Managerial Economics –

Managerial economics is the economics applied a decision making. The managerial economics, which is concerned those aspects of economics and its tool of analysis which are used in the process of decision making of enterprise. The decision maker should have a good knowledge regarding the economics theory and its tool for analysis.

(1) ⇒ According to Spencer & Siegelman,

"The integration of economic theory with business practice for managerial economic is the purpose of facilitating decision making and forward plaving by management."

(2) ⇒ According to Mansfield –

" Managerial economics is concernid with application of economic concept and economic analysis to the problem of formulating rational managerial decision.

Nature and Characteristics –

(i)- Managerial economics is prescriptive rather than descriptive.

(ii). Micro-economic in character.

(iii)- A scientific art. 2

(iv)- Normative science.

Scope of Managerial Economics –

(i). Theory of demand
(ii). Theory of Production
(iii). Theory of Profit
(iv). Pricing Problem
(v). Resource allocation
(vi). Investment Problem
(vii). Inventory Problem
(viii). Invironmental Issue.

Importance of Managerial Economics –

(i). Helps in reaching a variety of business decision in complicated invironment.

(ii). Built competent manager.

(iii). Co-ordination with other department.

(iv) Helps in welfare of society and organisation

(v). Help to make optimum utilization of resources, which are scares.

Meaning of Economics -

Economics is basically the study of tools and techniques by which we can make optimum utilization of available resources, so that objectives can be achieve.

Economics is the study of economic problem, ie how the scare resources are utilize so that each and every wants and desire are supposed to be fulfilled and satisfied.

According to Robbins, " Economics is concerned with the best possible use of limited resources.

Nature of Economics -

(i). Economics provides set of concepts and precepts.

(ii). Economic concepts and precepts furnish as the tools and techniques of analysis.

(iii). It is valuable guide to management.

(iv). Economics may be micro and macro.

Science, engineering and Technology -

Science - science refers to a system of acquiring knowledge based on scientific method and to the organized body of knowledge gained through such research

Engineering - engineering is the discipline, arts and profession of acquiring and applying technical, scientific and mathematical knowledge to design and implement material, structure, machines and process.

Technology -

According to Merriam - Webster dictionary - "The term technology is practical application of knowledge in a particular area and the capability given by practical application of knowledge."

Unit-2

Meaning of demand analysis:-

Demand is one of the crucial requirements for the existance of any business enterprise. A firm is interested in its own profits and sells both of which depend partially upon the demand for its product. The decision which management makes with respect to production, advertising, cost allocation, pricing etc is called analysis of demand.

Demand analysis means the study of factors which influence the demand of commodity or service. It is only on the basis of these factors or determinants one can forecast the demand. Analysis of demand enables the producer to adjust this production to the demand to maximize the objective function.

Objective:-

(i). To study and analyse the determinants of demand.

(ii). To measure the elasticity of demand.

(iii). To prepare sells and demand forecast

(iv). Manipulating demand.

(v). To make appropriate changes in allocation of resources.

Demand -

It refers to the quantity of commodity goods, or services that consumers are willing and able to purchase at various price during a period of time.

Demand function -

$$D_x = f(P_x, P_r, Y, T, A, U)$$

P_r = Price of related goods.

P_x = Price

Y, M = Income

T = Taste

A = Advertising

U = Unknown factors.

Law of Demand -

The law of demand explains the relationship between change in quantity demanded and change in price. It states that the higher the price, the lower would be quantity demanded in the market and lower the price there would be higher quantity demanded in the market.

The price and quantity of commodity demanded are inversely related, all other things being equal.

Demand Schedule -

Demand schedule is a chart or a table that sures the relationship b/w price and demand of a commodity or a servic at a time.

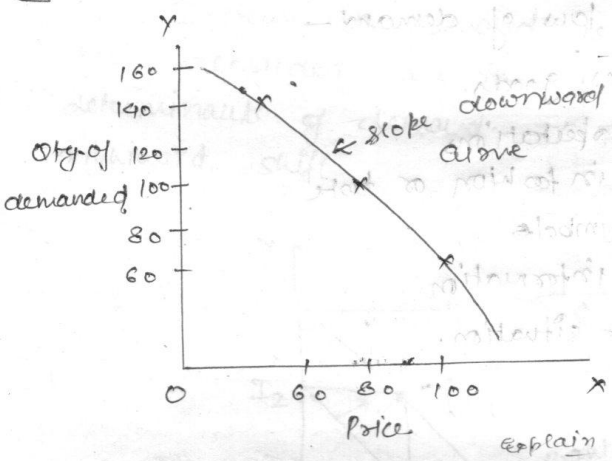
ex. Orange

Price (in Rs)	Qty of commodity (per
80	100
100	80
60	150

Demand Curve –

The graphical representation of a demand schedule is known as demand curve.

Ex.



Explain

Assumption of law of demand –

(i). Price of related goods remains constant.

(ii). Income of a consumer remains constant.

(iii). Taste and preference of a consumer get never changed.

(iv). Advertising also does not effect the demand of the product.

(v). Price rise in future should not be ~~~~ expected. ~~

Reason of demand curve sloping Downward—

1. Income effect
2. substitution effect
3. Additional consumers
4. different uses of commodity.

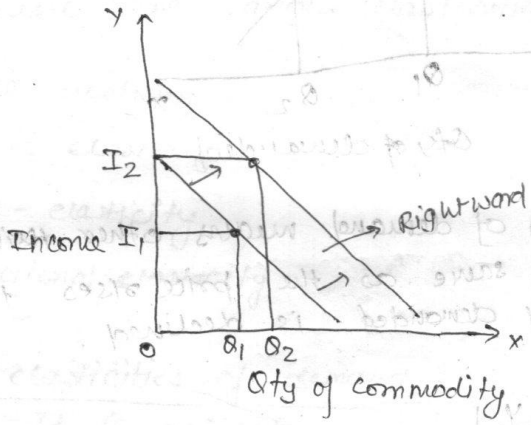
Exception of law of demand—

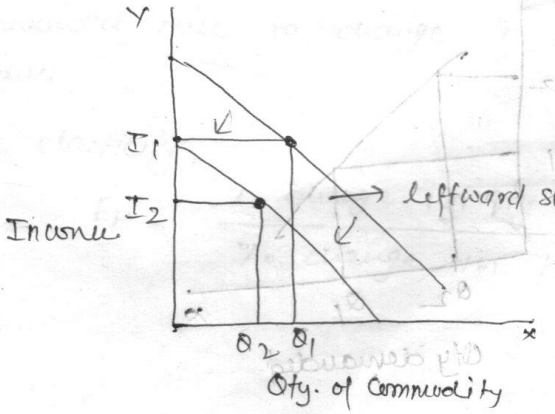
1. Conspicuous goods
2. future expectations
3. change in fashion or taste
4. Status symbol
5. lack of information
6. Emergent situation.

Increase and decrease in demand:-

Increase and decrease in demand refers to a change in demand. It is cause by change in factors ~~instead~~ like taste preference, income, other factors etc. instead of price.

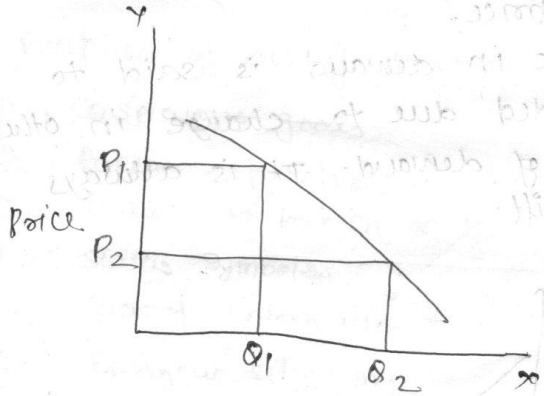
Increase in demand is said to more demanded due to change in other determinants of demand. It is allways rightward swift.



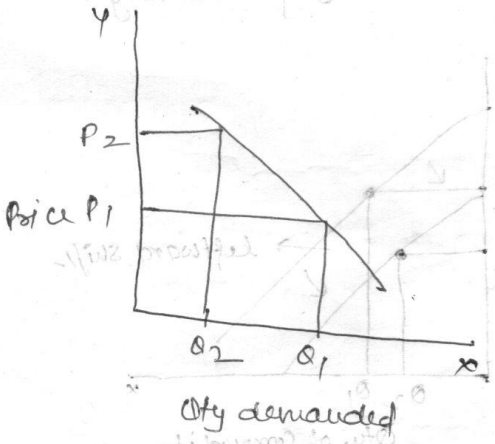


Extension and contraction of demand –

Extension of demand means other things remains the same as the price fall demand increase.



Contraction of demand means other things remains same as the price rises the quantity demanded is declined.



Elasticity of demand-

Elasticity of demand is used to denote a measure of the rate at which demand change in response to the change in one of the variable or determinants of demand always demand depends.

$$E_D = \frac{\%\text{ change in qty demanded}}{\%\text{ change in determinants of demand}}$$

There are various elasticities of demand-

(i) Price elasticity
(ii) Income elasticity
(iii). Cross - elasticity
(iv). Promotional elasticity

Price elasticities of demand-

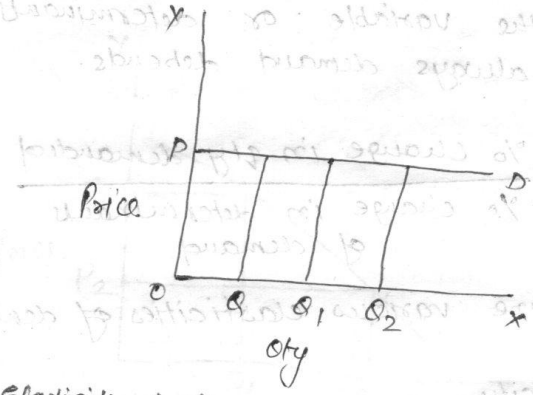
It is defined as % change in qty. demanded due to change in prices of product.

Price elasticity,

$$E_P = \frac{\%\text{ change in qty demanded}}{\%\text{ change in price}}$$

Types and degrees of price elasticity -

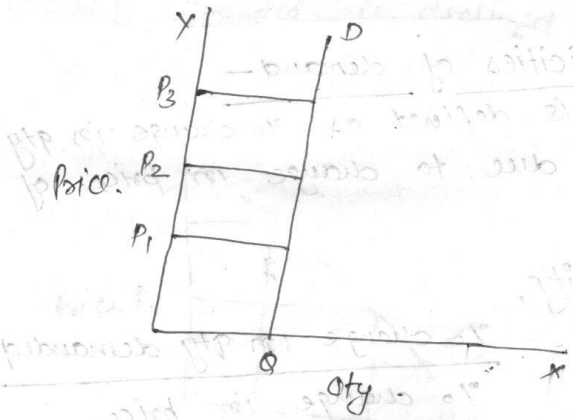
(1). Perfectly elastic :-



Elasticity of demand -

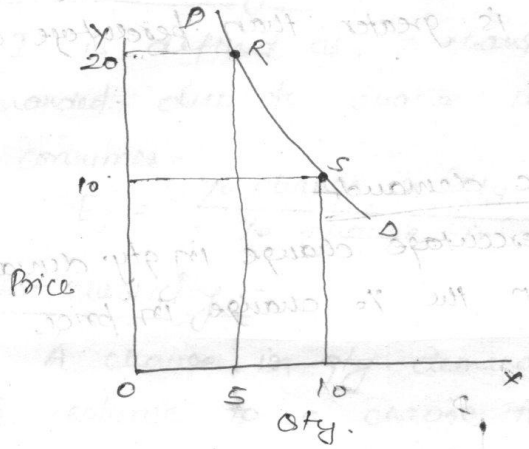
$E_D = \infty$

(2). Perfectly Inelastic -



$E_D = 0$

(3). Unitary elastic :-



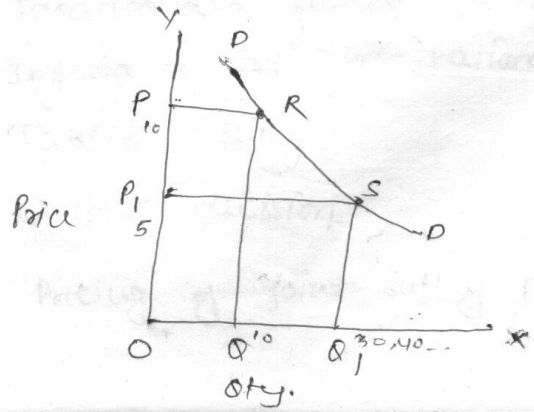
$E_D = 1$

Eg

Price	demand	Total Outlay
10	= 100	= 1000
20	= 50	= 1000
Inc	dec	

⇒ Price elasticity of demand is unitary when, the change in demand is exactly proportionate ~~into~~ to the change ~~of~~ in price. The curve is rectangular hyperbola.

(4) Elastic Demand—

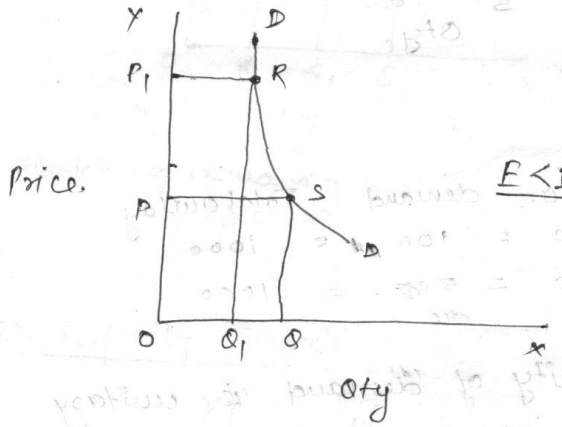


$E > 1$

⇒ If the percentage change in qty. demanded is greater than percentage change in price.

(5). Inelastic demand:-

If percentage change in qty. demanded is less than the % change in price.



Income elasticity —

It is defined as % change in qty. demanded due to change in income of consumer.

$$E_y = \frac{\%\text{ change in qty. demanded}}{\%\text{ change in income}}$$

Cross-elasticity :-

A change in qty. demanded for goods in response to a change in price of another goods.

$$E_c = \frac{\%\text{ change in qty. demanded of goods A}}{\%\text{ change in price of goods B}}$$

Use and Importance of elasticity of demand for managerial decision making —

(i). Determination of Price Policy
(ii). Shifting tax burden
(iii). Price discrimination
(iv). Taxation and subsidy policy
(v). Importance in international trade
(vi). Public utility
(vii). Output decision
(viii). Pricing of joint supply product

Unit - III

Demand Forecasting -

Demand forecasting is an art of predicting demands for a product or services, at some future date on the basis of certain present and past behaviour of some related events.

Demand forecast for a product may be in respect of —

(i)- Aggregate demand — Total demand for output in the economy at a future time.

(ii). Total demand for the product of an industry.

(iii). The demand for the product of an individual firm.

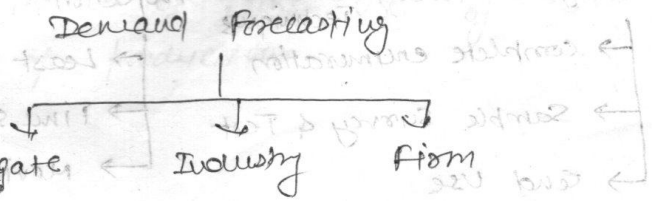
Demand forecast plays an important role —

(i). Planing for future level of production.

(ii) For launching a new product.

(iii)- For expanding production capacity.

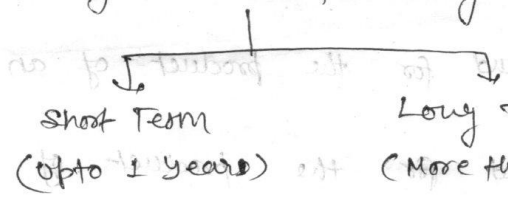
(iv) For entering an industry.



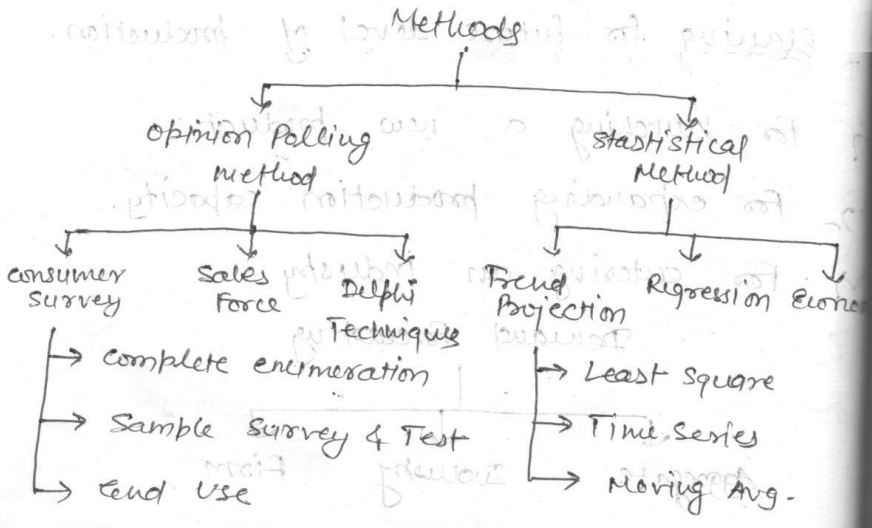
Significance -

(i). Production Planing
(ii). control of business
(iii). Inventory control
(iv). Sales Forecasting
(v). Growth and long term investment progra
(vi). Economic planing and policy making

Types of demand forecasting -



Methods of demand forecasting



Production Function –

Production function express the technological relationship b/w the physical input and physical quantities of output.

In other word it shows that with a given stage of technological knowledge and during a particular period of time, how much can be produced with a given ammount of input.

$$Q = f(L, C, N)$$

L – Labour

C – Capital

N – Land

Features –

(i). It indicates a functional relationship b/w physical input and physical o/p of a firm.

(ii). The production funⁿ is always in relation to a period of time.

(iii). It is a pure technical relationship.

(iv). o/p in the production function is the result of joint use of factor of production.

Factor of Production—

(I) Land
(II) Labour
(III) Capital
(IV) Entrepreneur (owner)

Law of Dimnishing Return—

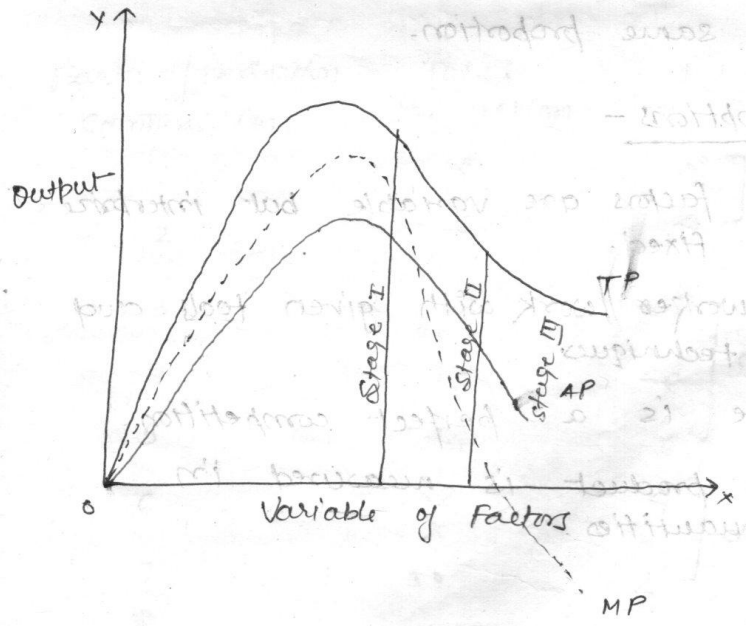
In short period, when the output of product is sought to be increased by the way of additional application of the variable factors to a given quantity of fixed factor, law of variable proportion is into existance.

This law with study the relations between one variable factor of production and output keeping the quantity of other factors fixed, is called the law of variable proportion.

According to this law, the proportion of factor is changed, the total production at first increases more than proportionate then equi-proportionately and finaly less than proportionately. The classical economics called as law of dimnishing return.

Production Schedule -

Fixed Factor (land)	Unit of Variable input (labour)	Total Product	Avg Product	MP (marginal Price)	stages
5	0	0	0	10	Stage-I
5	1	10	10	14	
5	2	24	12	15	
5	3	39	13	13	stage-II
5	4	52	13	-1	
5	5	51	10.2	15	
5	6	66	11	0	stage-III
5	7	66	9.4	-2	
5	8	64	8		



Law of Return to scale -

In long run, all inputs are variable. Production can be increased by changing one or more of inputs. The firm can change its ~~plant~~ plant or production in the long run, it is possible for a firm to change all input up or down accordance with scale this is known as return to scale.

The law of return to scale describes the relationship b/w output and scale of input in the long term when all inputs are increased in the same proportion.

Assumptions -

(i) All factors are variable but interprise is fixed.

(ii) A worker work with given tools and techniques

(iii) There is a perfect competition.

(iv) The product is measured in quantities.

When a firm increases all factors of production in a fixed proportion, output increase in 3 distinct phases.

$P = f(L, C, K)$

x variable used as change in input.

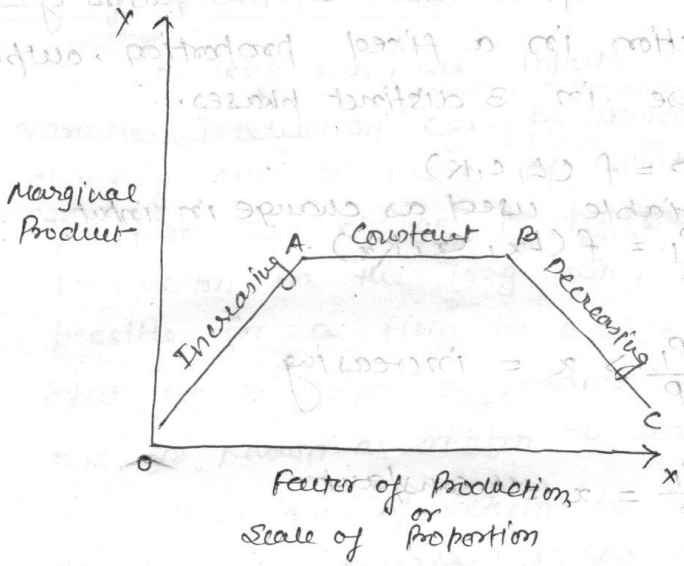
$P_1 = f(Lx, Cx, Kx)$

(1)- $\frac{P_1}{P} > x$ = increasing

(2)- $\frac{P_1}{P} = x$ = constant

(3). $\frac{P_1}{P} < x$ = Decreasing

Factor of Production Combination	Total Production	M.P. (additional)	
1	2	2	Increased
2	6	4	
3	12	6	constant
4	18	6	
5	24	6	
6	28	4	decreasing
7	30	2	



Theory of Cost :-

The cost which a firm incurs in the process of production of its goods and services is an important variable for decision making. Total cost and total revenue determine the profit level of a business firm.

~~Theories~~

Theories of Cost

Traditional / Short Run Cost — Modern

Traditional cost - In traditional cost are generalized in 2 parts on the basis of period ie short run and long run period.

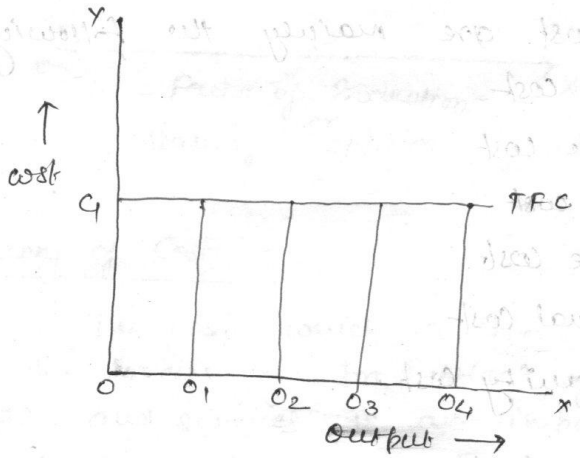
Cost are mainly the following types-

(i). Fixed cost
(ii). Variable cost
(iii). Total cost
(iv). Average cost
(v). Marginal cost
(vi). Opportunity cost.

(1). Fixed cost-

Fixed cost are amount expend by the firm on a fixed input in short run. Fixed cost are these cost, which remain constant irrespective of the level of output. These cost remain unchanged even if the output of the firm is nil. This is also known as supplementary cost all over head.

Unit of output	Total fixed cost (TFC)
0	200
10	200
20	200
30	200
50	200

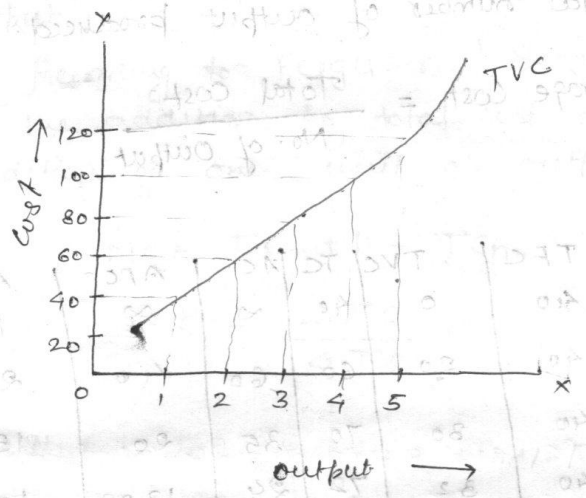


(2). Variable or Prime cost –

These are those cost incurred on variable factors. These cost vary with the level of output.

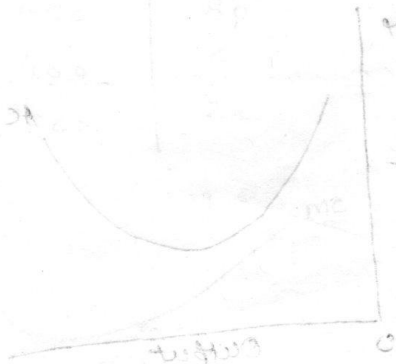
In other words variable cost are those cost which rise when output expand and fall when output contra when output is nil, they are reduced to zero.

Unit of output	Total Variable cost (TVC)
0	0
1	40
2	60
3	80
4	100
5	120



(3). Total Cost -

Total Cost = Fixed cost + Variable cost.

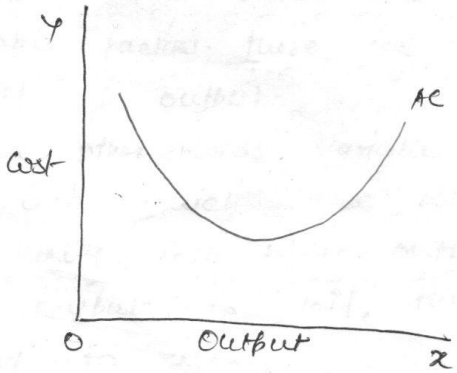


(4). Average cost -

The average cost of production is the total cost per unit of output. In other words average cost of production is the total cost of production devided by total number of output produced.

$$\text{Average Cost} = \frac{\text{Total Cost}}{\text{No. of Output}}$$

Unit	TFC	TVC	TC	AC	AFC	AVC
0	40	0	40	∞	∞	0
1	40	20	60	60	40	20
2	40	30	70	35	20	15
3	40	32	72	24	13.33	10.6
4	40	34	74	18.5	10	8.5
5	40	36	76	15.2	8	7.2



MC curve is always rise upward when the o/p increase mc always increase

Relationship b/w Average cost and Marginal cost :-

Output	Total cost	AC	MC
0	60	∞	0
1	80	80	20
2	96	48	16
3	108	36	12
4	124	31	16
5	150	30	26
6	192	32	42

(i). Both AC and MC are calculated from

$$AC = \frac{TC}{Q}, \quad MC = \frac{\Delta TC}{\Delta Q}$$

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

(ii)- When AC fall, MC also falls

(iii). When AC rise, MC also rise.