_0 and on this curve at point 'A' will operate the plant.

J.S. Bain has defined that the long run average cost curve shows for each possible output, the lowest cost of producing that output in the long run.

Long Run Marginal Cost:

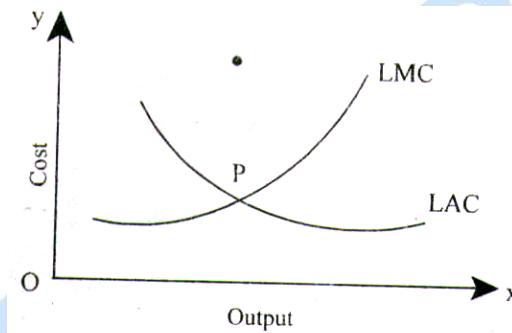
Long run marginal cost implies the change in total cost on the production of one more units of commodity

$$LMC = \frac{\Delta LTC}{\Delta Q}$$

Where, LMC => Long Run Marginal Cost

ΔLTC => Change in Long Run Total Cost

ΔQ => Change in Output Level



□ □ □

Chapter-9

Market: Meaning Type, Price & Output Determination

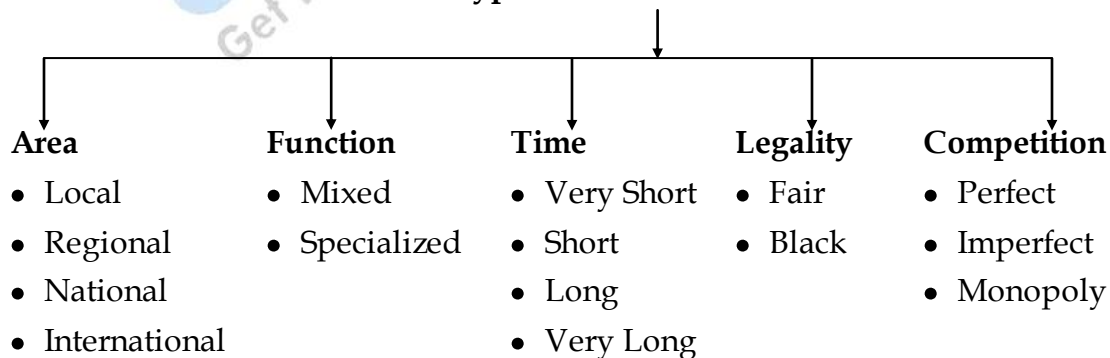
Q.1 What is a Market?

Ans.: The term market refers to a particular medium through which buyers & sellers meet each other and buy and sell the goods & services.

Characteristics of Market :

- A. Existence of Buyer and Seller
- B. Communication between Buyer and Seller
- C. Place and Medium through which interact.
- D. Commodity and services demanded and sold
- E. Entry and Exit of Buyer and Seller
- F. Any types of Competition among seller
- G. Knowledge about market

Types of Market



Q.2 What is Perfect Competition?

Ans.: The Perfect Competition is a form of market situation in which there is a large number of buyers and sellers, who buy and sell. It can sell its output in the market at the fixed equilibrium price of output by the industry.

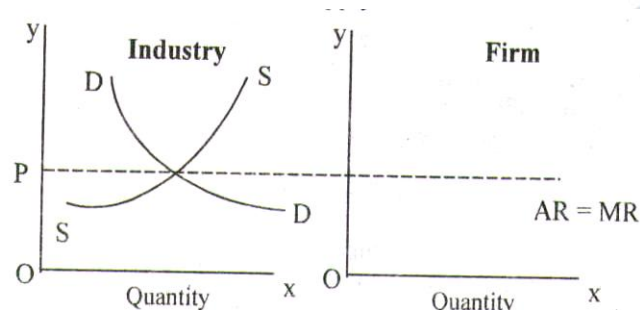
Feature of Perfect Competition :

- (i) There are a large number of undifferentiated buyer and sellers.
- (ii) The sellers sell homogeneous products.
- (iii) There is no restrictions on the entry and exists of the buyer and seller.
- (iv) Both buyers and sellers have the perfect knowledge of the market.
- (v) All the factors are perfectly mobile.
- (vi) The market price must be flexible over a period of time is to the changing conditions of supply and demand.
- (vii) There should not be any artificial restriction on the demand and supply, prices of goods and factors of production in the market.
- (viii) A perfectly competitive market assumes the non-existence of transport cost.
- (ix) Under perfect competitive market there is a separate existence of industry and its group of firm fixes the selling price.
- (x)

Pure Competition		Perfect Competition
1.	Large no. of buyer and seller	Large no. of buyer and seller
2.	Homogeneous Product	Homogenous Product
3.	Uniform Price	Uniform Price
4.	Free Entry and Exit	Free Entry and Exit
		Perfect Mobile factor of production
		Perfect knowledge
		No Transportation Cost

Q.3 How price determine under perfect competition?

Ans.: Industry is a group of producers or firms. In a perfectly competitive market the equilibrium price of a commodity is determined by the Inter section of the market demand curve and the market supply curve. Market demand curve is the horizontal summation of the individual demand curves whereas market supply curve is the horizontal summation of the firms supply curves.



In the above figure, DD is the market demand curve, while SS is the market supply curve. Equilibrium is attained at T where two curve intersects. At equilibrium price OP, the quantity sold by the industry is OQ.

The price so determined by the industry is accepted by each individual firm as given. Under conditions of perfect competition, an industry is the price maker, while a firm is a taker.

Q.4 What are the conditions of Equilibrium of a Firm?

Ans.: Every firms aims at drawing such an output-price strategies that it should earn maximum profit and minimum loss such a situation is termed as the equilibrium of the firm.

A firm is in equilibrium has no motive to change its organizations or scale of production which is possible when it is earning maximum net profits.

Conditions of Equilibrium of Firm :

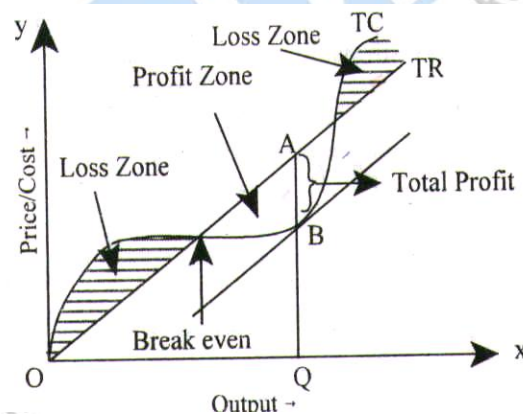
- (i) A firm will be in equilibrium when it has no tendency to increase or contract level of output.

- (ii) Marginal cost of the firm must be equal to marginal revenue ($MC = MR$).
- (iii) Marginal cost (MC) must cut marginal revenue (MR) Curve from below.

A competitive firm, in order to reach equilibrium will produce output at a given price which maximizes its profit and minimizes the loss. There are two approaches to explain equilibrium of a competitive firm.

- (i) Total Revenue and Total Cost Approach
- (ii) Marginal revenue and Marginal Cost Approach
- (i) **Total Revenue and Total Cost Approach** : It is the simplest way to determine the equilibrium of firm. In order to find out the profit of firm. The difference between total revenue and the total cost is maximum, symbolically

$$\text{Profit} = \text{Total Revenue} - \text{Total Cost}$$



In the above figure, TC is the total cost and TR is the total Revenue curve of the firm. The difference between TR and TC is measured by the vertical distance at a point on two curves. The vertical distance between TR and TC curves is the maximum at OQ output. Firm obtains AB profit at equilibrium level of output. In case the firm decide to produce any output, other than the equilibrium output its profit will fall.

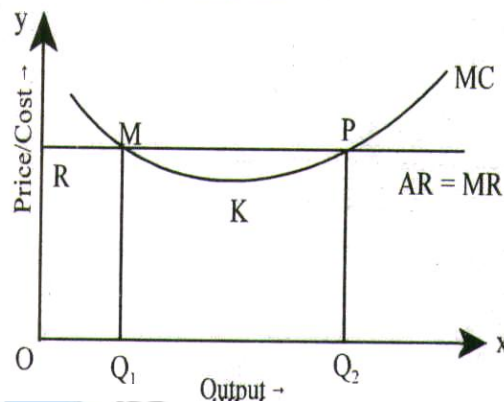
- (ii) **Marginal Revenue Marginal Cost Approach :** At different levels of output the profits of a firm will be maximum at that level of output whose MC is equal to MR.

$$MR = MC$$

$$\text{Or } MR - MC = \text{Zero}$$

MR and MC equality approach to firms equilibrium i.e. based on two conditions.

- (a) **First Order or Necessary Condition :** The firm's MC must be equal to its MR at the equilibrium level of output.
- (b) **Second Order or Sufficient Condition :** At the equilibrium level of output the MC should be rising i.e. the MC curve should have a positive slope.



Firm's first order, condition of equilibrium is satisfied both at point M and point P, where MC Curve intersects the MR Curve. However at point M firm does not get maximum profit because the second order condition of equilibrium is not satisfied. In case the firm decides to produce output more than OQ_2 , its MC being less than MR, It will earn profits, The firm would extend the output up to OQ_2 level (where both the conditions are satisfied) and at equilibrium point P because with this output

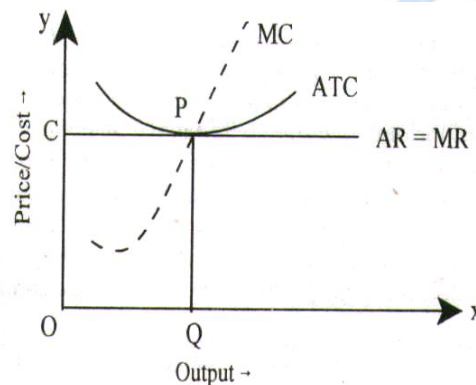
- (a) $MC = MR$
- (b) MC curve intersect MR curve from below

Q.5 Describe the Price - Output Equilibrium of Firm under Perfect Competition in Short-Run.

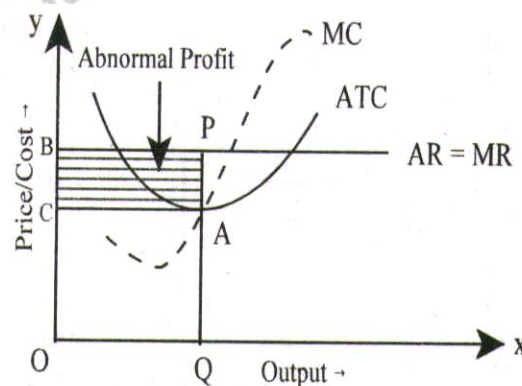
Ans.: In short run, under perfect competition, a firm may earn or suffer :-

- (1) Normal Profit
- (2) Abnormal Profit
- (3) Losses

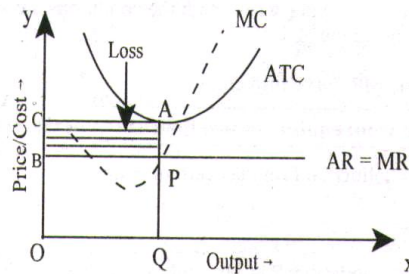
- (1) **Normal Profit :** The figure shows that P is the equilibrium point of a firm. It is the level where $MC = MR$. At output OQ and price OC, $AR = ATC$. At this level the firm will neither earn profit nor suffer loss i.e. it is the normal profit level.



- (2) **Abnormal Profit :** Profit will be maximum when MC curve cuts the MR curve from below. Thus the equilibrium is at point P. At output OQ and price OB, $AR > ATC$. It represents that the firm earns an abnormal profit. (i.e. BCAP).

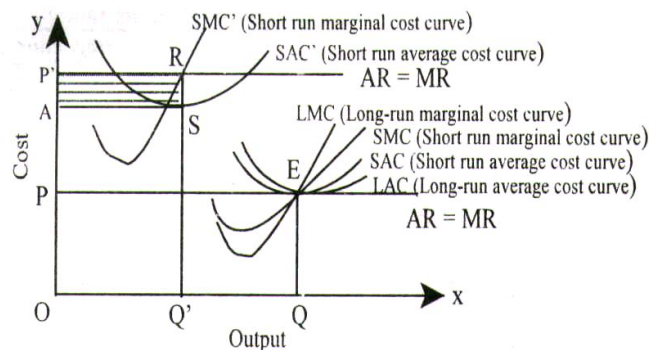


- (3) **Losses :** the equilibrium of the firms is at point P where $MC = MR$. At output OQ and price OB, the firm suffers losses (i.e. CBPA), Since the $AR < ATC$.



Q.6 Describe the Price-Output Equilibrium under Perfect Competition in Long-Run.

Ans.: Under perfect competition, long run is that period where a producer can change its supplies by changing all the production factors. He has sufficient time to adjust his supplies according to the changing demands. In long run, the firm is at equilibrium where marginal cost becomes equal to price. Besides, the firm under perfect competition to be at equilibrium price should be equal to average cost. Generally, in long run, the firm earns normal profit. In case it incurs super normal profit, the production of existing firms will increase, and also some new firms will enter into the market. This increases the supply of products and a fall in price is depicted. Because of this firm will earn normal profit. But, if the price is less than AC, the firm will suffer losses. These losses would force some of the firms to leave the industry. As a result, the output of the industry will decrease which will increase the price and as such the firm will begin to earn normal profit.



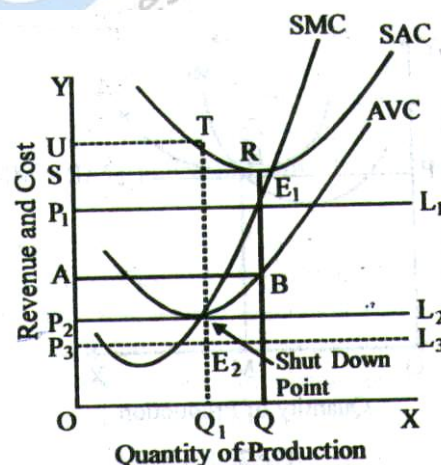
The figure, shows that output is on x-axis, and cost on y-axis. OP is the price and at this price the firms produces with SAC and earns super normal profit (i.e. PASR). Due to this, the existing firm increases its production capacity and the new firms enter the industry. Consequently, the supply increases and there is a fall in price. Thus, the price falls to OP. At this level, the firm will be at equilibrium at point E and produces OQ level of output. The reason for this is that, at point E, AR, MR, LMC, LAC all are equal and the firm earns normal profit.

Q.7 What is meant by breakeven-point?

Ans.: BEP refer to firm's that level of output at which its $TR = TC$. At this point the firm gets neither super normal profit, nor incur losses but gets normal profit only.

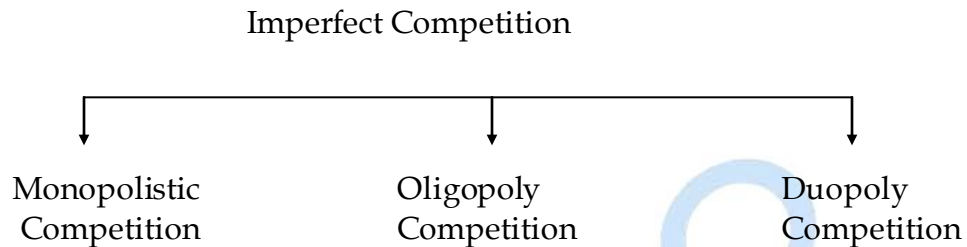
Q.8 What is meant by shut down point?

Ans.: The shut down point of a firm is firm's that level of output at which market price of its product is just equal to its variable cost or at which firm's loss is equal to F. C. It is technically called shut down point because the moment market price falls further and the firm is unable to recover even its variable cost, it discontinues its production.



Q.9 What is Imperfect Competition?

Ans.: Market is said to be imperfect when large no. buyers and sellers and both are not fully aware of the prices at which transactions take place.

**Q.10 What is a Monopolistic Competition?**

Ans.: Monopolistic competition implies that market situation where there are many sellers, but there is a product differentiation between each seller. The individual decisions about pricing and output are not considered.

According to Leftwitch, "Monopolistic competition is a market situation in which there are many sellers of a particular product but the product of each seller is in some way differentiated in the minds of consumers from the product of every other seller."

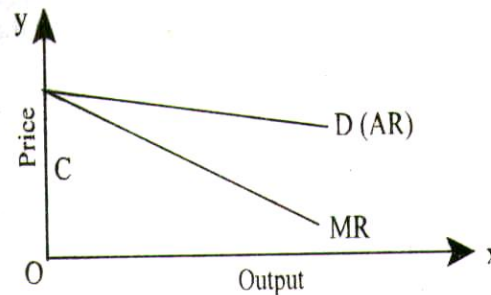
The main features of a monopolistic competition are:

- (i) Large Number of Buyers and Sellers
- (ii) Free Entry and Exist of Buyer and Seller
- (iii) Product Differentiated
- (iv) Free pricing policy of Firm
- (v) Imperfect knowledge of the market.
- (vi) Non price Competition (Advertisement Exp.)

Q.11 Determine the nature of Demand Curve under Monopolistic Competition?

Ans.: Under Monopolistic competition it is difficult to construct the demand curve of the industry. Each firm produces a differentiated product and

sells it at a different price. It is therefore, difficult to say how much the demand would be at a given price that's why separate demand curves are constructed for individual firms.



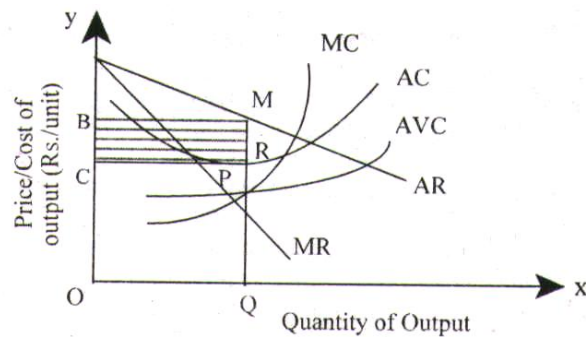
In the above figure $D (AR)$ i.e. the demand curve. Due to product differentiation a firm faces downward sloping demand curve. The reason is that. If a producer increase price of his product, some of his customers will stop buying this product and will shift to his rival firm who has not changed his price. On the other hand, if he lowers his price, he will attract some new customers.

Q.12 Describe the Equilibrium of a Monopolistic Firm?

Ans.: Every firm will choose to produce that particular output at which it will be able to secure maximum amount of profits. The equilibrium price and output is indicated by the equality of MR and MC . Basically, the equilibrium under monopolistic competition involve :-

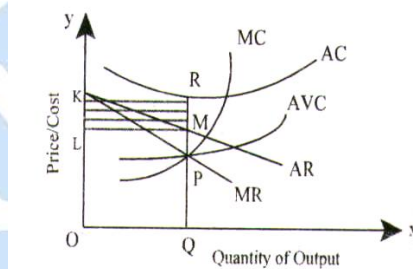
Equilibrium in Short-Run : In a short run, a monopolistic competitive firm attains equilibrium where its MC equals MR , and the MC is rising at the equilibrium point. In a short run, the firm has to confront both fixed cost and variable cost. The firm will not produce, If it fails to recover the variable cost. The firm may get abnormal profits, suffer losses or may first manage to get normal profits in the short run.

- (i) **Firm may Earn Abnormal Profit :** A monopolistic firm shall earn abnormal profits if its average revenue is more than average cost at the equilibrium level of output.

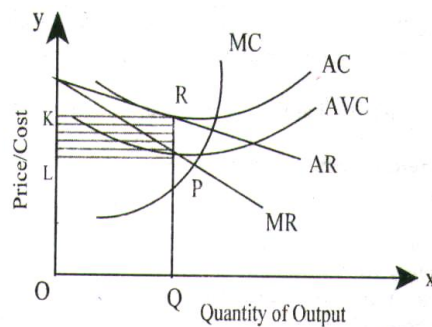


At the equilibrium OR , the firm produces OQ output since at OQ output, firm AR is more than its AC ($AR > AC$) it gets profit because it manages to recover both the fixed cost and variable cost.

- (ii) **Firm may Outflow Loss :** In the short run the firm may suffer losses if its $AR < AC$. At the equilibrium price OR , the firm produces OQ output where $AC > AR$. The firm, incur loss equal to $KLMR$ due to the non-recovery of fixed cost. In spite of these losses the firm will continue to produce because it manages to recover the Average Variable Cost.



- (iii) **Firm may work at Normal Profit or Break even level:** In the short run monopolistic firm may get normal profits in the short run. It would happen when the firm's $AR = AC$.

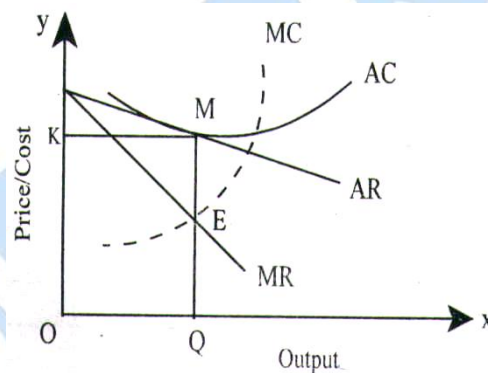


At equilibrium price OR, (where it MC curve intersects MR curve) the firm produces OQ output. Since at OQ output firm's $AR = AC$, it will neither earn/get profit nor suffer loss, but will get normal profits only.

Equilibrium in Long-Run : During the long run new firms can be established, existing firms can expand their size and all factor inputs can undergo a change.

"No Monopolistic competitive firm receives abnormal profit in the long run".

Basically, the firms in the long-run will get the normal profits, if the existing firms are making super normal profits, it will attract some of the new firms in the industry. The entry of new firms will result into over production which will have a depressing effect on price. Hence all the firms in the long run will get normal profit.



The firm is in equilibrium because at point E, $MC = MR$. Since, at this equilibrium AR is tangent to long run AC at point M. hence, the firms are earning normal profits.

Q.13 What is a Monopoly?

Ans.: Monopoly is a market structure in which there is only one single seller or producer of the commodity which has no close substitute.

Kinds of Monopoly :-

- (i) **Absolute Monopoly :** It refers to that market where there is one and only one seller of a product, having no substitute.

- (ii) **Relative Monopoly** : It refers to single firm which constitutes the whole industry. In this form there is no difference between firm and industry.
- (iii) **Simple Monopoly** : It refer to that market where there is one price is taken by all the consumers.
- (iv) **Discriminating Monopoly** : It refer to that market where there is different price are taken by different consumers.
- (v) **Private Monopoly** : It refers to that market where there is firm's ownership is in the private hands.
- (vi) **Public Monopoly** : It refer to that market where there is firm's ownership is in the hand of Govt. such as Railway.

Q.14 What are the main features of Monopoly?

- Ans.:**
- (i) There exists a single producer-cum-seller firm in the market and there are large no. of buyers who cannot influence the price of output by their individual action in the markets.
 - (ii) Full control over the supply of the product.
 - (iii) There is a strict restriction i.e. barrier on the entry of new firm in the market.
 - (iv) The monopolist is in a position to set the price himself.
 - (v) There is an incurrence of informative selling cost in the beginning to inform the buyers about the output.
 - (vi) The aggregate demand for the output of a monopoly firm of all the buyers constitute the demand for the output of a monopoly firm in the market. The demand curve of monopoly firm left to right downwardly with negative tangential slope. It means, if the monopolist reduces the price of his product, demand of that product will increase and vice-versa. E.g. Public utility Services such as railways, water supply, electric supply etc.
 - (vii) Concept of firm & industry is same.
 - (viii) AR and MR both are different & downward sloping and stepper.
 - (ix) Firm is price taker and price maker.

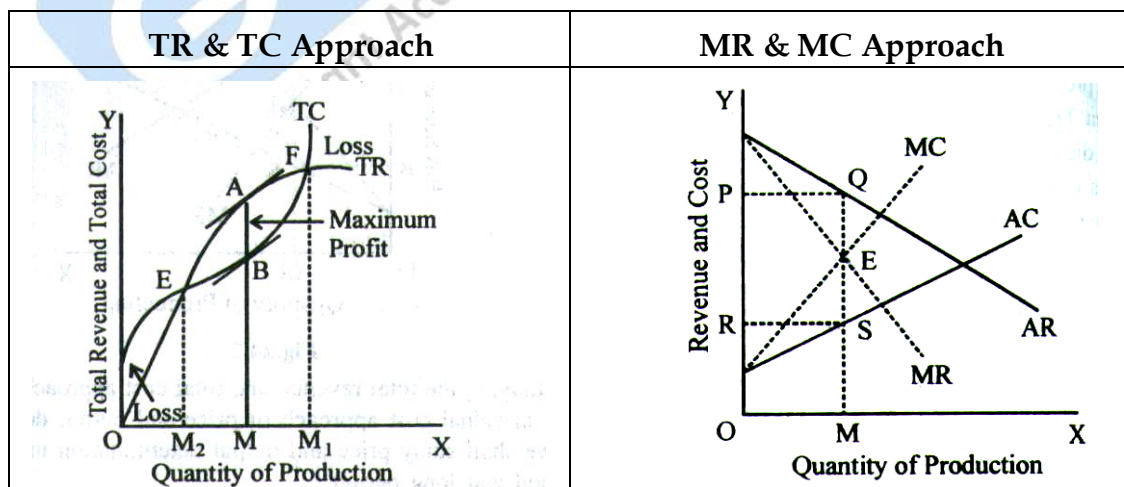
Q.15 What are the reasons for the Emergence of Monopoly?

Ans.: These factors are discussed below :-

- (i) **Natural Factors :** A firm may enjoy monopoly because of its control over a crucial raw material or mineral e.g. uranium etc.
- (ii) **Legal Factor :** A firm can legally procure monopoly power e.g. patent right, copy right etc.
- (iii) **Cost Factor :** A firm may produce at such a low cost at which no other firm can produce a commodity.
- (iv) **Market Factors :** Sometimes the size of the market is so small that it cannot accommodate more than one firm.
- (v) **Heavy Investment :** Certain industries like iron & steel etc need heavy investment in which only a particular firm can afford to arrange.
- (vi) **Protection of Public Rights :** Motivated by public welfare and public interest the government itself can assume monopoly power eg. Railways, posts & telegraphs etc.

Q.16 Describe the Equilibrium of a Monopoly Firm?

Ans.: Like a competitive firm, the, prime objective of a monopoly firms is to maximize its profits or minimize losses. There are two approaches to study equilibrium of a monopoly firm :-



Q.17 How is Price determined under Monopoly?**Ans.: Price Determination under Monopoly :**

- (1) **Short-Run Equilibrium under Monopoly :** Short period refers to that period in which the monopolist has to work with a given existing plant. During short-run monopolist cannot expand or contract the size of his plant nor can be change the structure of the fixed cost. Monopolist can increase his output by changing the variable factors.

In the short run, the monopoly firm may enjoy super-normal profits, i.e. abnormal profit, normal profits and sustain losses.

(i) Firm may Enjoy/Abnormal Profit :

Equilibrium point = E

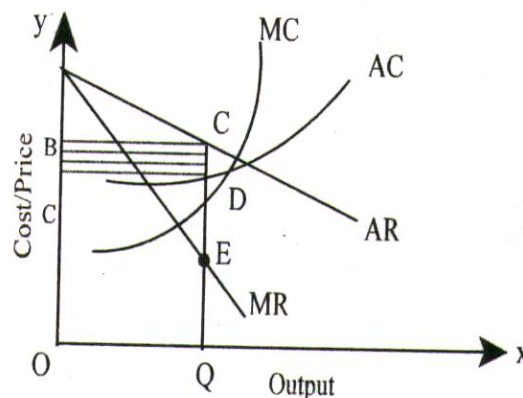
Where $MR = MC$

MC cut MR from below

Equilibrium output OQ

$AR > AC$

Total Profit = ABCD

**(ii) Firm may Work at Normal Profit:**

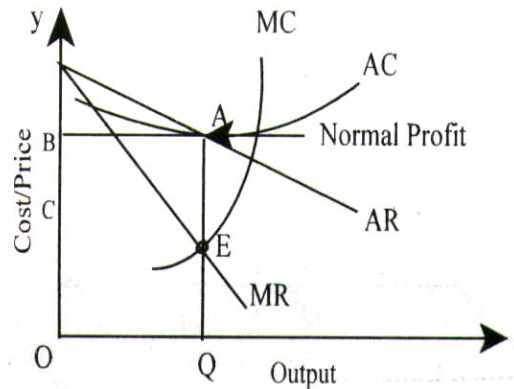
Equilibrium points = E

Equilibrium output = OQ

At point E $MR = MC$ and MC cuts MR from below

$AR = AC$

Firm will earn normal profit



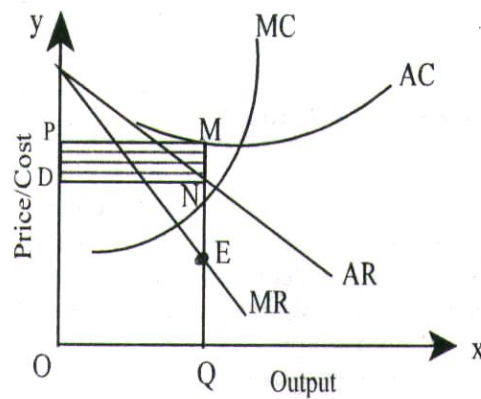
(iii) Firm may Suffer/ Losses :

At equilibrium point E

$MR = MC$ & MC cuts MR from below

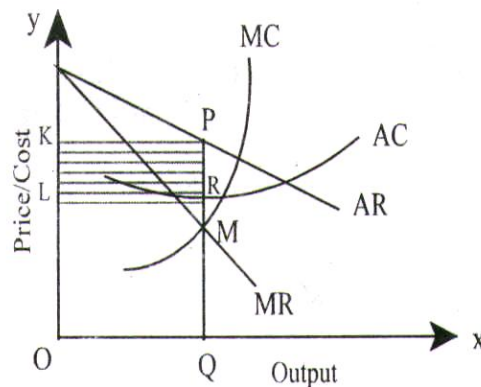
$AC > AR$

Monopolist firm suffer loss equal to MNDP



- (2) **Monopoly Price during Long-run** : Long run is a period in which output can be changed by changing the factors of production. The long-run equilibrium of the monopoly firm is attained at that level of output where its MC equal the MR. Monopoly firm in the long-run gets abnormal profit. It is also because the new firms are not allowed to enter the market.

Monopoly firm does not suffer loss in the long run, because all costs in the long-run are variable and these must be recovered. It fails to do so it would better stop production and quit the market.



Effect of Monopoly

Advantages		Disadvantages
1.	Economics of large scale of production.	i) Exploitation of consumer.
2.	Lower selling cost.	ii) Exploitation of workers.
3.	Incentive for research & development.	iii) No incentive for greater efficiency.
	Check on wastage of resources.	iv) Inequalities of wealth.
	Public utilities available to all.	v) Hindrances in the establishment of new enterprises.
		vi) Political corruption & bribery.
		vii) Fluctuation in the prices.

Q.18 What is Discriminating Monopoly or Price Discrimination?

Ans.: "The act of selling the same article produced under a single control at different places to different buyers at different prices is known as price discrimination."

Kinds of Price Discrimination :

- (i) Personal Price Discrimination
- (ii) Geographical Price Discrimination
- (iii) Trade Discrimination
- (iv) Time Discrimination
- (v) Demographic Discrimination

Essential Conditions for Emergence of Price Discrimination :

- (i) Existence of two or more than two Market/Market Imperfections.
- (ii) Existence of Different Elasticities of Demand in Different Markets
- (iii) No Possibilities of Resale
- (iv) Legal Sanction
- (v) Full Control over the Supply

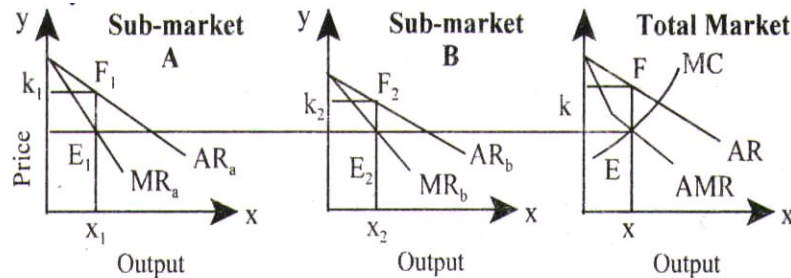
Q.19 How is Price determined in Discriminating Monopoly?

Ans.: Under price discrimination the seller divides the buyers or market into two or more groups and then charges higher price to the buyers/markets having the less elastic demand. Equilibrium of the monopolist under price discrimination is attained when his marginal cost equals the marginal revenue. Since the commodity is produced under a single control and sold in more than one market, there will be only one marginal cost curve, while marginal Revenue curves will be more than one.

Thus the monopolist has to take two decisions:-

- (i) How much total output should be produced?

- (ii) How the total output should be shared between the two sub markets?



In the above figure the elasticity of demand of sub market A is less than sub market B which has greater elasticity of demand.

AMR is the combined marginal revenue curve of the whole market obtained by the lateral summation of MR_a & MR_b .

The discriminating monopoly will maximize his profits by producing the level of output at which MC curve cuts the AMR. It is clear that at OX level of output profit are maximum because at this level MR is equal to MC of the whole output in such a way that his profits may be maximum. Therefore, he will sell OX, level of output in such market A at price F, X, The Revenue is OX, F, K, Similarly in sub-market B, at, OX₂ level of output he will sell at price X₂ F₂ and its revenue being O X₂ F₂.

Thus, Two conditions are required for the equilibrium of the discriminating monopoly.

- (i) Aggregate $MR = MC$ of totals output (ii) $MR_a = MR_b = MC$

Q.20 What are the Degree of Price Discrimination?

Ans.: Prof. A. C. Pigou has given the following three conditions of price discrimination :-

- (1) **Price Discrimination of First Degree :** Price discrimination of first degree is said to exist when different rates are charged from the different buyers and different prices for different unit which a

buyer may be prepared to buy. The price of each unit is equal to its demand price so that the consumer is unable to enjoy any consumers Surplus. Eg. Doctors, lawyers.

- (2) **Price Discrimination of Second Degree :** In the second Degree the buyers are divided into different groups and from different groups a different price is charged which is lowest demand price of that group. This type of price discrimination would occur if each individual buyer had a perfectly in elastic demand curve for good below and above a certain price e.g. Railway charges fares in this way.
- (3) **Producer of Third Degree :** Price Discrimination of Third Degree is said to exist when the Seller divides his buyers into two or more than two sub-marketers and from each sub market different price is charged. The price so charged depends on the output sold along with demand conditions of sub-market.

Q.21 What are the objective of Discrimination Monopoly would it justifiable?

- Ans.:** (i) To appropriate the consumer surplus so that it occurs to the produce rather than to the consumer.
- (ii) To dispose of occasional surplus.
- (iii) To develop a new market.
- (iv) To make the maximum use of the unutilized capacity.
- (v) To earn monopoly profits.
- (vi) To enter into or retain export markets.
- (vii) To destroy the competition or to make the competition amendable to the wishes of the Seller.
- (viii) To raise future sales.

Desirable	Non-Desirable
i) Specific Natures of Industry	i) Transfer of Resources of Production
ii) Social Welfare	ii) Increase Prices
iii) Higher Total Production	iii) Use of Price Discrimination Policy
iv) Export Trade	iv) Exploitation of Consumer
v) Public Utility Service	

Q.22 What are Limitation of monopoly? How can control be exercised on Monopoly Power.

Ans.: Limitation of Monopoly Power :

- (i) Fear of Possible Competition
- (ii) Fear of Substitute Competition
- (iii) Public Bycott
- (iv) Elasticity of Demand of Concerned Goods
- (v) Law of Return
- (vi) Fear of Nationalization
- (vii) Enlightened & Progressive Monopolist

Some important ways to control are as :

- (i) Control on price & production.
- (ii) Restriction on malpractices.
- (iii) Publicity of evils of monopoly.
- (iv) Encouragement to consumer's association.
- (v) Public ownership & management.
- (vi) Prohibition on emergence of monopoly & breakup of monopoly.
- (vii) Taxation – (a) Lump-sum Tax (b) Quantitative Tax.

Encourage to co-operative production & distribution.

Q.23 What is Oligopoly?

Ans.: That form of imperfect competition in which a particular commodity is produced by few firms only whose product are either homogeneous or are close substitute.

Features of Oligopoly :

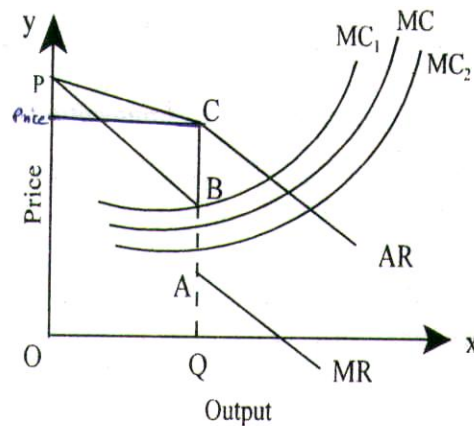
- (i) Few Seller
- (ii) Large Buyer
- (iii) Product may be Homogeneous or Differentiated
- (iv) Interdependence
- (v) Advertisement & Sales Promotion
- (vi) Rivalry
- (vii) Difficult to Enter & Exit of Firms
- (viii) Price Rigidity
- (ix) Demand Curve Uncertain
- (x) Price rigidity and price war.

Types of Oligopoly :

- (i) **Differentiated Oligopoly** : It is refers to that market condition product is differentiated produced by firms.
- (ii) **Pure Oligopoly** : It is refer to that market where there is homogenous product produced by firms.
- (iii) **Collusive Oligopoly** : It refer to that market where there all firms make cartel, to enjoy monopoly power.
- (iv) **Independent oligopoly** : Firm free to produce & decide own price.

Q.24 How can Price be determined under Oligopoly?

Ans.: Firms under oligopoly aim at profit maximization. Under oligopoly, the point where the cost of producing and additional unit is equal to the revenue earned from an additional unit sold (i.e. $MC=MR$), is called the equilibrium point. This can be depicted from he following diagram:-



In the figure, x-axis refers to output and y-axis to price. Under oligopoly, the firm is at equilibrium when $MC = MR$. At this equilibrium, the firm produces, OQ level of output price. Until the MC curve cuts the MR curve in discontinuous portion, the price OP will remain constant. This is known as rigid price. The price will change only when MC curve cuts the MR curve in continuous portion. And, since any change in price will result in loss of profit, therefore, no change in price is made.

Q.25 What is kinked Demand Curve Hypothesis?

Ans.: Rival consciousness is a basic characteristics of oligopoly. Under oligopoly the price change by a seller depends largely upon the reaction of rivals. This results in one particular shape of demand curve under oligopoly i.e. kinked demand curve.

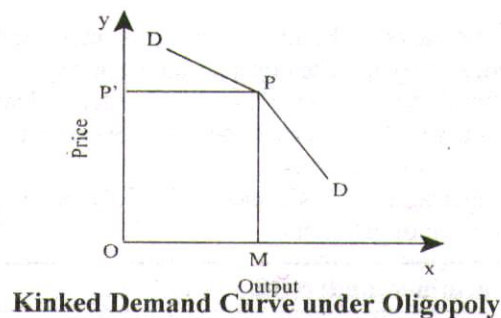
The assumption behind drawing this curve is that the 'Kink' in the curve is always at the ruling price. If a firm under oligopoly raise the price the rivals will not follow the suit rather they will allow the firm to increase the price and loose customers. Thus upper part of kink is more elastic.

On the other hand if the firm lowers its price the rivals will follow suit and lower their prices too thus the firm will not gain much by lowering its price. Thus lower part of kink is less elastic.

Since there is no gain in changing the price the oligopolist will stick to the prevailing price and thus a kink will form at the prevailing price.

In this curve the demand curve DD is kinked at P .

The prevailing price is MP at this price the firm sells OM output, Now the upper segment DP and lower segment PD show different elasticity DP is more elastic where as PD' is relatively less elastic. This difference in elasticity is due to rival consciousness existing between firms in oligopoly. It is due to this difference in elasticity that the demand curve is kinked at the prevailing price.



Kinked Demand Curve under Oligopoly

Q.26 What is the Relationship of Elasticity, AR and MR under Monopoly?

Ans.: Monopoly is a market situation where there is a sole seller of the products and the products have no close substitutes. Here, the firm and industry are same and restrictions are imposed on the entry or exit of any firm. The demand curve (i.e. AR) is relatively inelastic because there are no close substitutes of the products.

The relationship between elasticity, AR and MR is expressed as

$$MR = AR (e^{-1/e})$$

Where,

MR = Marginal revenue

AR = Average revenue

e = elasticity

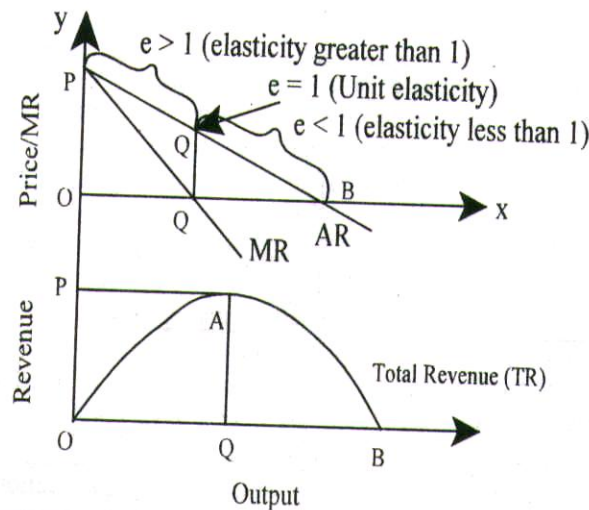
Therefore, if

e < 1, MR is negative (-)

e = 1, MR is zero (0)

e > 1, MR is positive (+)

In a straight line demand curve, the elasticity of middle point is equal to 1, it states that at this level MR corresponding to the middle point of the AR will be zero.



The above figure shows the relationship between e , AR and MR under monopoly. In this fig. G is the mid point of AR curve where $e = 1$, and MR is zero. MR cuts the x-axis at point Q, here the TR will be maximum. Since $MR = 0$. This has been shown below in that figures, where TR reaches the highest at point A. At a quantity more than OQ, $e < 1$ and MR negative. Due to MR being negative beyond OQ, TR will be diminish if sales is more than OQ, R falls after reaching point A. At a quantity less than OQ, $e > 1$ and MR becomes positive. This shows that TR will increase with an increase in quantity.

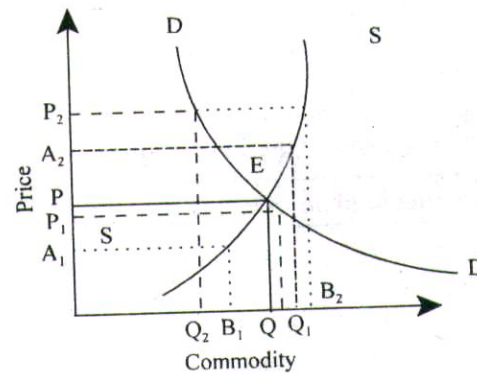
In a nut shell, it is not profitable for a produce beyond the middle point on the demand curve, because he can always increase his revenue by reducing output which will also reduce his cost.

Q.27 Describe Price Determination?

Ans.: The determination of price is the most significant function as every economic activity is measured in monetary terms i.e. it is measured in terms of price. Pricing of commodities is not an easy task. The price of a commodity is determined by the interaction of demand and supply forces in the market. The equilibrium price is the price at which the demand and supply forces are in balance.

The determination of price requires demand and supply both. In a purely competitive market, the equilibrium price is determined by the interaction

of demand and supply forces in the market. The point at which the demand curve and supply curve intersect each other is called the equilibrium point and the price prevailing at this point or level is called equilibrium price. This can be explained through the following diagram.



The diagram shows that equilibrium price is determined at point E, where demand curve equates the supply curve.

Any change in demand or supply will also change the equilibrium price. If the demand curve remains same, price falls (P_1) with an increase in supply (Q_1) and rises (P_2) with decrease in supply (Q_2). Similar, if supply curve remains same, price rises (A_2) with an increase in demand, B_2 , and decreases (A_1) with decrease in demand (B_1). Similar, if supply curve remains same, price rises (A_2) with an increase in demand B_2 and decreases (A_1) with decrease in demand (B_1).

Q.28 Distinguish between Market Price and Normal Price?

Ans.:

Basis	Market Price	Normal Price
Period	It is determined in a very short period.	It is determined in a long period
Point of Time	It prevails at a particular point of time or day.	It prevails by the interaction of demand and supply over a long period.

Basis	Market Price	Normal Price
Demand and Supply effect	Demand plays a vital role in price determination as the supply cannot be adjusted in accordance with the demand needs in short period.	Supply plays a vital role in price determination as the supply can be adjusted in accordance with the demand needs in long period.
Price Stability	Price varies from time to time	It is more stable than market price.
Determination of Price	Price is determined through the interaction of the temporary demand and supply forces.	Price is determined through the interaction of the permanent demand and supply forces.
Reality of concept	The concept of market price is a realistic and practical concept.	The concept of normal price is an imaginary & theoretical concept.
Production cost	Market price may be less than, equal to or more than production cost.	Normal price tends to be equal with the production cost. Sellers enjoy normal profit.

Q.29 What is dumping?

Ans.: Monopolist sell a portion of his output in a foreign market at a very low price and the remaining output at a very high price in the domestic market because foreign market is perfect & domestic market is imperfect competition market.

Chapter-10

Marginal Physical Productivity

Q.1 What is Marginal Productivity?

Ans.: Marginal productivity is the increment made to the total output by employing an additional unit or factor.

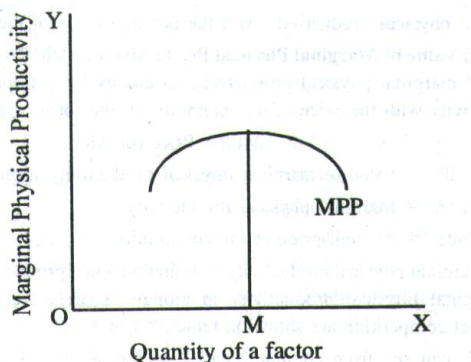
Q.2 How many type of distribution?

Ans.: There are two type of distribution :-

- (1) **Personal Distribution** : Distribution of national income among various individuals is equally distributed.
- (2) **Functional Distribution** : Various factor of production are rewarded for their services rendered in the act of production.

Q.3 What is Marginal Physical Productivity?

Ans.: Marginal physical productivity is the reward for a factor of production is given on the basis of marginal product and the marginal product is known as Marginal Physical Productivity.



Q.4 Write definition of Distribution.

Ans.: All wealth that is created in a society, find its way to the final disposition of the individuals through certain channels or source of income Seligman.

The economics of distribution account for the sharing of wealth produced by a community among the agents or the owner of the agents which have active in its production.

Q.5 What is Marginal Revenue Productivity?

Ans.: An additional made to total revenue resulting from the employment of one more unit of a factor of production, keeping other thing constant.

Q.6 What are the Assumption of MPP Theory of Distribution.

- Ans.:**
- (i) All units of factor are equal.
 - (ii) Each factor can be substituted for each other.
 - (iii) Perfect mobility of factor
 - (iv) Perfect competition in factor and commodity market.
 - (v) Units of different factor are divisible.
 - (vi) It is applicable in the long run.
 - (vii) Based on law of variable proportions.
 - (viii) Optimum use of resources is taken into consideration.

Q.7 What is Marginal Productivity Theory of Distribution?

Ans.: It states that the reward for factors of production depends on their productivity and it is equal to their marginal productivity. A firm demands the factor of production according to their productivity the more the productivity of a factor of production. The more is the price and if the productivity is low, the price is also low and the price for the factor of production is determined by their marginal productivity. A firm can maximize its profit only by equalizing the marginal productivity of a factor of production and its marginal cost. If the price of a specific factor

of production is less than its marginal productivity, the firm will earn profit and it will use more units of the factor of production. According to the theory, the price received by every factor of production is equal to its marginal production.

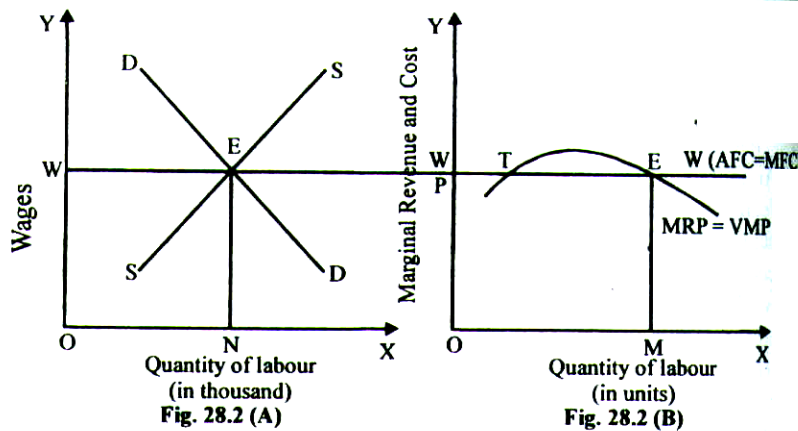
Q.8 What are the conditions for equilibrium under perfectly competitive factor market for a firm?

Ans.: Following conditions fulfill in equilibrium :-

- (i) The marginal productivity of every factor of production is the same in all business.
- (ii) The marginal productivity of every factor of production is equal to the M.P of all other factor in industry.
- (iii) The reward for factor of production is equal to its marginal productivity and in the long run it is equal to its average productivity also.

$$MRP = MPP \times MR$$

$$VMP = MPP \times \text{Price (AR)}$$



- (a) Marginal revenue product must be equal to marginal factor cost.
- (b) MRP curve must cut MFC from the above.
- (c) $MRP = VMP = MFC = AFC = \text{Price}$

Where,

MRP = Marginal Revenue Productivity

VMP	=	Value of Marginal Physical Productivity
MFC	=	Marginal Factor Cost
AFC	=	Average Factor Cost

Q.9 What are the criticism of Marginal Productivity Theory of Distribution?

- Ans.:**
- (i) All factor units are not identical.
 - (ii) No perfect mobility
 - (i) Perfect competition is not found.
 - (ii) Full employment
 - (iii) Maximization of profit is not the main objective.
 - (iv) All the factor units are not divisible.
 - (v) Productivity is not related to one factor alone.
 - (vi) Application of the theory in short period.
 - (vii) It neglects technological progress.
 - (viii) The sum of factor payments is not equal to its product.
 - (ix) No justification for inequalities of income distribution.

□ □ □

Chapter-11

Theory of Rent

Q.1 What is Rent?

Ans.: According to **David Ricardo** "Rent is that portion of the produce of the earth which is paid to the landlord for the use of the original and indestructible power of the soil."

But what an owner receive is not a pure rent it is gross because it includes :-

- (a) Interest on the capital invested.
- (b) Depreciation and maintenance.
- (c) Salary to be paid for management.
- (d) Reward for risk taking.

Types of Rent :

- (i) **Contract Rent OR Gross Rent** : Includes above (a) + (b) + (c) + (d)
- (ii) **Economic Rent (Pure Rent)** : $\text{Total Rent} - \{(a) + (b) + (c) + (d)\}$
- (iii) **Modern Concept** : Payment to any factor of production over and above its transfer earning, its opportunity cost.
- (ii) **Situation Rent** : It depend on position of the place, means when place near to populated area having a high rent or if far away, then having less rent.
- (v) **Scarcity Rent** : Place which is scare means supply limited & demanded more, having high rent and vice versa.

Q.2 What is difference between Economic & Contract Rent?**Ans.:**

S.No.	Economic Rent	Contract Cost
1.	Imaginary	Real
2.	Uncertain	Certain
3.	Decided on basis of intra marginal rent and cost of marginal land.	Decided by landlord & tenant.
4.	Justified neither exploit nor unfair.	May be or not.
5.	Two parties are not so necessary.	Two parties are necessary.
6.	Tendency toward equal to contract rent.	Contract Rent may be equal, more than or less than Economic Rent.
7.	May be higher or lower according to the marginal ability of land.	Not so possible.

Q.3 What is Classical Theory of Rent?**Ans.:** Classical or Ricardian Theory of Rent is :-**Assumption :**

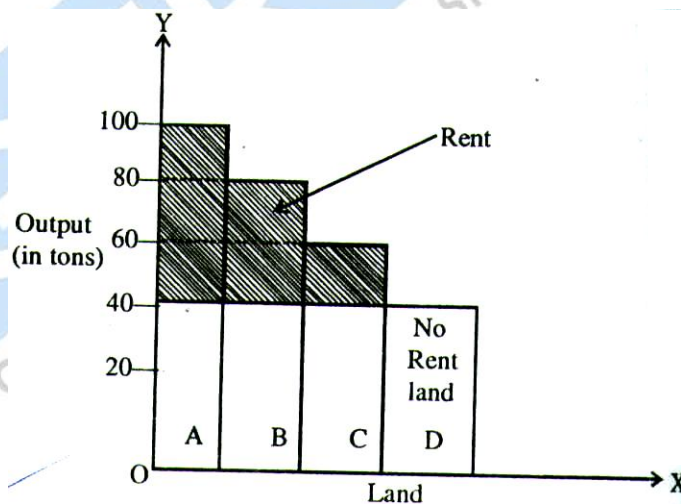
- (1) Land has some original & indestructible power.
- (2) Land which is free gift of nature.
- (3) Land cultivated according to descending order of fertility.
- (4) Rent arise due to difference in fertility & location.
- (5) Law of diminishing return is operate
- (6) Long period.
- (7) No rent land = marginal land = where cost is equal to output price.
- (8) Population increases permanently.

- (9) $E_s < 1$
- (10) Perfect competition.
- (11) Land does not have alternative uses.
- (12) Land is specifically used otherwise ideal.
- (13) Land and capital are single factor.

Rent arise because of two reasons :

- (A) Land differs in quality may be in terms of fertility and location so rent is termed as differential rent.
- (A-1) **Rent under Extensive Cultivation :** Extensive means cultivation in large land area to high output to meet the high demand and has lowest fertility as the marginal land and better than that has been termed as Intra marginal land.

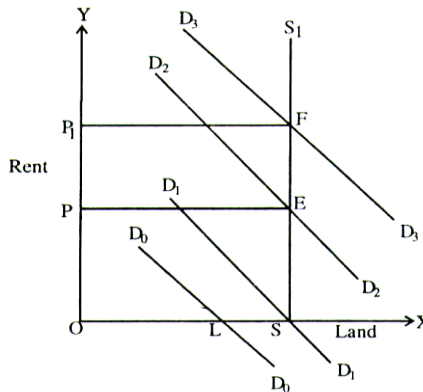
Intensive Cultivation : When efforts are made to increase production by use of additional units of labours and capital on certain land area. Because decrease return to factor worked so output is decrease.



- (A-II) **Locational Rent :** When land is situated near to market area so the transportation cost is low, that's why its having greater rent. Sometime because of in market having great number of customers, so chances of more selling which leads to high in rent of that place.

(B) Land scarcity in relation to demand of it.

Supply is constant of land but demand is varied according to requirement so that price as follows :-



Ricardian Theory : Determination of Land Rent by applying Demand and Supply Curves.

Straight line vertical parallel to Y-axis

D0D0 = having no price because as per requirement supply is more

D1D1 = having price zero because Supply = Demand

D2D2 = having price=OP at point E.

D3D3 = having Op1 price at point E1

Criticisms (Ricardian) :

- (1) Unrealistic Assumption
- (2) Rent is no more specialty of land.
- (3) Wrong order of land used for cultivation
- (4) Marginal land or No-Rent land does not exist.
- (5) Land & capital are not identical
- (6) Rent determines the price.
- (7) Application of law of diminishing return has avoided.
- (8) Rent also arise in short; run is not incorporate.
- (9) Land & labour are not homogenous factors.

Q.4 What is Modern Theory of Rent?

Ans.: All factor those having inelastic supply can be included in this category and land is used for many alternate uses.

- (A) **Perfectly Specific Factor :** Land which is used only for only one specific & having no any other use.
- (B) **Perfectly Non-Specific Factors :** Land which is used for different uses. So the earning in the next best uses opportunity is called transfer earning.

$$\text{Rent} = \text{Actual Income} - \text{Transfer income}$$

“Income received by the factor in its present occupation or industry is in excess of the transfer earning is called Rent “

Example :

Actual Income (at present)	Transfer Income	Rent = AI - TI
15000	15000	Zero
15000	Zero	15000
15000	9000	6000
15000	18000	+3000 (go to that job)

Q.5 Distinguish between Ricardian & Modern Theory of Rent?

Ans.:

Basis	Ricardian	Modern Theory
Meaning	Payment made to owner for using original & indestructible power of soil.	Difference between the actual income & transfer income.
Relationship	Only related to land.	Related to all factors of production.

Basis	Ricardian	Modern Theory
Causes	(a) Difference in fertilities. (b) Difference in situation. (c) Application of diminishing return.	a. Scarcity. b. Perfectly elastic supply curve.
Scope	Upto only land.	Upto all factors.
Specific Factor	Supply curve is in elastic because specific use.	According to specific or non-specific use. Supply curve may be elastic or inelastic.
Rent & Price	Rent is not impact on price but price affected rent.	Essential factor cost so it is part of price.
Measurement of Rent	Diff. between Intra marginal land and marginal land.	Difference between Actual Income & Transfer Income.
Utility	Impractical assumptions so don't have any utility.	More near to reality and hence is much useful.

Q.6 What is Quasi Rent.

Ans.: It is propounded by Alfred Marshall as follows :

$$\text{Q.R.} = \text{Total Revenue} - \text{Total Variable Cost}$$

$$\text{Average Q.R.} = \text{Average Revenue} - \text{Average Variable Cost}$$

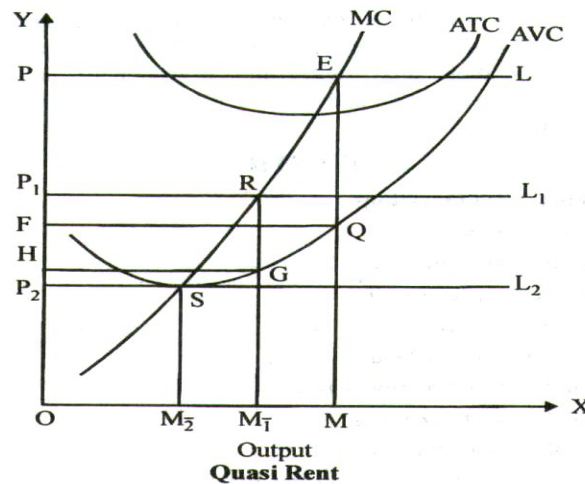
“ Income derived from machinery and other man made appliances and extra effort like innovation during the short period as in short period the supply remain stable “

It is surplus earned by machine in the short period over its running cost.

It disappears in long period. It occur only in short period because of short in supply as per required by demand.

So Q.R. is an unnecessary payment during the short period and which is not a part of cost of product and it is merged into normal profit in long period.

e.g. Firm enjoy extra profit due to innovation but when that innovation become common, then the extra profit disappears.



Distinction between Rent and Quasi Rent.

	Rent	Quasi Rent
Meaning	Part of total land which paid to owner of the land for use it.	That surplus income which obtained due to scarcity of supply of manmade resources of production.
Concept	Used for price determination.	Price cannot be determined.
Nature	Permanent.	Temporary nature.
Period of Existence	Even in long period.	Exist in only short period.

Chapter-12

Wages

Q.1 What is Wages? Explain different kinds of Wages.

Ans.: Payment made to labour whether it is mental or physical is called wages.

Labour is not uniform so they are not perfect substitute to each other.

It includes :-

- Both type of work - Physical & Mental
- Commission, Bonus, Royalty any Payment
- Worker, Clerk, Officers etc.
- Payment of Service for example Doctor, Architect, Lawyer etc.

Kinds of Wages :

- (A) **Nominal Wages :** Those are earned in monetary form by rendering service.
- (B) **Real Wages :** Money Wages + Other Facilities (Given to the employee by employer)

$$\text{Real Wages} = \frac{\text{Money Wages}}{\text{Price Level}} = \frac{\text{Money Wages}}{\text{Cost of Living Index}}$$

Means basically purchasing power of money wages is **Real Wages**.

In Depression = Money Wages constant, but Real Wages rise

In Boom = Money Wages constant but Real Wages is low

Q.2 Analyse the factors determining Real Wages & make it differentiate from Money Wages.

Ans.: Real Wages are different from Money Wages on following ground :-

- (i) Purchasing power of money
- (ii) Incidental benefits (Fringe benefits)
- (iii) Avenues of extra earning
- (iv) Working condition
- (v) Nature of job
- (vi) Future prospects
- (vii) Social status
- (viii) Period & cost of training & education.

Factor affecting Real Wages :

- (i) Money wages
- (ii) Purchasing power of money
- (iii) Extra Earning & facilities
- (iv) Nature of work (DR. Engineer, Etc.)
- (v) Working hour
- (vi) Working conditions
- (vii) Future prospects
- (viii) Prestige of work
- (ix) Extra work without salary
- (x) Pleasantness of work
- (xi) Job expenses
- (xii) Training period and expenses
- (xiii) Nature of employment (Permanent or Temporary)

Q.3 Explain the method of Wage Payment with their merits & demerits.

Ans.: Methods of Wage Payment :

- (i) **Time Wages :** According to time means per hr, per day, per week, per month. According to this whether produced less or more are paid for same time and same post.

Merits	Demerits
a) Easy	a) Wastage of time
b) High level of work	b) Trend of doing slow work
c) Co-operation & unity	c) Need of Inspection
d) Assurance of certain wages	d) Rise in cost of product
e) Safety of health	e) Lack of good relation
f) Safety of machinery & tools	f) Lack of productivity statement of workers.
g) Decrease in administrative Expenditure	g) Avoidance of duties
h) Regularity of work	h) Uneconomic method

- (ii) **Piece Wages :** According to the volume and the quality of work.

Merits	Demerits
a) Wages according to ability	a) Adverse effect on the health of workers
b) Low production cost	b) Downfall in the quality of production
c) Less need of inspection	c) Misuse of machine & tools
d) Good relation between employee and employer	d) Lack of sense of security among workers
e) Rise of standard of living of workers	e) Lack of unity among workers
f) Safety of tools	f) Uncertainty of income
g) Improvement in product method	g) Problem of absence
h) Rise in work efficiency	h) Psychological difference

Q.4 What is Subsistence Theory of Wages with its criticisms?

Ans.: Subsistence Theory of Wages : By Adam Smith (Iron Law of Wages)

Wages tends toward minimum subsistence level in long run.

Minimum subsistence level is that amount which is necessary to maintain minimum standard of living.

Wages more than subsistence level is induced to larger families so supply of labour rise and wages reduce to subsistence level.

Wages less than subsistence level is induced starvation so supply of labour downward and wages upward upto subsistence level.

Criticisms :

- (a) One sided (Consider only supply side)
- (b) Difference in wages (Should exist but not according to this method as per same rate)
- (c) Long period theory
- (d) Neglect the trade union
- (e) Unjustified & improper
- (f) Wrong assumption (If salary rise then family rises)
- (g) Neglect the productivity of labour

Q.5 What is Standard of Living Theory of Wages with its criticisms?

Ans.: Standard of Living Theory : By Tarennes

According to this theory, wages up to that level so the labour get their recreation and education to child etc. Arrange atleast all necessities, comfort, luxuries for which workers are habitual

Criticism :

- (a) Indeterminate (Standard of living $\leftrightarrow$ Wages)
- (b) Difference in wage rate
- (c) Long term theory
- (d) One sided theory (Only supply side)
- (e) Dependant on standard of living

Q.6 What is Wage Fund Theory of Wages?**Ans.: Wage Fund Theory :**

According to **J.S. Mill**, employer makes a fund for wages and divided among workers. Increase in wages need to decrease in no. of employees. Means the wages of one industry would rise at the cost of workers in another industry.

Criticism :

- (a) Derived demand of labour – not direct relation with fund
- (b) Ignores efficiency
- (c) Ignores trade union
- (d) Wages & Employment
- (e) Vague theory (Don't have any basic criteria to deciding wage fund)

Q.7 What is Residual Claimant Theory of Wages?**Ans.: Residual Claimant Theory : By Walker**

$$\text{Wages} = (\text{Total Revenue}) - (\text{Rent} + \text{Interest} + \text{Profit})$$

Criticism :

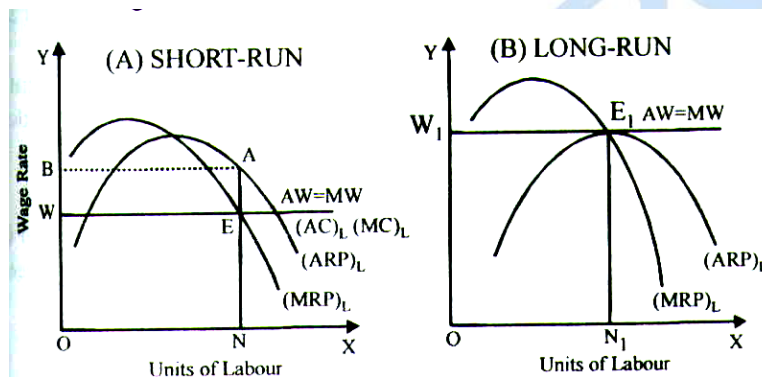
- (a) Defective theory (Wages may be negative)
- (b) One sided theory (Only productivity based)
- (c) Ignores the trade union
- (d) Difference in wages
- (e) Unlogical theory

Q.8 What is Marginal Productivity Theory of Wages?**Ans.: Marginal Productivity Theory of Wages : By Jevons****Assumption :**

- (a) All labour are of same quality
- (b) Perfect competition is prevalent in labour market

- (c) Labour has perfect mobility.
- (d) Quantity of other factors of production may kept constant
- (e) Law of diminishing return is operative
- (f) All units of labour is equal.
- (g) Demand of labour depends on marginal production

Additional made to the total out by employment of an additional unit payment made to the factor is just equal to the value of the addition made to the total output by employment of an additional unit of factor, remuneration of a labour is determined by marginal revenue productivity of labour.



Criticism :

- (a) Impractical & wrong assumption
- (b) One sided theory (More on demand instead supply)
- (c) Difficulty in measuring marginal productivity
- (d) No stage of full employment in economy
- (e) Narrow sense of productivity

Q.9 What is Discounted Marginal Productivity Theory of Wages?

Ans.: Wages are paid in advance before product completion. So amount borrowed from some where and interest paid on it, that's why wages paid are equal to difference between marginal productivity & interest on it.

Q.10 What is Modern Theory for determination of Wages with different aspects?

Ans.: Modern Theory of Determination of Wages or D&S Theory of Wages :

In different situations :

- (1) Under perfect competition
- (2) Under imperfect competition
- (3) Trade union & wages
- (1) **Perfect Competition :**

Assumption :

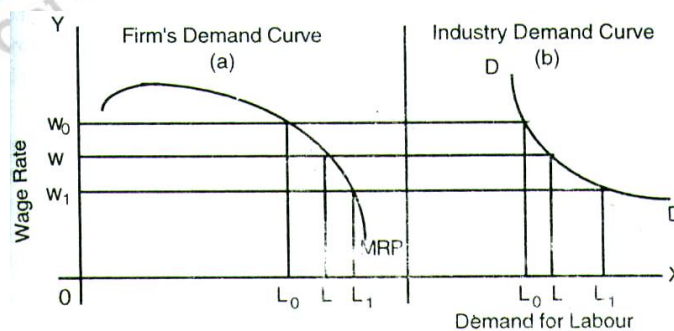
- (a) Perfect competition in product & factor market
- (b) Units of labour are homogeneous
- (c) Same wage rate paid
- (d) Transportation cost = nil
- (e) Perfect mobility of factors

Demand for Labour : The amount of labour of a given type that will be employed by firm at a given wage rate in a given region at per unit of time.

Labour demand is derived depending on product demand.

Determinant of Demand for Labour :

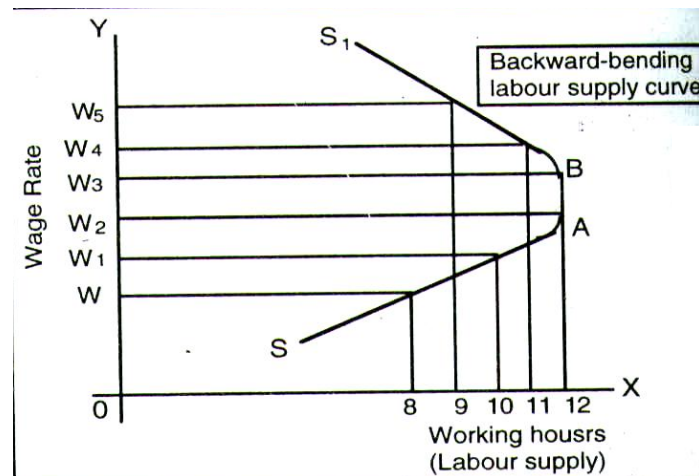
- (i) **Productivity of labour :**
- (ii) **State of Technology :**
 - (a) Labour incentive
 - (b) Capital intensive
- (iii) **Demand for the Product**
- (iv) **Price of Capital as a Factor (Price of Substitute Resource)**



Supply of Labour : The no. of hours of a given unit of labour which will be offered for hire at different wage rates.

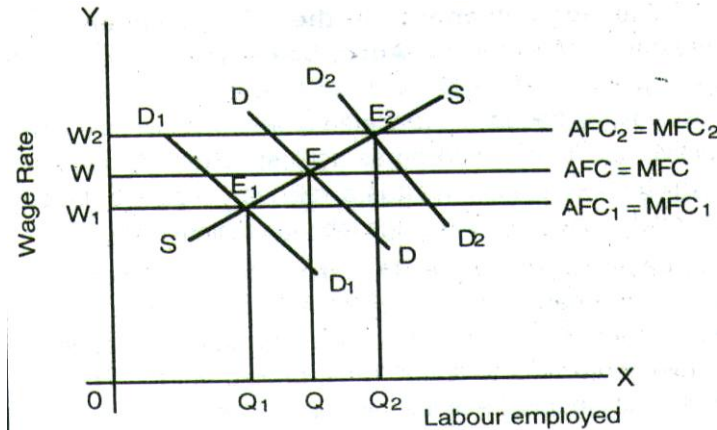
Increase wage of labour depend on :-

- (i) No. of labour available at difference wage rate.
- (ii) No. of hour willing to work per unit of time.



Determinants of supply for labour :

- (i) Occupational Mobility : Depend on :-
 - (a) Nature of labour – skilled or unskilled.
 - (b) Non-monetary benefits
 - (c) Cost of transfer of occupation
- (ii) Work leisure Ratio –It depends on positive substitution effect & negative income effect. Firstly when wages rise (+) substitution. Effect works so the supply of labour increases. But after certain level of income, the (-) income effect works and labour want to enjoy more leisure time instead of work, so supply curve bent toward backward at higher wages.
- (iii) Efficiency of labour
- (iv) Size of population

Determination of wage rate :

DD_L is the demand curve and SS_L is the supply curve. E is the intersection point of the two curves. Thus, OW is the equilibrium wages rate determined at which ON demand for and the supply of labour is equal.

(2) Imperfect Competition :

Two conditions of labour market.

(A-I) Monopsony in factor market is a situation in which there is only one firm to buy the service of a particular type of labour & oligopsony when a few firm may be more then two firms hire such labour & labour have perfect competition in selling of their labour.

Thus, under monopsony or oligopsony the firms possess monopoly power that's way then exploit the labour & enjoy the super normal profit at the cost of labour by :

- (A) Given the wage rate less than the prevailing wage rate in the factor market.
- (B) Given the prevailing wage rate but the working hour may be increased.

(A-II) Perfect competition in purchasing of labour and monopoly in sale of labour.

When trade unions are having control on supply of labour that's way the wage rate increases means product cost become $\uparrow$ demand $\downarrow$ next requirement of product $\downarrow$ so demand for labour $\downarrow$ at last its leads to create situation of unemployment.

(A-III) Monopoly in the Hire and Monopoly in the Sale of labour.

Everything depends on both's bargaining power if purchaser having higher bargaining power, employer may exploit the employee.

But if seller having more bargaining power than, employee gets friendly rates.

(3) **Trade Union & Wages :** Trade Union makes employees united & organized & substantially increases the bargaining power of employees.

Trade Union affect in two ways :-

- (i) Increase wage rate by low supply of labour
- (ii) Increase wage rate by increase demand of labour

Limitation of Trade Union :

- (i) Problem of unemployment
- (ii) Substitution of other sources
- (iii) Demand Elasticity of Commodity

[$Ed < 1$ = More wage & $Ed > 1$ = Less wage]

Q.11 What is Minimum Wages?

Ans.: Minimum Wages : That means salary which is necessary to maintain a minimum standard of living of the workers and which may provide them

such general comfort that they may develop good habits, may maintain the feeling of self respect.

Object : To prevent employee from exploitation.

It can be in three ways :-

- (i) Min. wage > Prevailing wages
- (ii) Min. wage < Prevailing wages
- (iii) Min. wage = Prevailing wages

When elasticity of demand of labour < 1 then unemployed is not high

When elasticity of demand of labour > 1 then unemployed may exist

□ □ □

Chapter-13

Interest

Q.1 What is Interest?

- Ans.:**
- A payment made by borrower to the lender for the money borrowed.
 - It is reward for capital.
 - **Type of Capital :**
 - (1) Physical Capital
 - (2) Financial Capital - Interest is the money rate of return on Financial Capital.
 - Interest is the income which goes to the owner of capital - **Carver**
 - Interest is the remuneration for mere abstinence (saving which is created coz absent of comp) - **J. S. Will**
 - Interest is simultaneously the reward for the pure yield of capital. of saving for the foregoing of liquidity and the supply of money.
 - **Types of Interest :**
 - 1. Net Interest = Net Payment for Use of Capital.
 - 2. Gross Interest = Net Interest + Payment for Risk + Reward for Management Services + Compensation for Change in Money Value

• **Difference between Gross Interest & Net Interest**

S. No.	Gross Interest	Net Interest
1.	Wide Concept	Narrow Concept
2.	Rate Difference	Almost Same
3.	Determination by Borrower & Lender Influence	Determining by Demand & Supply Forces

Q.2 List the responsible factors for difference in Rate of Interest.

Ans.: Factors Responsible for Difference in Rate of Interest :

- (i) Monopoly Power
- (ii) Liquidity of Mortgaged Article
- (iii) Difference in Risk
- (iv) Inconvenience
- (v) Period of Loan
- (vi) Security
- (vii) Banking Facilities
- (viii) Competition
- (ix) Difference in stages of economic development

Q.3 Can Rate of Interest fall to Zero or Negative?

Ans.: It may be happened in following situations :-

- (i) Absence of law and order.
- (ii) Spending of total income on consumption.
- (iii) Marginal productivity of capital is zero.
- (iv) Liquidity trap of Keynes.

Q.4 What is Classical Theory of Interest?

Ans.: It includes following :-

(1) **Classical Abstinence Theory :**

- (i) **Nassau Senior :** Individual sacrifices, their consumption, in form of saving and get interest on it.
- (ii) **Karl Marx :** Rich people save just because of some amount left after consumption not because sacrifices present consumption.
- (iii) **Marshall Say :** Reward of waiting, (inactive-never produce anything) postpone consumption.

Criticism :

- Not account productivity of capital.
- Cost of feeling of sacrifices difficult.
- Large amount of fund from Richers.
- Intensity of feeling of sacrifice is difficult for different Individual.
- One sided – only supply considered.

(2) **Time Preference Theory : By Bohm Bawerk and Irving Fishers**

People want to enjoy in present instead of future, so the interest is a compensation paid to save for the time preference.

For one who could not have distinction between present and future, they do not having interest.

Criticism :

- (i) Demand & Supply not on productivity.
- (ii) Supply of capital not only because saving.
- (iii) Present consumption more than future consumption.
- (iv) Capitalization rate difference in rental market and resale market.

(3) **Classical Demand & Supply Theory** : Interest determined by mutual co-ordination of demand for capital and supply of capital.

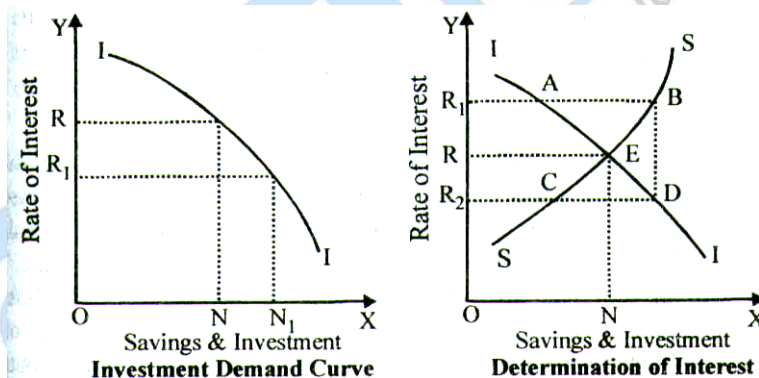
(A) **Demand for Capital (or Investment)** : Rate of Interest is just equal to the marginal productivity of capital means a high rate of interest the demand for capital is low & vice versa. Thus

That's why till ($MP_C = \text{Interest}$) demand for capital exist.

(B) **Supply of Capital (or Saving)** : Saving will take place because of many reasons, Income, Standard of living, Foresightedness ;and rate of interest.

From all of these, when the rate of interest is high, saving may become high.

(C) **Determination of Rate of Interest** : When demand for capital and supply of capital are intersecting each other is the equilibrium where rate of interest is decided.



Criticism of Classical (D & S):

- (i) Equilibrium in Saving and Investment
- (ii) Interest is not the Reward of Saving
- (iii) Marginal Productivity of Capital is Affected by Profit :
- (iv) Ignore the Effect of Quantity of Money
- (v) Uncertain & Undetermined Form
- (vi) Unrealistic assumption of full employment

- (vii) Interest Rate & Saving
- (viii) Supply of Capital is not Independent from Investment
- (ix) Narrow Concept & Scope
- (x) Income is assumed to be Constant

Q.5 What is Loanable Funds Theory of Interest?

Ans.: Loanable Funds Theory of Interest given by Wicksell, Ohlin, Robertson, Myrdas, Viner.

It decide rate of interest by monetary & non-monetary Forces.

Supply of loanable fund = Saving + Bank Cr. + Dishoarding + Disinvestment

Demand for loanable fund = Investment + Consumption + Hoarding

Determination of Interest

Demand for laonable funds = Supply of Loanable funds

Or $I + C + H = S + B + DH + DI$

Or $(I - DI) + (H - DH) = (S - C) + B$

Or Net Investment + Net Hoarding = Net Saving + Bank Cre.

Critical Evaluation :

- (i) Saving is affected by past income, new income, current income, so it is varied.
- (ii) Funds rise by releasing saving and down by absorbing cash balance into saving.
- (iii) Saving are not necessarily interest elastic.
- (iv) Combining monetary factor and non-monetary factor.

Q.6 What is Liquidity Preference Theory of Interest?

Ans.: It is given by Lord Keynes.

“Interest is the reward for parting with liquidity for a specified period.”

“Liquidity preference means the demand for money to hold or the desire of the public to hold cash “

Determination of interest at the point where supply of money (SM) is equal to demand for money (DM)

Demand for Money (DM) : Demand for money is a preference for liquidity. (Motive for Holding Liquidity) :

- (a) **Precautionary Motive :** The desire to provide for contingencies requiring sudden expenditure and for unforeseen opportunities of advantageous purchases for

- For tide over unfavorable conditions.
- To gain from unexpected deals.

- (b) **Transaction Motive :** Need of current transaction for personal & Business purpose.

Personal Motive : Bridge the gap between receipt of income and payment of expenses.

Business Motive : Interval between the time of incurring business cost & receipt of sale proceeds.

- (c) **Speculative Motive :** Speculative motive is the motive of earning profit from knowing better than the market what the future will bring forth.

$$M = M_1 + M_2 \quad M_1 = \text{Precautionary} + \text{Transaction Motive}$$

$$M_2 = \text{Speculation Motive}$$

$$M_1 = f_1(Y) \quad [\text{Means depend on Income}]$$

$$M_2 = f_2(r) \quad [\text{Means depend of Rate on Interest}]$$

$$M = f_1(Y) + f_2(r)$$

Supply of money (SM) : SM is depend upon money in circulation and bank deposits money in circulation that's means the quantity of currency notes & coins.

Equilibrium rate of interest : where $DM = SM$

- (i) **Change in demand for money (DM) :** When DM is change & SM is constant creates effect when DM increase at constant SM will raise the rate of interest & vice versa.
- (ii) **Change in supply of money (SM) :** At constant DM, increase SM, will lower the rate of interest & vice versa.

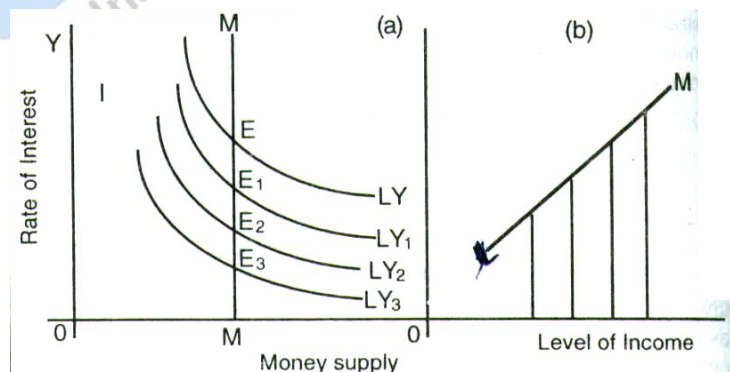
Criticism :

- (i) Liquidity preference increase or decrease because of Income & if income is known, we must know Rate of Interest.
- (ii) One sided only the monetary factor, ignore real factor.
- (iii) Ignore saving. Depend on “parting with liquidity”.
- (iv) Narrow concept.
- (v) Vague & confusing concept.
- (vi) Rate of interest independent from demand for investment it is wrong.
- (vii) Acceptable in short run ignore long run.
- (viii) Unrealistic assumption
- (ix) Saving & waiting ignore

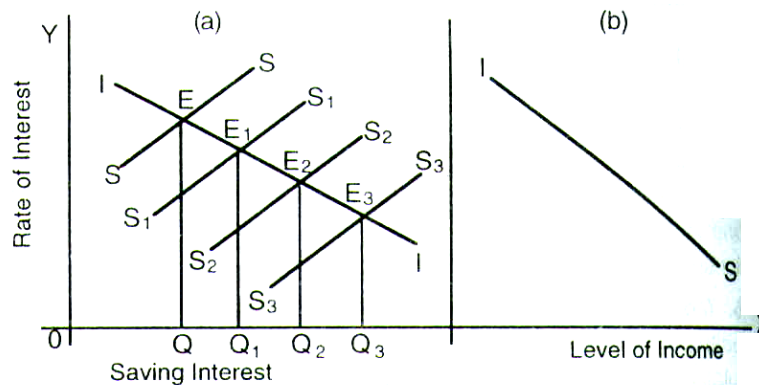
Q.7 What is Modern Theory of Interest?

Ans.: It is given by **Hicks & Hensen** also known as IS – LM Model.

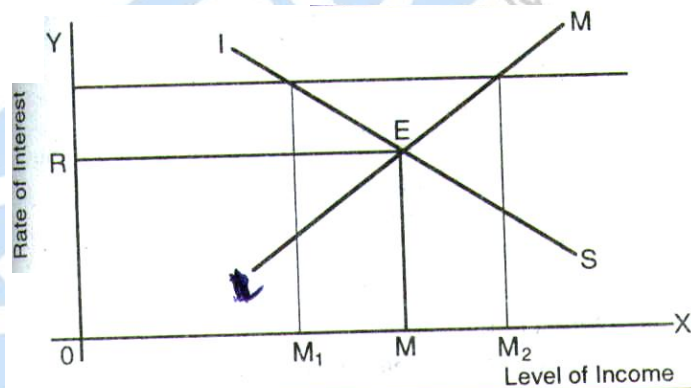
LM Curve : It represent various combination of income & interest rate at which demand for and supply of money are equal.



IS Curve : Investment saving curve represent those combination of income & rate of interest at which saving & investment are equal.



Determination of equilibrium rate of interest : At that point where both the IS and LM curve intersect each other.



Chapter-14

Profit

Q.1 What is Profit?

Ans.: The payment received by the entrepreneurs for helping in the production is called profit.

- Profit is not at all definite & pre-determined.
- Some time negative reward.
- Rent for the ability of entrepreneur – **Francis L. Walker**
- Entrepreneur wages – **Taussing & Davenport**
- Reward for taking risk – **Hawley**
- Reward for bearing uninsurable risk or uncertainties – **H. F. Knight**
- Capitalist does not pay fully for the work of laborers and keep a large part of it for himself. – **Karl Marks**
- Profit may be considered a reward for making innovations a reward for accepting risk & uncertainties and market imperfection. – **Henry Graon**

Normal Profit (According to Marshall)	Super Normal Profit (According to Knight)
• Reward for known risk	• For unknown risk
• Part of economic cost	• Not a part of economic cost

Normal Profit (According to Marshall)	Super Normal Profit (According to Knight)
• Stable	• May increase or decrease
• Always positive	• Can be positive / negative / zero
• Minimum amount of profit which does not force the firm engaged in the industry to leave it and does not provide any incentive to new firm for entry. It is the part of the economic cost.	• Surplus over normal profit. • Reward for unknown risk. • No firm gets super normal profit in long run in perfect competition.
• $TR = TC$	• $TR > TC$

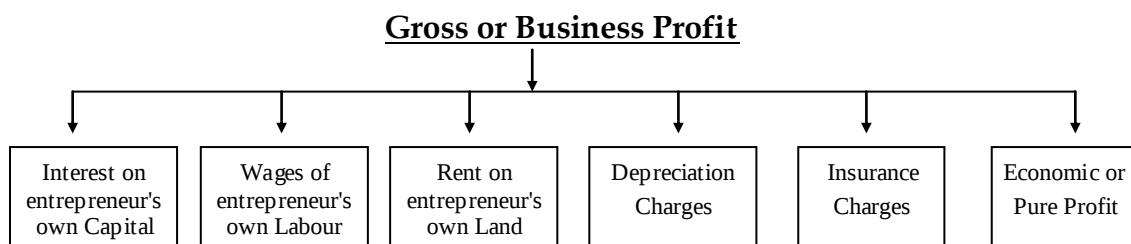
Profit is the reward for the work of Entrepreneurial ability or it is a payment of taking risks, uncertainties and innovation.

Characteristics of Profit :

- (1) Profit is a residual income.
- (2) Uncertain & indeterminate.
- (3) Higher the risk, higher the reward
- (4) Can be positive / negative / zero.
- (5) Dynamic fluctuation

Gross Profit (GP) :

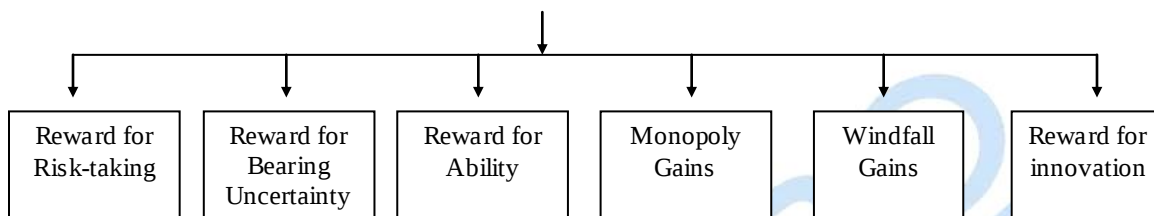
Gross Profit = Total Revenue - Explicit Cost



Economic or Pure Profit :

Economic Profit = Total Revenue – Explicit Cost – Implicit Cost

Economic Profit = Total Revenue – Direct Cost – Indirect Cost

Elements of Economic or Pure Profit**Q.2 What is Marginal productivity Theory of Profit?**

Ans.: Marginal productivity of an entrepreneur is an addition to the total productivity of entrepreneur.

Additional dose of entrepreneur ability or by deduction of one dose of ent. Ability.

Entrepreneur is single factor.

No. of it's cannot be increase or decrease.

So it is increase by increase in skills of entrepreneur ability.

Criticism of Theory :

- i. One sided – demand side.
- ii. Different to measure Marginal revenue productivity because only single it is.
- iii. Wrong assumption & impracticable.
- iv. Related to long run.
- v. All entrepreneur Are not of equal skill.
- vi. Not taken unexpected profit.

Q.3 What is Rent Theory of Profit.

Ans.: It is given by **Francis L. Walker.**

Profit is the rent for superior ability which one entrepreneur command over the marginal (Lowest Level) entrepreneur in the field of production.

Criticism :

- (i) Profit & rent cannot be similar.
- (ii) Profit is not the reward of ability alone. It may be due to monopoly & opportunity cost.
- (iii) Absence of marginal entrepreneur.
- (iv) Profit arises in dynamic economy only.
- (v) Profit is a part of cost.
- (vi) It could not understand the nature of profit.

Q.4 What is Wages Theories of Profit.

Ans.: It is given by Taussing & Davenport.

Entrepreneur Does special kind of mental labour instead of physical labours in the industry and receive his wages as profit.

Criticism :

- (i) Does not differentiate the work of entrepreneur & worker.
- (ii) Wages cannot be negative but profit could be.
- (iii) Profit increase and wages decrease in imperfect competition.

Q.5 What is Innovation Theory of Profit?

Ans.: It is given by **J. A. Schumpeter.**

Changes in production process so that the production expenditure or cost tends to decline and which further tends to incur profit. Thus in this manner more profit will accrue to the firm which take to innovation before others.

Innovation may in a way of introducing of new production technique, old to new pd, new sources of raw material selling the production in new market, new ways of distribution, reorganize the whole industrial set up etc. in business.

This type of profit is possible only when other firms do not adopt the innovations. But still if the innovation has a co-ordination with monopoly then it will accrue for a longer period. Profit is therefore the cause of innovations and if an innovation is successful it will give rise to profit that's why innovation profits appear, disappear and reappear in a more or less sequence.

Criticism :

- (i) Profit does not accrue due to innovation only.
- (ii) Ignorance of risk taking.
- (iii) It fails to determine the quantum of profit.
- (iv) Present a narrow view of the function of Entrepreneur.

Q.6 What is Risk Theory of Profit?

Ans.: It is given by **Hawley** (1907).

Profit is the reward for performing responsibilities and risk taking activity means higher the risk, higher the profits.

Criticism :

- (i) It is not the risk taking reward basically it rewards for avoiding the risk with his entrepreneurial ability.
- (ii) There is not any direct relationship between the risk bearing and profit.
- (iii) Profit does not arise due to all type of risks basically arises on account of unforeseen risks.
- (iv) Entrepreneurs are free and independent.

Q.7 What is Uncertainty Bearing Theory of Profit.

Ans.: It is given by H. Knight (1927).

Foreseen risk is that which can be foreseen and can be provided against through insurance. Whereas unforeseen risk is that which cannot be foreseen by the entrepreneur and which cannot be got covered through insurance.

e.g. competitive risk, technical risk, risk due to government interface, risk due to trade cycle.

Criticism :

- (i) Profit is not only the reward for uncertainty.
- (ii) Uncertainty bearing is not a factor of production.
- (iii) It does not explain the comprehensive definition of profit.
- (iv) It does not measure the volume of profits.
- (v) Uncertainty is one among all other factors.
- (vi) It fails to explain profit under perfect competition and monopoly.

Q.8 What is Socialist Theory of Profit?

Ans.: In capitalistic economy a large part of the total produce is grabbed by the capitalists themselves & merely a small portion of the produce is given away to the labour. Thus according to this theory, the main reason for profit accruing to the capitalists or entrepreneur is the exploitation of labour as the maximum share of the produce is high jacked by the capitalists or by the entrepreneur themselves. The labour class will demand higher wages and other necessary amenities of life and facilities for working. Therefore in long run the profit features of the socialist theory of profit.

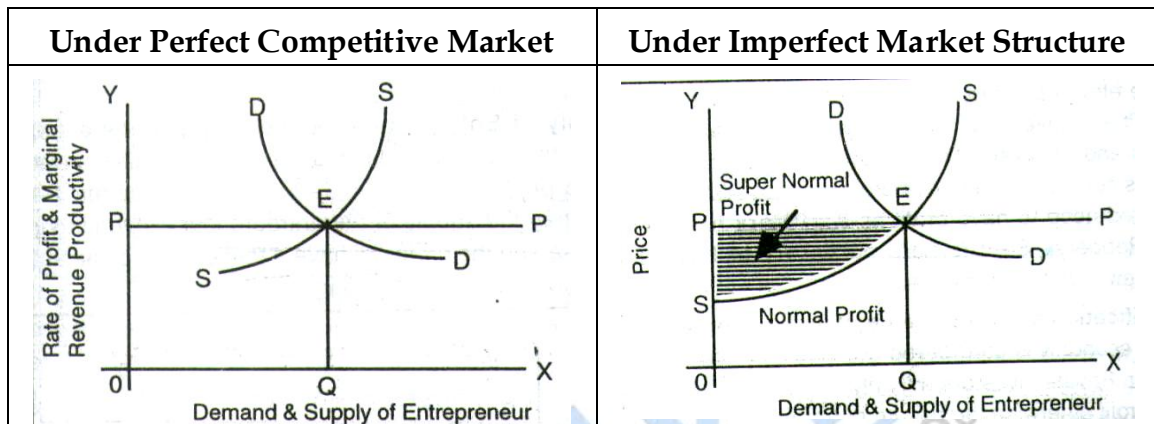
Criticism :

- (i) Profit is not the outcome of the exploitation of the labour.
- (ii) Profit is not the direct result of the exploitation of labour as other factors of production are also actively involved in the process of production.

Q.9 What is Demand & Supply or Modern Theory of Profit.

Ans.: The profit at which the supply curve & demand curve of the entrepreneur intersect each other or equal to each other that point determine the price

for the entrepreneur, better termed as profit for the entrepreneur and that will be a situation of normal profit. Normal profit is also the opportunity cost of the entrepreneur.



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Chapter-15

National Income

Q.1 What is National Income?

Ans.: It is the flow of goods and services which become available to a nation during a year.

Alfred Marshall - The labour and capital of a country acting upon its national resources produce annually a certain net aggregate of commodities, material and immaterial, including services of all kinds. This is the true value of net annual income of the country or the national dividend.

PIGOU - The national dividend is that part of the community income including, of course, derived from abroad, which can be measured in money.

FISHERS - The true national income is that part of the annual net produce which is directly consumed during that year.

Q.2 What are the related concepts or aggregates of National Income.

Ans.: (1) **G D P_{MP} (Gross Domestic Product at Market Price)** : The final goods and services produce during a year within the domestic territory of a country. Gross indicate that the value of domestic product is inclusive of depreciation i.e. consumption of fixed capital within the domestic territory means within the boundary of the country including the production by domestic and by outsiders.

(2) **GNP_{MP} (Gross National Product at Market Price)** :

$$\text{GDP}_{\text{MP}} + \text{NFIA} = \text{GNP}_{\text{MP}}$$

NFIA (Net Factor Income from Abroad) is the difference between factor income earned by our resident from the rest of the world and factor income earned by our resident within our country.

(3) **NNP_{MP} (Net National Product at Market Price) :**

$$\text{GNP}_{\text{MP}} - \text{Depreciation} = \text{NNP}_{\text{MP}}$$

Depreciation also known as consumption of fixed capital refer to the loss of value of fixed assets on A/c of – Normal wear & tear, Normal obsolescence, accidental damage of machinery.

(4) **NDP_{MP} (Net Domestic Product at Market Price) :**

$$\text{GDP}_{\text{MP}} - \text{Depreciation} = \text{NDP}_{\text{MP}}$$

(5) **GDP_{FC} (Gross Domestic Product at Factor Cost) :** It is the sum total of factor income generated within the domestic territory of a country alongwith depreciation during a year.

(6) **GNP_{FC} (Gross National Product at Factor Cost) :**

$$\text{GDP}_{\text{FC}} + \text{NFIA} = \text{GNP}_{\text{FC}}$$

(7) **NDP_{FC} (Net Domestic Product at Factor Cost) :**

$$\text{GDP}_{\text{FC}} - \text{Depreciation} = \text{NDP}_{\text{FC}}$$

(8) **NNP_{FC} (Net National Product at Factor Cost) (National Income) :**

$$\text{GNP}_{\text{FC}} - \text{Depreciation} = \text{NNP}_{\text{FC}}$$

(9) **National Disposable Income (NDI) :** The Income from all sources available to resident of a country for consumption, expenditure or for saving during a year.

(10) **Private Income :** Income & other payment relating to private sector. It includes all payments which are earned by private sector within the country and abroad, plus all current transfer payment.

(11) **Personal Income :** The total of all current income received by household from all sources.

All income which accrue to the factors i.e. earned by the factors are not received by them and on the other hand, there are certain payment which they receive but are not earned by them.

Therefore, personal income is the total of all such payment and income received whether or not they have earned it.

- (12) **Personal Disposable Income (PDI) :** That part of personal income, which the individual can spend the way they like, it is the income remaining with individual after deduction of all taxes levied against their income & property by the Govt.

- (13) **Relationship :**

$$GDP_{MP} = GDP_{FC} + \text{Indirect Taxes} - \text{Subsidies}$$

$$NDP_{MP} = NDP_{MP} + \text{Indirect Taxes} - \text{Subsidies}$$

Q.3 What are the various methods for measuring National Income.

Ans.: (1) Product Method (Value Added method) :

It estimates the contribution of each producing enterprise to production in the domestic territory of the country in an accounting year. First of all the various producing enterprise in a country are classified into primary, secondary and territory sector.

$$(GDP_{MP}) \text{ Net Value Added} = \text{Value of Output} - \text{Intermediate Consumption}$$

$$\text{Value of Output} = \text{Sale} + \Delta \text{ Stock}$$

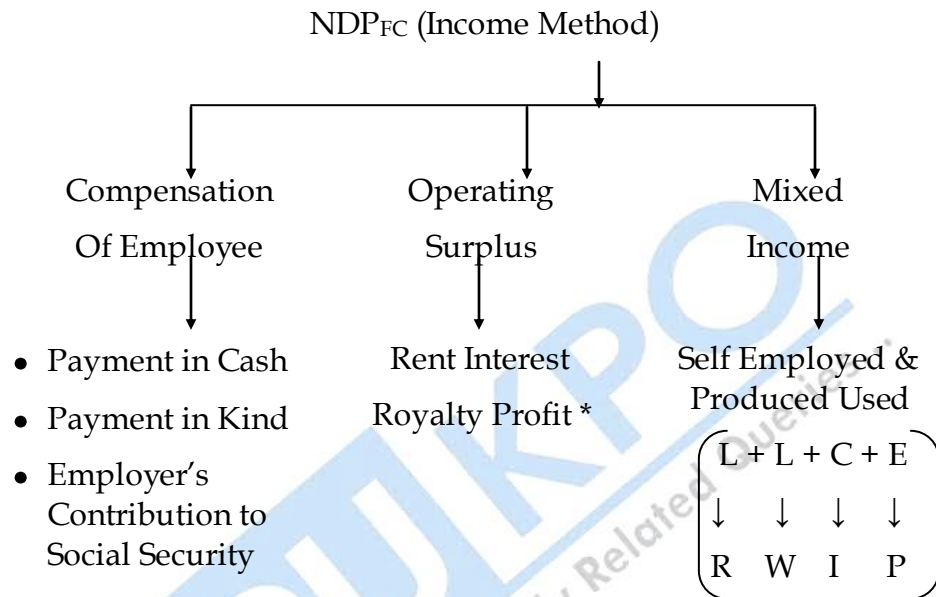
$$\Delta \text{ Stock} = \text{Closing Stock} - \text{Opening Stock}$$

Precaution should be taken :-

- (i) The value of only final goods and sources should be included to avoid double counting.
- (ii) Sale & purchase of 2nd hand good should not be counted
- (iii) Services of housewife should not be counted.
- (iv) Production for self consumption should also be included.
- (v) Imputed rental value of the self occupied house should be included.

- (2) **Income Method :** It measures NI from the payment point of view where payment is made in form of wage, rent, interest & profit to the primary factor of production i.e. labour, land, capital &

enterprise respectively for their productive service in an accounting year.

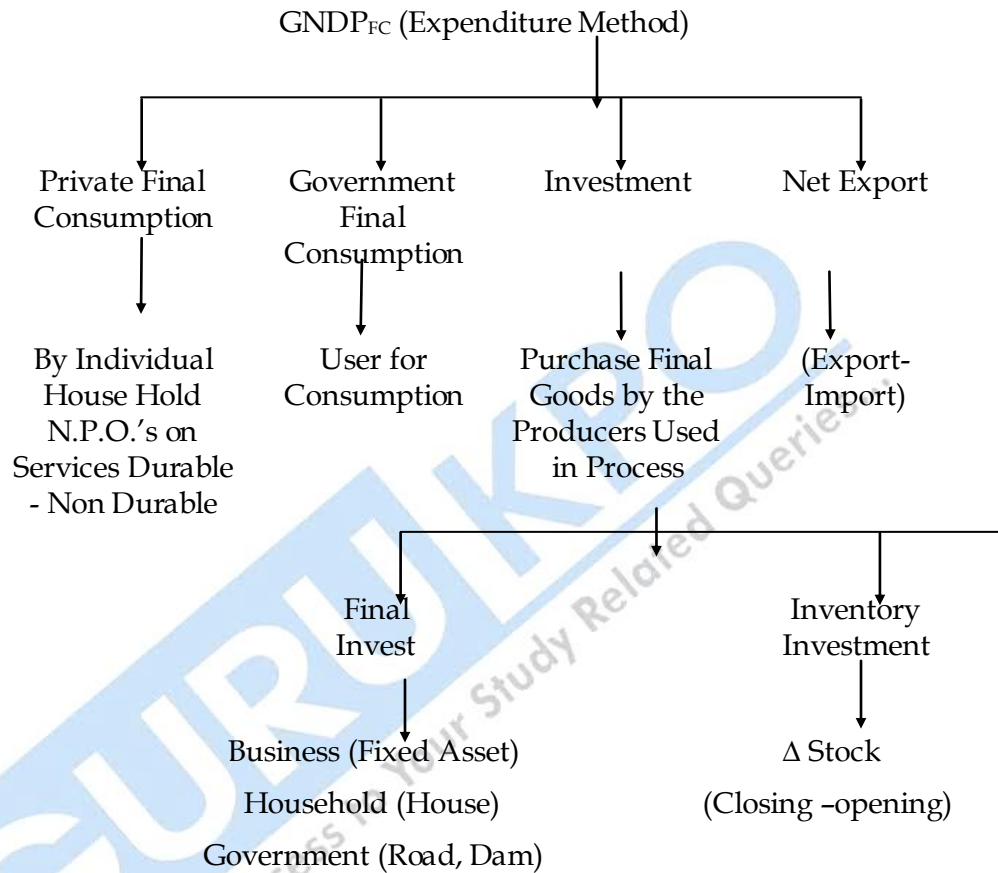


Profit = Dividend + Corporate Tax + Undistributed Profit

Precaution should be taken :-

- (i) Windfall gain are not included.
 - (ii) Wealth tax, capital gain tax is not included.
 - (iii) Production for self-consumption should also be included.
 - (iv) Imputed rental value of self consumption house should be included.
 - (v) Sale & purchase of 2nd hand goods should not count.
 - (vi) Income of gamblers, smuggler etc. not included.
 - (vii) Financial transaction such as sale of share not included.
- (3) **Expenditure Method** : It measure the final expenditure on GDPMP during an accounting year.

Expenditures are of two types - Final & Intermediate Expenditures.



Precautions should be taken :-

- (i) Expenditure on 2nd hand goods should not be included.
- (ii) Expenditure on financial transactions like purchase of share should not include.
- (iii) Government expenses on transfer payment not include.
- (iv) To avoid double counting only expenses On final goods and services is to be included.
- (v) Intermediate expense is not included.

Q.4 Give important factors that make National Income important.

- Ans.:**
- (1) Importance in Economic Planning
 - (2) Importance in Development & Economics.
 - (3) Importance in International Comparison
 - (4) Importance in Studying the Trade Cycle
 - (5) Importance in the Structure of the Economy
 - (6) Helpful in showing the Economic Development of a Nation
 - (7) Importance in Policy Formulation
 - (8) Importance for Public Sector
 - (9) Importance in Forecasting

Q.5 List the difficulties in estimating National Income.

- Ans.:**
- (1) Lack of Well Organized Monetized Sectors
 - (2) Inadequate and Unreliable Data
 - (3) Illiteracy and Ignorance
 - (3) Occupational Specialization
 - (4) Difficulties in Economic Activities and Choice of Method
 - (5) Difficulty of Errors in Calculation
 - (6) Difficulties in Calculation of Value of Service
 - (7) Problem of Double Counting
 - (8) Lack of Statistical Organization
 - (9) Difficulties of Regional Diversities
 - (10) Indifference of the Public

Q.6 Explain the relationship between National Income and Economic Welfare ?

- Ans.:** Economic welfare is that part of total welfare which is directly or indirectly measured in terms of money. All the satisfaction and non-satisfaction are included in total welfare which are received from existing resources in an economy welfare classified into two categories.

- (i) Economic Welfare
- (ii) Non economic welfare

Economic welfare is that part of total welfare which is directly or indirectly measured in term of money while non economic is that part of total welfare which is not measured in term of money.

(1) **Size of National Income & Economic Welfare :**

- When sizes of National Income increases
- When size of National Income decreases

Generally with the rise in the size of NI employment, output, income rise and standard of living rise which leads welfare of people and vice versa. Thus there is direct relationship but this relationship is not always true because

- National Income & Share of Poor's in National Income
- Change in Consumer Preferences
- Method of Increasing National Income
- Population & Growth Rate of National Income
- Production of Non-Consumption Goods

(2) **Distribution of National Income and Economic Welfare :**

- Distribution of National Income in favour of the Poor
- Distribution of National Income in favour of the Rich

Distribution of National Income in favour of Poor : The transfer of income from rich to the poor section of society, it will reduce the inequalities of income and eco-welfare of the poor will increase.

Argument in Favour	Argument in Against
1) Increase in Consumption Expenditure	1) Bad Habits
2) Less Sacrifice of the Rich and more satisfaction to the Poor	2) Less Rational in Spending
3) Comparative Position is Constant	3) Increase in Population
	4) Bad Generation in Future.

Distribution in favour of Rich : By happening this phenomenon, inequalities are high and eco-welfare of people low. We can conclude that the distribution of income in favour of the poor will raise the economic welfare when they are educated and motivated to spend their increased income on goods of necessities and comfort so their economic welfare is increased.

- (3) **Stability of National Income and Economic Welfare :** The trade cycle bring upswing and downswing in economic activities, resulting into inflation deflation and stagflation. The various measures to regulate and control the business cycle will lead to stability in national income and it will raise the economic welfare of the people.

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Chapter-16

Business Cycle

Q.1 What is Business Cycle?

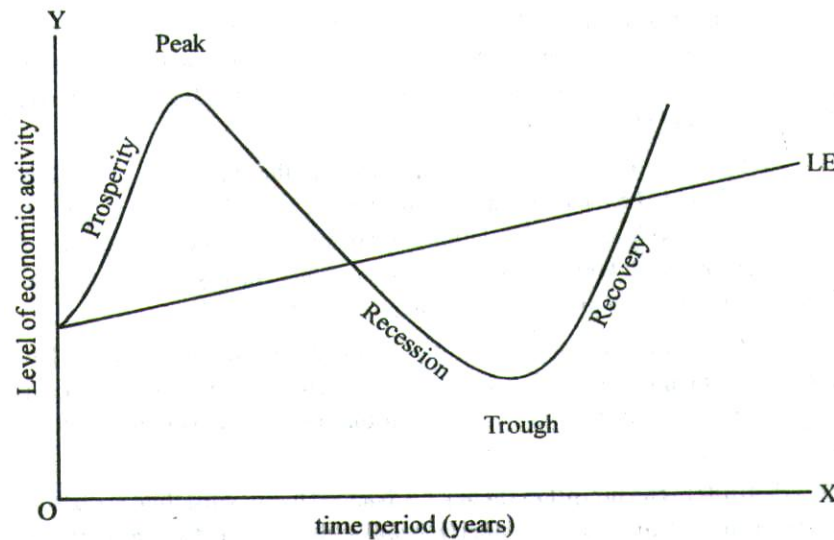
Ans.: A trade cycle is composed of periods of goods trade characterize by rising price and low unemployment Percentage altering with periods of bad trait characterized by falling prices and high unemployment percentage.

Q.2 Explain characteristics of Business Cycle?

- Ans.:**
- (a) **Recurring Fluctuation** : The occurrence of expansion and contraction has not fixed or variable period.
 - (b) **Period of Business Cycle is no longer than a Year** : Generally it takes $\frac{3}{4}$ years mean at least one year. It is different from seasonal fluctuation which is related within the year.
 - (c) **Presence of Alternating Forces of Expansion & Contraction** : The forces of expansion when born gathers momentum overtime taking the economy to a high level of activity. This force is however first weakened and then completely replaced by a counter force which leads to contraction and the process ends up with depression.
 - (d) **Phenomenon of the Crises** : The peak and trough are asymmetrical, the prosperity phase of business cycle comes to an end abruptly, whereas recovery after the depression is gradual and slow.

Q.3 Explain different phases of Business Cycle.

Ans.:



In the above diagram the line LE is the line of equilibrium or level of full employment.

- (a) **Prosperity or Expansion** : In this stage increase production, high capital investment in basic industries, expansion of the bank credit, high prices, high profit, full employment.
- (b) **Recession** : This stage is characterized by liquidation in the stock market, strain in the banking system and some liquidation of bank loan, small fall in price, sharp reduction in demand for capital equipment and abandoning of relatively new projects. Unemployment leads to fall in income expenditure, price & profits. It is a cumulative effect once a recession starts it goes on gathering momentum and finally assumes the shape of depression.
- (c) **Depression** : It is a protective period in which Business activities in the country is far below the normal. It is characterized by a sharp deduction of production, mass unemployment, low employment, falling prices, falling profits, low wages, and contraction of credit, high rate of business failures and an atmosphere of all round pessimism and despair all construction activities come to a more or

less complete stand still during depression. The consumer goods industries and however, not much affected.

- (d) **Recovery** : It implies increase in business activity after the lowest point of depression has been reached. The entrepreneur began to feel that the economic situation was after all not so bad. This leads to new innovation in business activities. The industrial production picks up slowly and gradually. The volume of employment also straightly increases. There is a slow rise in prices accompanied by a small rise in profit. Wages also raise new investment takes place in capital good industries. The bank also expands credit. Pessimism is gradually replaced by an atmosphere of all round cautious hope

Q. 4 Explain Hayek's Monetary Over-Investment Theory of Business Cycle.

Ans.: So long as the natural rate of interest equals the market rate of interest, the economy remains in the state of equilibrium and full employment. Trade cycle in the economy is caused by inequality between market and natural interest rate. When the market interest rate is less than the natural rate, there is prosperity in the economy. On the contrary when the market interest rate is more than the natural rate, the economy is in depression. The natural rate of interest is that rate at which the demand for loanable funds equals the supply of voluntary savings. On the other hand, the market rate of interest is the money rate which prevails in the market and is determined by the demand and supply of money.

Prosperity begins when the market rate of interest is less than the natural rate of interest. In such a situation, the demand for investment funds is more than the supply of available saving.

The prices of factors are raising continuously the rise in production cost bring fall in profit of producers. The producer of capital good invests less in the expectation of loss in the future. Consequently, the natural interest rate falls.

The fall in prices comes to an end during depression. Banks begin to raise the supply of money which reduces the market interest rate below the natural interest rate. This encourages investment and the process of revival begins in the economy.

Q.5 What is Under Consumption Theory of Business Cycle?

Ans.: The chief proponent of this theory given by **J. A. Hoabson**. Trade cycle appear due to mal-distribution of national income. This mal-distribution of national income takes place because during boom the entrepreneur and businessman gather income with business activities bank and become richer since they cannot consume the whole income they save. There is too much saving during the boom period. Reduction in the level of consumption means a fall in the demand for consumer's goods because the amount saved is not spent on consumption. The supply of consumers' goods will be far greater than the demand for them. Prices of these goods begin to fall. The general outlook becomes pessimistic. If this downward movement continues, depression will set in.

Q.6 What is Keynes's Saving and Investment Theory of Business Cycle?

Ans.: Business Cycle appear as the result of the fluctuation in the rate of investment is due to marginal efficiency of capital (MEC). MEC depends on (a) Prospective yield (b) supply price of capital asset. Supply price of capital remains constant during short run. So if MEC is up, then quantity of private investment also rises and vice versa. Generally in expansion, MEC is not high with rise in income, the phase going toward depression.

Q.7 What is Hawtrey's Theory of Business Cycle?

Ans.: According to **R. G. Hawtrey**, Business Cycle is caused due to elastic money supply. Money supply is elastic and on account of it, sometime there is expansion of money supply and alternatively sometimes there is contraction of money supply. In other words, we can say that money inflation and money deflation lead to fluctuation in business activities. When there is expansion of money supply, economic activities will expand while contraction of money leads to contraction of business activities or depression.

Q.8 What is Psychological theory of Pigou for Business Cycle?

Ans.: The wave of optimism and pessimism in the mind of businessmen bring the fluctuation. When businessmen become optimistic about future they endorse such wave to others, so they all invest more which leads

prosperity phase. Similarly when a businessman is pessimistic about future, they endorse such wave to others so they stop new investment which leads depression phase.

Q.9 What is Innovation Theory of Business Cycle?

Ans.: Innovation means such a new change which brings transformation in the present technique of production. Any type of innovation result into an increased volume of profit to the innovators. Schumpeter develops the model in two stages.

- | (a) First Approximation | (b) Second Approximation |
|--|--------------------------|
| (a) Economic system is in full equilibrium. Here is not any type of unemployment and there is no incentive for additional investment. | |
| (b) When innovation is introduced, need have financed through bank credit because there is not surplus fund to finance. So as per new flow of production in market which leads to rise in incomes, demand and cyclical impact? But beyond a certain level high output cause low in price and profitability. This leads to contraction. | |

Q.10 Sort out the measure to control Business Cycle.

Ans.: Two type of measures are adopted to control business cycle :-

- (1) **Preventive Measures :** Aim to avoid of the occurrence of B.C.
 - (i) To reduce the dependence of Agriculture on nature.
 - (ii) Equilibrium between demand and supply.
 - (iii) Check on speculative activities.
 - (iv) Nationalization of basic industries.
- (2) **Corrective Measures :**
 - (i) **Monetary Policy :** Introduced by central bank of the country which control the money supply and cost of credit in the economy. It uses two types of measures.

(a) **Quantitative Measures :**

Open Market Operation : Sell the security from market in boom and purchase security from the market in depression.

Bank Rate : High B.R in boom and vice versa.

SLR & CRR = High rates in Boom and vice versa.

(b) **Qualitative Measures :** Credit rationing, direct action, moral suasion etc.

(ii) **Fiscal Policy :** Introduced by Govt. which shows management of public revenue, expenditure and public debt to achieve certain objective. Govt. can control on investment by taxation policy.

(iii) **Direct Controls :** For the speedy and effective control of business cycle, govt. should resort to direct physical control. Direct control include licensing, rationing of scarce and essential goods, price and wage control, export-import control, exchange control, control over hoarding and black marketing, control of monopolies & restrictive trade practices etc.

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Chapter-17

Theory of Employment

Q.1 Write a Critical Note on Classical Theory of Employment?

Ans.: There are two basic features of classical theory :-

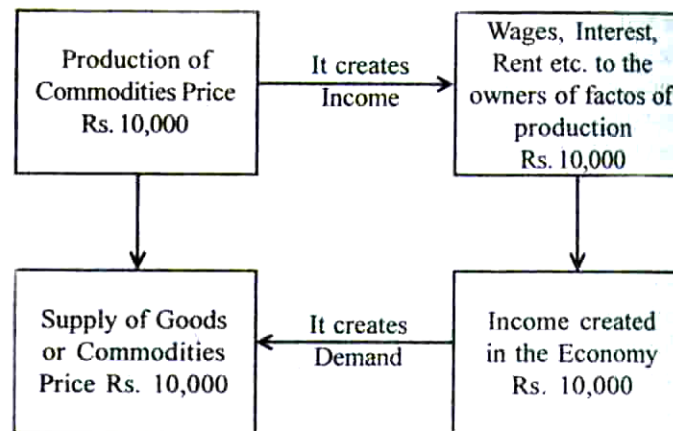
- (1) Classical theory of employment assumes full employment as general phenomena. According to this theory, there shall be generally full employment and any departure from this will be abnormal. As per this theory, Laissez-faire capitalist economy is self sustaining. According to classical theory, general over production and hence general unemployment are not possible. If forces of demand and supply are left free, then full employment situation will be established.
- (2) The classical economists assured that the flexibility of prices and wages always establish the situation of full employment e.g. there is over production and this will lead to unemployment. When there is overproduction, it will not be sold on current prices. Therefore, prices will fall, demand will rise and the production will increase. Additional resources will be employed to increase the production and thus unemployment situation will vanish.

Flexibility in wages also plays an important role in removing unemployment situation. In case of unemployment situation, all workers cannot be employed on prevailing wages and the wage rate will fall with fall in wages, the demand for workers will rise. Producer will employ more persons on work and unemployment situation will not be there. They take it if money only kept for transaction motive.

Say's Law of Marketing - "Supply always creates its own demand".

Every supply of output creates an equivalent demand for output, therefore over production and unemployment is logically inconsistent and impossible and cannot exist in any economy under normal condition. Say recognizes that there might be excess production in some industries on account of miscalculation of the entrepreneurs. But it is temporary situation and this is eliminated with the economy again, reaching equilibrium situation.

It can be explained with the help of a chart.



As per Say, it is production which create market for goods. A product is no sooner created than it from that instant affords a market, for another product to the full extent of its own value, nothing is more favourable to the demand of one product than the supply of another product.

Basic Assumption of Say's Law :

- (a) Whatever is earned is automatically spent on the purchase of Goods & Services.
- (b) Saving is equal to investment.
- (c) Operates in perfect competition market.
- (d) Government follows policy of laissez-faire.
- (e) Size of market is limited

Implication of Say's Law :

- (a) Laissez-faire capitalist economy is self adjusting.
- (b) There can be no general over production in economy.
- (c) There can be no general unemployment in economy.
- (d) Economy work as barter system where goods exchange for goods but money work as medium.
- (e) Saving is equal to investment.

But Theory criticized on the following grounds :-

- Every supply does not create its own demand. On Account of any saving, the demand for goods & services decline in the present and therefore, a part of present production is unsold. Therefore, there can be overproduction and unemployment.
- Equilibrium in saving and investment is not achieved through interest rate. High interest rate did not stimulate saving if level of income was very low and likewise low interest rate could not stimulate investment when marginal efficiency of capital was low.
- Capitalistic economy is neither automatic nor self adjusting therefore over production and unemployment situation arises.
- Wage cut do not lead to full employment situation but it will adversely affect employment in this age of trade unionism & collective bargaining.
- State intervention is essential in capitalistic economy.
- Long run is not significant.
- Unrealistic assumption.
- Money is not only the medium of exchange.
- Does not explain trade cycle.
- Actual practice is large scale unemployment in the general situation.

Q.2. Critically examine the Keynesian Theory of Employment?

Ans.: The level of employment in an economy depends upon effective demand and unemployment is the result of deficiency of effective demand.

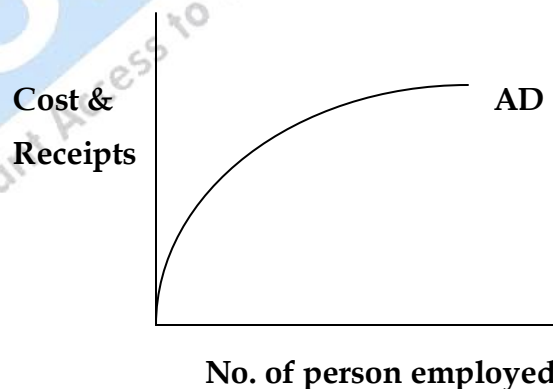
Effective demand depends upon –

- (1) Consumption Demand
- (2) Investment Demand

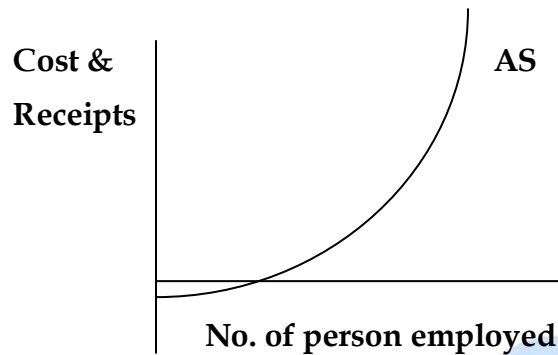
As the income increases, consumption will also increase but less than the income. Therefore, in order to maintain demand sufficient to sustain an increase in employment, investment must increase at least equal to an amount to the gap between income & consumption. Thus in an economy employment cannot increase unless investment increase.

Effective demand depends upon –

- (A) **Aggregate Demand Function (ADF)** : It represents a schedule of the various amt. of money which the entrepreneur in an economy expect to receive from the sale of their output at various level of employment. It represent the expected money expenses by the society at various level of employment.

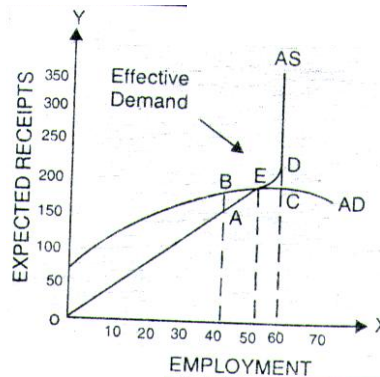


- (B) **Aggregate Supply Function** : It is a schedule of the various amount of money which the entrepreneurs in an economy must receive from the sale of output at various level of employment.



- (C) **Determination of the level of Employment :** Point E is the point where AD & AS intersects each other. At this level ON_2 workers are employed. At this point it is not necessary that all workers who want to work, because it may not be the point of full employment but it is less than full employment point.

Employment (Lakhs)	AS (Rs.) Crore	AD (Rs.) Crore	Trade in Employment
0	0	60	Rise
10	60	100	Rise
20	90	120	Rise
30	120	140	Rise
40	150	160	Rise
50	180	180	Equi
60	210	190	Fall
70	240	200	Fall



Basic assumption for Keynesian Theory :

- (1) Short period.
- (2) Closed economy
- (3) Fixed prices
- (4) No time lag
- (5) Excess capacity is available
- (6) Ignore government roles
- (7) Labour has Money Illusion
- (8) Money also act as a store value
- (9) Under employment equi.
- (10) Saving & Investment function

Criticism of Keynesian Theory :

- (1) The concept of equi is self-contradictory.
- (2) Keynesian economics is mainly static.
- (3) It has ignored the long period equi.
- (4) Unrealistic assumption
- (5) It is not general theory
- (6) It is not empirical
- (7) His use of "labour unit" as the measure of employment is not scientific.
- (8) Limited applicability of multiplier.
- (9) Lack of principle of acceleration.
- (10) It ignores cost push inflation.

Chapter-18

Growth Vs. Development : Theories of Economic Growth

Q.1 Difference between Growth and Development.

Ans.:

S.No.	Growth	Development
(i)	It is quantitative.	It is qualitative.
(ii)	It is short term.	It is long term.
(iii)	Less comprehensive.	More comprehensive.
(iv)	Indicators of growth are rate of change in GDP, per capital income.	Indicator of Development are compositional change in GDP Standard of living.
(v)	It is a rise or fall in output.	It relates as to how the output rises/falls.
(vi)	It is applicable to developed economies.	Applicable to developing economies.
(vii)	Part of positive economics.	Part of normative economics..
(viii)	Measurable.	Difficult to measure.

Q.2 Examine the problems of development in the Indian Context.

Ans.: (1) There is concentration of economic power and monopolistic practice in the country.

- (2) The economic system has become complex and this type of system creates impediments in the smooth functioning of the economy.
- (3) No clear cut direction of any economic policy is another problem of the economy.
- (4) Despite the best efforts made to remove poverty and rising per capita income, the problem is still grave which needs serious attention.
- (5) The Indian economy is faced with the problem of production explosion.
- (6) Under employment, unemployment is another chronic problem of the country.
- (7) Primitive & outdated methods of production. Still dominates all the productive activities of the economy.

Q.3 What is ROSTOW's Stages of development

Ans.: W.W. Rostow has classified all the societies into five categories like the -

- (a) Traditional Society
 - (b) Precondition for take off
 - (c) Take off stage
 - (d) Drive to maturity
 - (e) High Mass consumption Stage.
- (a) It is also called the pre-industrial stage as modern science & technology were not available in that period. It is that stage whose structure is developed within the limited production function based on pre-Newtonian science and technology. Pre-Newtonian attitude toward the physical world. It is predominantly agriculture based and static stage having no movement of economic activity. Such an economic society needs changes in agriculture pattern of farming commerce & trade. Since such a society has about ant manpower, this stage can be the basis of labour intensive industries. It can be used approximately to provide great input

infrastructural base for economic growth, as the economic resources are yet to be exploited to cater to human need.

- (b) This is the period of transition, society has to pass through this stage as it takes time to transform a traditional society in the ways necessary for it to exploit the fruits of modern science & technology. In a society preparing for the take off, this is a period when new avenues of economic activity are explored, trade & commerce widens, investment & modern manufacturing enterprises appear.
- (c) The forces of economic progress expand and come to dominate the society. New industries expand rapidly and in turn, other industries and services required to support them grow leading to expansion of the area and the modern industrial sector. New technology spreads to agriculture & agricultural productivity to generate greater and of food surplus & raw materials are required to sustain the rapidly expanding industrial sector. The take off can be further defined as requiring all the three of the following related conditions:
 - (i) A rise in productivity investment from, say 5% or less to over 10% of national income.
 - (ii) The development of one or more substantial income. The development of one or more substantial manufacturing sectors with a high rate of growth.
 - (iii) The existence or quick emergence of a political social and institutional framework which exploits the impulses to expansion in the modern sector and gives to growth an outgoing character.
- (d) It is also referred to as the stage of self-sustained growth. It is a period when a society has effectively applied the range of modern technology to the bulk of its resources or we may say that it is a long period of self-generating and self-sustained economic growth extending well over four decades. The rate of saving and investment are of such a magnitude that economic development becomes automatic over all capital per head increase as the economy matures. The structure of the economy changes dramatically where as the initial key industries decline as diminishing return sets in.

But the average rate of economy is maintained by a succession of new rapidly growing sector with a new set of pioneering leader and the economic is maintained by a succession of new rapidly growing sector with a new set of pioneering leader and the economic growth motion is on.

- (e) High mass consumption the leading sector of the economy shift toward production of consumer durables. Real income per head rises so high that the consumption. Real income beyond and therefore, there is a greater use for G & S and the proportion of urban total population. Since the society has achieved the technology maturity further resources are devoted to social welfare and security. In this stage the balance of attention of society swifts from supply to demand, from production problem to consumption and welfare problem. There forces tend of increase growth and welfare in this period they are –
- (i) The pursue of national policy to increase power & influence beyond national frontiers.
 - (ii) To have a welfare state by a more equitable distribution of national income through progressive taxation social security & leisure to the working force.
 - (iii) Decision to create commercial centre and leading sectors like cheap houses, automobile and electronics & household device etc. It leads to a higher rate of pop.

Criticized on following ground :

1. The sequence of stages is un warranted as the economic system is like that of human system. Moreover we can it project accurate results at any stage and to say that it would lead to the next stage is the prescribed time limit.
2. The precondition stage shows overlapping effects as it is not essential that is must precede the take off.
3. The selection of historical dates about the period of take off to sustained growth in vague, purely intuitive and subjective & hence it is dangerous to rely upon them.
4. The capital output ratio advocate does not lead us any where.

5. Its importance of the leading sector has not been found practically viable.
6. Pre-condition for take off does not occur first in time.
7. Puzzing & his leading is the stage of self sustained growth as no growth in purely self sustained.

Q.4 What is Theory of balanced growth?

Ans.: Balanced growth requires balance between different consumer goods industries and between consumer goods and capital goods industries. It also implies balance between industry & agriculture & between domestic and export sector. For this balance is required between the demand and supply sides the supply side lays emphasis on the simultaneous development. Of all inter related sectors which help in increasing the supply of goods.

Rosentien Rodan was the first economist who propounded the theory of balanced growth without using these words in 1943.

His Main contention is that "often SMP (Social Marginal Product) of an investment is different from its PMP (Pvt. Marginal Product) and that when a group industries is planned together in accordance with the SMP's the rate of growth of the economy is greater than it would have been otherwise. This is because an individual entrepreneur is interested only in the PMP of investment and is not likely to have an accurate assessment of its SMP. It is complementary of different industries which leads to the most profitable investment from the stand point of the society.

Account to Nurkse, vicious circle of poverty are at work in underdeveloped countries which retard economic development. If however they are broken economic development will follow. The vicious circle operates both on the supply side and demand side.

On the supply side there is low capacity to save resulting from low real income. The low real income is due to low productivity which leads to the most profitable investment from the stand point of the society. Individual investment decision can't solve the problem.

The size of the market can be enlarged by monetary expansion, by salesmanship and advertising, by abolishing trade restriction and expanding the economic infrastructure it can also be widened either by a reduction in prices or by an increase in money income while keeping price constant. This implies an increase in productive efficiency and in real income. But in underdeveloped countries market is not large enough to pursue production on a scale that will lead to reduction in costs.

Every scale in production, if distributed without miscalculation among all kinds of products in proportion to which products interest would create or rather constitute its own demand.

A balance is required between the domestic sector and the foreign sector. "Export revenue is an important source for financing development. Imports rise as production and employment expand and domestic trade itself requires. Imports of necessary material and equipment.

Criticism :

1. heavy investment oriented
2. More a question of entrepreneurial ability
3. Beyond the capacity and capabilities of developing countries.
4. Rise in costs
5. Wrong assumption of increasing returns.
6. No scope for priorities.
7. Scarcities and bottlenecks too promote growth.

Q.5 What is the theory of unbalanced growth?

Ans.: By Prof. Hirschman and Kindleberger, Break the vicious circle of poverty and stagnation, a developing country should undertake a big push by investing in strategically selected industries or sector of the economy. The best strategy of development is the creation of imbalance in the economy since it is observed that to correct the existing disequilibrium constitutes a major step for the progress of the economy.

Underdeveloped economy is one which is in a state of equilibrium at a low level of consumption production saving and investment. The most

effective way of breaking the vicious circle is to deliberately plan for imbalance. When a deliberate imbalance is created in our sector, society will make or be inspired to make efforts to correct it and thus the economy will surge forward from the imbalance to another imbalance.

The planning authority should pay attention to pressure creating and pressure relieving investment if there is a vigorous Pvt. Sector in a developing economy, government function should be limited to investment in pressure relieving sector thus as Pvt. investment takes place in manufacturing industries and pressure creating sector. There will be felt shortage of transport electricity, medical etc. The government should invest now a days in pressure relieving sector. If Pvt. Investment is not forthcoming in the basic industries, the role of government will be more active. Heavy investment by government in basic industry will be provided in continue to Pvt. Enterprise to invest in a variety of field. This will again create pressure to relieve which government will have to step in with heavy investment again deliberately creating sectoral imbalance.

Criticism :

1. Choice of disequilibria
2. Unmindful of resistance
3. Based on complete divisibility and mobility of factors.
4. Basic facilities are lacking
5. Possibility of inflationary condition
6. Regional disparity may rise
7. Too much emphasis on investment decision.

Q.6 What is Big push Theory of growth?

Ans.: It is associated with the name of professor Paul N. Rosenstein Rodan, "The thesis is that a big push or a large comprehensive programme is needed in the form of a high minimum amount of investment to overcome the obstacles to development in an underdeveloped. Economy and to

launch it on the path of progress. There is Minimum level of resources that must be devoted to a development programme if it is to have any chance of success. Rodan Distinguishes bet “there kind of indivisibilities and external economics.”

1. **Indivisibilities in Production function** : “of inputs, outputs or processes lead to increasing return. He regard social over head capital as the most important instance of indivisibility and hence of external economics on the supply side.
2. **Indivisibility of Demand** : It require simultaneous setting up of interdependent industries in underdeveloped countries. This is because individual investment project have high risk as low income limit the demand for their product. Roden takes first a closed economy where 100 disguised unemployed workers are employed ins a shoe factory whose wages constitute an additional income. If these workers spend all their income on shoes they manufactured, the shoe market have regular demand and thus succeed but the fact is that they would not like to spend all their additional income on shoes when they are poor.

Thus the new factory will be abandoned for want of an adequate market.

3. **Indivisibility in the supply of savings** : A high income elasticity of saving is the third indivisibility A high minimum size of investment require high volume of saving this is not easy to achieve in underdeveloped countries coz of low income. To overcome this it is essential that when income increases due to an increase in invest, the marginal rate of saving should be very much higher than the average rate of saving. Given those three indivisibility and the external economics to which they give rise a “big push” or a minimum quantum of investment is required to overcome the obstacles to development in underdeveloped countries.

Q.7. Give fundamentals of Harrod- Dumar Growth Model.

Ans.: It give importance to the rate of capital accumulation in economy growth, capital accumulation having dual character

(A) Generate income (B) The production capacity.

Assumption :

1. Assume constant capital output ratio $Y = RK$
2. Saving is constant proportion of national income $S = sY$
 Y = National output S = Saving
 K = total stock of capital s = MPS (Marginal propensity to save)
 R = capital output ratio.
3. Economy is at full employment equi
4. There is no government interfered
5. There is no existence of foreign trade, thus closed economy exist
6. Interest rate is constant
7. Price level constant

Harrod's Model : Based on three distinct concepts of growth rate -

- (a) Actual rate of growth (G)
- (b) Warranted " " " (G_w)
- (c) Natural " " " (G_n)

Firstly there is actual rate represented by G which his represented by saving ratio. It shows short run cyclical variation in the rate of growth. Secondary there is warranted rate of growth represented by G_n which is the full capacity growth rate of income in an economy. Lastly there is natural growth rate (G_n) which is regarded as the welfare optimum. It may be regarded as the potential on the full employment rate of growth.

$$GC = S$$

a = actual rate of growth
 c = ratio of invest to in income
 S = saving

$$G = \frac{\Delta y}{y} \quad c = \frac{I}{\Delta y} \quad s = \frac{S}{y}$$

$$GC = S$$

$$\frac{\Delta y}{y} \times \frac{I}{\Delta y} = \frac{S}{y}$$

$$I = S$$

It works on steady growth. To maintain full employment the required growth rate should be such that it makes full use of labour and production capacity created in the economy.

Thus, the saving made out of full employment incomes must necessarily be offset by an equal amount of investment.

Domar Model : It gives importance to the dual character of investment and states. If investment increases, productive capacity and real income also increase. It provides us with both sides of the equation the solution of which will yield the required rate of growth.

(a) **Increase in productive capacity (Supply side) :** The creation of new capacity may be made at the expense of the existing plant and machinery and if this happens the increase in productive capacity consequent to a new investment of a \$ D will be denoted by ΔC and α will indicate the proportion by which productive capacity of the whole economy rather than those of new plant where investment has been made.

Demand Side : Increase in national income would be equal to increase in investment multiplied by $1/\alpha$ where α is the marginal propensity to save (MPS) and hence $1/\alpha$ is the multiplier. Thus if ΔI is investment, ΔY is national income

$$\Delta Y = \Delta I \times \frac{1}{\alpha}$$

To maintain full employment equi level of income aggregates demand should be equal to aggregate supply

Thus
$$\Delta I = \frac{1}{\alpha} = I\alpha$$

Criticism :

1. Interest rate does not remain constant
2. Economy can't assume absence of Ex-In.
3. Neither MPS and capital output ratio constant
4. Price do not remain constant
5. There has been complete disregard of state intervention where as the state interference is reality.
6. Model can't apply under developed economics
7. Full employment is not exist.

□ □ □

B. Com (Part-I) Examination, 2011
(10+2+3 Patterns) (Faculty of Commerce)
ECONOMIC ADMINISTRATION AND
FINANCIAL MANAGEMENT
First Paper: Business Economics

Time: One Hour

Max. Marks: 40

OBJECTIVES PART- I

Attempt all questions.

1. Attempt all questions. Each question carries 2 marks. Answer to each question should not exceed 20 words.
 - i. Any two differences between Business Economics and Traditional Economics.
 - ii. Any two exceptions to the law of Diminishing Marginal Utility.
 - iii. Give any two stages of Demand Forecasting.
 - iv. Point out any two reasons for the operation of Law of Supply.
 - v. Write any two properties of ISO product curves.
 - vi. Does a firm in short run continue production even at loss under perfect competition?
 - vii. What is Liquidity Preference?
 - viii. Write the formula of Net National Product.
 - ix. What is Economics Welfare?
 - x. Distinguish between Marginal Physical Productivity and Marginal Revenue Productivity.

2. Attempt all questions. Each question carries 4 marks. Answer to each question should not exceed 50 words.
 - i. What are the exceptions to the Law of Demand?

- ii. Explain the relation between Average Cost and Marginal Cost with the help of diagram.
- iii. Give any four characteristics of Monopolistic Competition.
- iv. Distinguish between Money Wages and Real Wages.
- v. Write any four points of importance of Social Accounting.

DESCRIPTIVE PART II

Time: Two Hour

Max. Marks: 60

Attempt three questions in all, selecting at least one question from each section. Each question carries 20 marks. Each question has internal choice in the form of either/or.

Section-A

3. What do you mean by Indifference Curve? Explain their characteristics with the help of diagrams

OR

Distinguish between Micro and Macro Economics. How do the micro and macro analysis help in formulating business policies? Discuss.

Section-B

4. Explain with the help of diagrams the Law of Diminishing Returns. Discuss its limitations also.

OR

How is price under monopoly determined? What are the considerations before a monopolist while fixing the price? Discuss.

Section-C

5. Briefly discuss the Ricardian Theory of Rent. How does it differ from the Modern Theory of Rent? Explain.

OR

Define National Income. Discuss various methods of measuring national income with suitable examples.

B. Com (Part-I) Examination, 2010
ECONOMIC ADMINISTRATION AND
FINANCIAL MANAGEMENT
First Paper: Business Economics

Time: One Hour

Max. Marks: 40

OBJECTIVES PART- I

Attempt all questions.

1. Attempt all questions. Each question carries 2 marks. Answer to each question should not exceed 20 words.
 - i. Give the definition of Business Economics.
 - ii. What are Giffin goods?
 - iii. Why indifference curves are convex to the origin?
 - iv. What is cross demand?
 - v. Give any two reasons for the application of law of Diminishing.
 - vi. What is Revenue?
 - vii. What is monopoly?
 - viii. What is the wage fund?
 - ix. Differentiate between Gross profit and economic profit.
 - x. What do you understand by Gross National Profit?
2. Attempt all questions. Each question carries 4 marks. Answer to each questions should not exceed 50 words.
 - i. Why does the law of diminishing marginal utility apply?
 - ii. Distinguish between perfectly elastic demand and perfectly inelastic demand.
 - iii. Discuss the determinants of supply.

- iv. Explain relations between rent and price.
- v. Explain main components and national income.

DESCRIPTIVE PART II

Time: Two Hour

Max. Marks: 60

Attempt three questions in all, selecting at least one question from each section. Each question carries 20 marks. Each question has internal choice in the form of either/or.

Section-A

3. Explain the law of diminishing marginal utility. What is its importance?
OR
Explain the law of demand with illustration. Give circumstances under which it is not operative.

Section-B

4. Explain the producer's equilibrium with the help of ISO-product curves.
OR
How is price determined in the short and long period under conditions of perfect competition? Explain.

Section-C

5. Critically discuss the Keynesian theory of interest.
OR
Define national income. Explain the relationship between national income and economic welfare.

B. Com (Part-I) Examination, 2009
ECONOMIC ADMINISTRATION AND
FINANCIAL MANAGEMENT
First Paper: Business Economics

Time: One Hour

Max. Marks: 40

OBJECTIVES PART- I
Attempt all questions.

1. Attempt all questions. Each question carries 2 marks. Answer to each question should not exceed 20 words.
 - i. Which book was written by J.R. Hicks in 1939?
 - ii. According to Kautilya what is the root of wealth?
 - iii. Define the law of diminishing marginal utility.
 - iv. What is elasticity of substitution?
 - v. What is monopoly?
 - vi. Define opportunity cost.
 - vii. Define national income.
 - viii. What is differentiated product?
 - ix. Define Entrepreneur.
 - x. What are isoquants?
2. Attempt all question. Each question carries 4 marks. Answer to each question should not exceed 50 words.
 - i. Write any two points of distinction between micro and macro economics.
 - ii. Differentiate between production and consumption.
 - iii. What is marginalism?
 - iv. What is least cost factor combination?
 - v. What is scale of production?

DESCRIPTIVE PART II

Time: Two Hour

Max. Marks: 60

Attempt three questions in all, selecting at least one question from each section. Each question carries 20 marks. Each question has internal choice in the form of either/or.

Section-A

3. Differentiate between cardinal and ordinal approach of consumer behaviour.

OR

What is elasticity of demand? How it is measured?

Section-B

4. What is oligopoly? How the price and output are determined under it?

OR

What are the different kinds of Cost? What is their relationship with revenue?

Section-C

5. Explain in detail the marginal productivity theory of distribution.

OR

How the national income is measured? Discuss its method with suitable examples.

B. Com (Part-I) Examination, 2008
ECONOMIC ADMINISTRATION AND
FINANCIAL MANAGEMENT
First Paper: Business Economics

Time: One Hour

Max. Marks: 40

OBJECTIVES PART- I

Attempt all questions.

1. Attempt all questions. Each question carries 2 marks. Answer to each question should not exceed 20 words.
 - (i) Which book was written by Adam Smith in 1776 that laid the foundation of modern economics?
 - (ii) Define Business Economics.
 - (iii) Define Indifference curve.
 - (iv) How the marginal cost is ascertained?
 - (v) What is law of supply?
 - (vi) What is homogeneity of product?
 - (vii) What do you understand by 'Wastes of Competition'?
 - (viii) Differentiate between direct demand and derived demand.
 - (ix) What is no rent land?
 - (x) What is social accounting?
2. Attempt all questions. Each question carries 4 marks. Answer to each question should not exceed 50 words.
 - i. How the elasticity of demand is measured according to the are methods?
 - ii. How the consumer's surplus is measured?
 - iii. Differentiate between monopoly and monopolistic competitions.
 - iv. Explain the value added method of determination of national income.
 - v. What are laws of returns?

DESCRIPTIVE PART II

Time: Two Hour

Max. Marks: 60

Attempt three questions in all, selecting at least one question from each section. Each question carries 20 marks. Each question has internal choice in the form of either/or.

Section-A

3. Discuss the role of business economics in formulation of business policies.

OR

How does the indifference curve approach? Explain the consumer equilibrium.

Section-B

4. What are the returns of scale? Explain with the help of suitable diagrams.

OR

How price and output is determine under monopolistic competitions?

Section-C

5. Critically explain the theory of rent propounded by David Ricardo.

OR

What is national income? Does the increase in national income always promote welfare?

B. Com (Part-I) Examination, 2007
ECONOMIC ADMINISTRATION AND
FINANCIAL MANAGEMENT
First Paper: Business Economics

Time: One Hour

Max. Marks: 40

OBJECTIVES PART- I
Attempt all questions.

1. Attempt all questions. Each question carries 2 marks. Answer to each question should not exceed 20 words.
 - (i) When was modern Economics originated and by whom?
 - (ii) Discuss the nature of Economics.
 - (iii) Define elasticity of demand.
 - (iv) Point out the difference between fixed and variable costs.
 - (v) Define supply.
 - (vi) Define marginal revenue.
 - (vii) Distinguish between market price and normal.
 - (viii) What do you understand by monopolistic competition?
 - (ix) What is rent according to Ricardo?
 - (x) Differentiate between gross profit and economic profits.

2. Attempt all questions. Each question carries 4 marks. Answer to each question should not exceed 50 words.
 - (i) What do you mean by Demand Forecasting?
 - (ii) How is price determined under conditions of discriminating monopoly?
 - (iii) Explain relation between economic welfare and national income.
 - (iv) Differentiate between marginal revenue productivity and marginal physical productivity.

- (v) Distinguish between money wages and real wages.

DESCRIPTIVE PART II

Time: Two Hour

Max. Marks: 60

Attempt three questions in all, selecting at least one question from each section. Each question carries 20 marks. Each question has internal choice in the form of either/or.

Section-A

3. Define between marginal utility and total utility. Prove that the total utility is maximum only when the marginal utility is zero.

OR

Distinguish between marginal utility and total utility prove that the total utility is maximum only when the marginal utility is zero.

Section-B

4. Explain with the help of a diagram the Law of Diminishing Returns.

OR

Define monopoly. How is monopoly price determined?

Section-C

5. "Interest is the reward paid for parting with liquidity and is determined by the demand and supply of money" Elucidate.

OR

Define national income. Explain the various methods of measuring national income.

B. Com (Part-I) Examination, 2006
ECONOMIC ADMINISTRATION AND
FINANCIAL MANAGEMENT
First Paper: Business Economics

Time: One Hour

Max. Marks: 40

OBJECTIVES PART- I
Attempt all questions.

1. Attempt all questions. Each question carries 2 marks. Answer to each question should not exceed 20 words.
 - (i) What is the meaning of marginal utility?
 - (ii) Give the views of Kautilya about women labour.
 - (iii) Define the indifference curve.
 - (iv) Give general conditions of equilibrium for a production firm.
 - (v) What is basic nature of average fixed cost?
 - (vi) What do you mean by GDP?
 - (vii) At which stage the supply of labour will be zero?
 - (viii) What type of relations exists between economic progress and interest rate?
 - (ix) Why is price elasticity of demand for salt almost zero?
 - (x) Give main points of subject matter of business economics.

2. Attempt all questions. Each question carries 4 marks. Answer to each question should not exceed 50 words.
 - (i) What did say Kautilya about industries?
 - (ii) Distinguish between value in use and value in exchange.
 - (iii) Explain the relationship between marginal revenue and average revenue of monopoly firm.

- (iv) If the price of a commodity increases from Rs. 40 to 60 and its supply increase from 6 kg to 9 kg, calculate its elasticity of supply.
- (v) Distinguish between gross profit and net profit.

DESCRIPTIVE PART II

Time: Two Hour

Max. Marks: 60

Attempt three questions in all, selecting at least one question from each section. Each question carries 20 marks. Each question has internal choice in the form of either/or.

Section-A

3. Explain the law of demand with illustration. Give circumstances under which it is not operative.

OR

Briefly discuss the usefulness of micro and macro economics in business decisions.

Section-B

4. Explain the law of supply with the help of supply schedule and supply curve.

OR

Explain the determination of price and output by a firm under perfect competition.

Section-C

5. Define the National Income. Does an increase in National income necessarily mean an increase in economic welfare of the people? Discuss

OR

Critically evaluate the marginal productivity theory of distributing.