UNIT- III Production, Cost, Market Structures & Pricing

Production Function:

Samuelson define the production function as "the technical relationship which reveals the maximum amount of output capable of being produced by each and every set of inputs"

Michael define production function as " that function which defines the maximum amount of output that can be produced with a given set of inputs".

The production function expresses a functional relationship between physical inputs and physical outputs of a firm at any particular time period. The output is thus a function of inputs. Mathematically production function can be written as

Q = F(L1,L2,C,O,T)

Where Q is the quantity of production, F explains the functions, that is, the type of relation between inputs and outputs , L1,L2,C,.O,T refer to land, labout, capital, organization and technology respectively. These inputs have been taken in conventional terms. In reality, material also can be included in a set of inputs.

A manufacturer has to make a choice of the production function by considering his technical knowledge, the process of various factors of production and his efficiency level to manage. He should not only select the factors of production but also should work out the different permutations and combinations which will mean lower cost of inputs for a given level of production.

With change in industry and the requirements the production function also needs to be modified to suit to the situation.

Production Function with One Variable Input

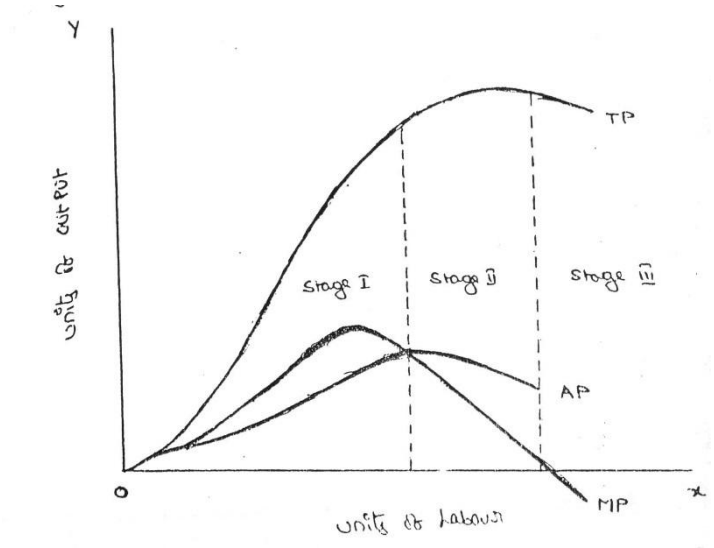
The laws of returns states that when at least one factor of production is fixed or factor input is fixed and when all other factors are varied, the total output in the initial stages will increase at an increasing rate, and after reaching certain level or output the total output will increase at declining rate. If variable factor inputs are added further to the fixed factor input, the total output may decline. This law is of universal nature and it proved to be true in agriculture and industry also. The law of returns is also called the law of variable proportions or the law of diminishing returns.

Definition According to **F. Benham**

"As the proportion of one factor in a combination of factors is increased, after a point, first the marginal and then the average product of that factor will diminish".

Units of	Total	Marginal	Average	Stages

labour	production(tp)	product (mp)	product (ap)	
0	0	0	0	Stages 1
1	10	10	10	
2	22	12	11	
3	33	11	11	Stages 2
4	40	7	10	
5	45	5	9	
6	48	3	8	Stages 3
7	48	0	6.85	
8	45	-3	5.62	



From the above graph the law of variable proportions operates in three stages. In the first stage, total product increases at an increasing rate. The marginal product in this stage increases at an increasing rate resulting in a greater increase in total product. The average product also increases. This stage continues up to the point where average product is equal to marginal product. The law of increasing returns is in operation at this stage. The law of diminishing returns starts operating from the second stage awards. At the second stage total product increases only at a diminishing rate. The average product also declines. The second stage comes to an end where total product becomes maximum and marginal product becomes zero. The marginal product becomes negative in the third stage. So the total product also declines. The average product continues to decline.

Production Function with Two Variable Inputs

Production process that requires two inputs, capital© and labour (L) to produce a given output(Q). There could be more than two inputs in a real life situation, but for a simple analysis, we restrict the number of inputs to two only. In other words, the production function based on two inputs can be expressed as

Q = f(C,L)

Where C= capital , L = labour,

Normally, both capital and labour are required to produce a product. To some extent, these two inputs can be substituted for each other. Hence the producer may choose any combination of labour and capital that gives him the required number of units of output, for any one combination of labour and capital out of several such combinations. The alternative combinations of labour and capital yielding a given level of output are such that if the use of one factor input is increased , that of another will decrease and vice versa. How ever, the units of an input foregone to get one unit of the other input changes, depends upon the degree of substitutability between the two input factors, based on the techniques or technology used, the degree of substitutability may vary.

Iso - Quants

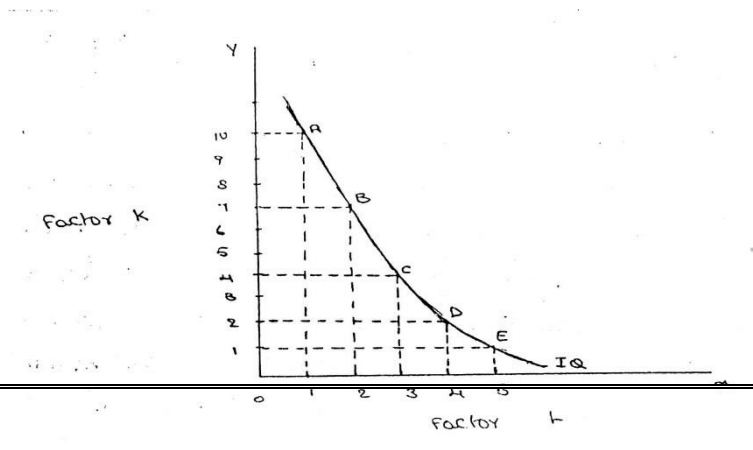
The term Isoquants is derived from the words 'iso' and 'quant' – 'Iso' means equal and 'quent' implies quantity. Isoquant therefore, means equal quantity. Isoquant are also called isopridcut curves, an isoquant curve show various combinations of two input factors such as capital and labour, which yield the same level of output.

As an isoquant curve represents all such combinations which yield equal quantity of output, any or every combination is a good combination for the manufacturer. Since he prefers all these combinations equally , an isoquant curve is also called product indifferent curve.

An isoquant may be explained with the help of an arithmetical example

Combinations	Labour (units)	Capital (Units)	Output (quintals)
A	1	10	50
B	2	7	50
C	3	4	50
D	4	4	50
E	5	1	50

Combination 'A' represent 1 unit of labour and 10 units of capital and produces '50' quintals of a product all other combinations in the table are assumed to yield the same given output of a product say '50' quintals by employing any one of the alternative combinations of the two factors labour and capital. If we plot all these combinations on a paper and join them, we will get continues and smooth curve called Iso-product curve as shown below.



Labour is on the X-axis and capital is on the Y-axis. IQ is the ISO-Product curve which shows all the alternative combinations A, B, C, D, E which can produce 50 quintals of a product

Features of Isoquant

1.Downward sloping: isoquant are downward sloping curves because , if one input increase, the other one reduces. There is no question of increase in both the inputs to yield a given output. A degree of substitution is assumed between the factors of production

2. Convex to origin: isoquant are convex to the origin. It is because the input factors are not perfect substitutes. One input factor can be substituted by other input factor in a diminishing marginal rate. If the input factors were perfect substitutes , the isoquant would be a falling straight line.

3. Do not intersect: two isoquant do not intersect with each other. It is because, each of these denote a particular level of output. If the manufacturer wants to operate at a higher level of output, he has to switch over to another isoquant with a higher level of output and vice versa.

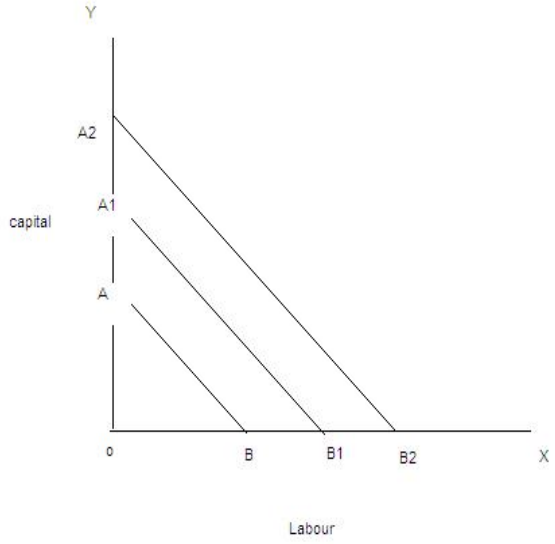
4. Do not axes: the isoquant touches neither X-axis nor Y- axis, as both inputs are required to produce a given product.

Iso Cost

Iso cost refers to that cost curve that represent the combination of inputs that will cost the producer the same amount of money. In other words, each isocost denotes a particular level of total cost for a given level of production. If the level of production changes, the total cost changes and thus the isocost curve moves upwards, and vice verse.

Iso cost line shows various combinations of labour and capital that the firm can buy for a given factor prices. The slope of iso cost line = PL/Pk. In this equation , PL is the price of labour and Pk is the price of capital. The slope of iso cost line indicates the ratio of the factor prices. A set of isocost lines can be drawn for different levels of factor prices, or different sums of money. The iso cost line will shift to the right when money spent on factors increases or firm could buy more as the factor prices are given.

With the change in the factor prices the slope of Isocost line will change. If the price of labour falls the firm could buy more of labour and the line will shift away from the origin. The slope depends on the prices of factors of production and the amount of money which the firm spends on the factors.



Marginal Rate Of Technical Substitution

The marginal rate lof technical substitution (MRTS) refers to the rate at which one input factor is substituted with the other to attain a given level of output. In other words, the lesser units of one input must be compensated by increasing amounts of another input to produce the same level of output.

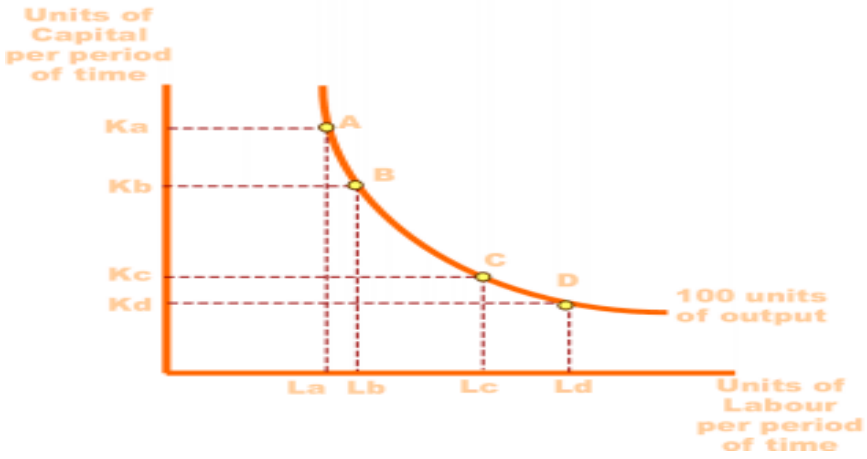
Isoquants are typically convex to the origin reflecting the fact that the two factors are substitutable for each other at varying rates. This rate of substitutability is called the "marginal rate of technical substitution" (MRTS) or occasionally the "marginal rate of substitution in production". It measures the reduction in one input per unit increase in the other input that is just sufficient to maintain a constant level of production. For example, the marginal rate of substitution of labour for capital gives the amount of capital that can be replaced by one unit of labour while keeping output unchanged.

To move from point A to point B in the diagram, the amount of capital is reduced from Ka to Kb while the amount of labour is increased only from La to Lb. To move from point C to point D, the amount of capital is reduced from Kc to Kd while the amount of labour is increased from Lc to Ld. The marginal rate of technical substitution of labour for capital is equivalent to the absolute slope of the isoquant at that point (change in capital divided by change in labour). It is equal to 0 where the isoquant becomes horizontal, and equal to infinity where it becomes vertical.

The opposite is true when going in the other direction (from D to C to B to A). In this case we are looking at the marginal rate of technical substitution capital for labour (which is the reciprocal of the marginal rate of technical substitution labour for capital).

It can also be shown that the marginal rate of substitution labour for capital, is equal to the marginal physical product of labour divided by the marginal physical product of capital.

In the unusual case of two inputs that are perfect substitutes for each other in production, the isoquant would be linear (linear in the sense of a function $y = a - bx$). If, on the other hand, there is only one production process available, factor proportions would be fixed, and these zero-substitutability isoquants would be shown as horizontal or vertical lines.



Law of Returns to Scale

There are three laws of returns governing production function. They are

1. Law of increasing returns to scale
   This law states that the volume of output keeps on increasing with every increase in the inputs,. Where a given increase in inputs leads to a more than proportionate increase in the output, the law of increasing returns to scale is said to operate.
2. Law of constant returns to scale
   When the scope for division of labour gets restricted, the rate of increase in the total output remains constant, the law of constant returns to scale is said to operate, this law states that the rate of increase/decrease in volume of output is same to that of rate of increase/decrease in inputs.
3. Law of decreasing returns to scale
   Where the proportionate increase in the inputs does not lead to equivalent increase in output, the output increases at a decreasing rate, the law of decreasing returns to scale is said to operate. This results in higher average cost per unit.

These laws can be illustrated with an example of agricultural land. Take one acre of land. If you till the land well with adequate bags of fertilizers and sow good quality seeds, the volume of output increases the following table illustrates further

Capital (in units)	Labor(in units)	% of increase in both inputs	Output(in units)	% of increase in output	Law applicable

1	3	---	---	---	---
2	6	100	120	140	Law of increase returns to scale
4	12	100	240	100	Law of constant returns to scale
8	24	100	360	50	Law of decrease returns to scale

Internal and External Economies of Scale

Internal Economies refer to the economies introduction costs which accrue to the firm alone when it expands its output. The internal economies occur as a result of increase in the scale of production.

a. **Managerial Economics**: As the firm expands, the firm needs qualified managerial personnel to handle each of its functions marketing, finance, production, human resources and others in a professional way. Functional specialization ensures minimum wastage and lowers the cost of production in the long –run.
b. **Commercial Economics**: The transaction of buying and selling raw material and other operating supplies such as spares and so on will be rapid and the volume of each transaction also grows as the firm grows, there could be cheaper savings in the procurement, transportation and storage cost, this will lead to lower costs and increased profits.
c. **Financial Economics**: The large firm is able to secure the necessary finances either for block capital purposes or for working capital needs more easily and cheaply. It can barrow from the public, banks and other financial institutions at relatively cheaper rates. It is in this way that a large firm reaps financial economies.
d. **Technical Economies**: Technical economies arise to a firm from the use of better machines and superior techniques of production. As a result, production increases and per unit cost of production falls. A large firm, which employs costly and superior plant and equipment, enjoys a technical superiority over a small firm.
e. **Marketing Economies:** The large firm reaps marketing or commercial economies in buying its requirements and in selling its final products. In the matter of buying they could enjoy advantages like preferential treatment, transport concessions, cheap credit, prompt delivery and fine relation with dealers.
f. **Risk Bearing Economies**: The large firm produces many commodities and serves wider areas. It is, therefore, able to absorb any shock for its existence
g. **Economics of Larger Dimension**: large – scale production is required to take advantage of bigger size plant and equipment.
h. **Economics of Research and Development**: Only such firms with a strong research and development base can cope with competition globally.

External Economics:

External economics refer to all the firms in the industry, because of growth of the industry as a whole or because of growth of ancillary industries, external economics benefit al the firms

in the industry as the industry expands. This will lead to lowering the cost of production and thereby increasing the profitability. The external economics can be grouped under three types:

A**). Economies of Concentration**: When an industry is concentrated in a particular area, all the member firms reap some common economies like skilled labour, improved means of transport and communications, banking and financial services, supply of power and benefits from subsidiaries. All these facilities tend to lower the unit cost of production of all the firms in the industry.

B) **Economics of Research And Development**: all the firms can pool resources to finance research and development activities and thus share the benefits of research. There could be a common facility to shares journals, newspapers and other valuable reference material of common interest.

C) **Economics of Welfare**: there could be common facilities such as canteen, industrial housing, community halls, schools and colleges, employment bureau, hospitals and so on, which can be used in common by the employees in the whole industry.

Cost Analysis

The institute of cost and management accountants (ICMA) has define cost as " the amount expenditure, actual or notional, incurred on or attributable to a specified thing or activity". It is the amount of resources sacrificed to achieve a specific objective. cost refer to the expenditure incurred to produce a particular product or services. Cost refers to the amount of expenditure incurred in acquiring something. In business firm, it refers to the expenditure incurred to produce an output or provide service. Thus the cost incurred in connection with raw material , labour, other heads constitute the overall cost of production.

Cost Concepts :

A managerial economist must have a clear understanding of the different cost concepts for clear business thinking and proper application.. The various relevant concepts of cost are:

Opportunity Cost:

In simple terms, it is the earning from the second is alternative. It represents the maximum possible alternative income that was have been earned if the resources were put to alternative use.

Opportunity cost can be distinguished from outlay costs based on the nature of sacrifice. Outlay costs are those costs that involve cash outflow at sometime and hence they are recorded in the book of account. Opportunity cost refers to earnings/profits that are foregone form alternative ventures by using gives limited facilities for a particular purpose.

Fixed Cost Vs Variable Cost

Fixed cost is that cost which remains constant for a certain level to output. It is not affected by the changes in the volume of production. But fixed cost per unit decrease, when the production is increased. Fixed cost includes salaries, Rent, Administrative expenses depreciations etc.

Variable is that which varies directly with the variation is output. An increase in total output results in an increase in total variable costs and decrease in total output results in a proportionate decline in the total variables costs. The variable cost per unit will be constant. Ex: Raw materials, labour, direct expenses, etc

Explicit and Implicit Costs:

Explicit costs are those expenses that involve cash payments. These are the actual or business costs that appear in the books of accounts. These costs include payment of wages and salaries, payment for raw-materials,

Implicit costs are the costs of the factor units that are owned by the employer himself. These costs are not actually incurred but would have been incurred in the absence of employment of self – owned factors.

Short – Run and Long – Run Costs:

Short-run is a period during which the physical capacity of the firm remains fixed. Any increase in output during this period is possible only by using the existing physical capacity more extensively. So short run cost is that which varies with output when the plant and capital equipment in constant.

Long run costs are those, which vary with output when all inputs are variable including plant and capital equipment. Long-run cost analysis helps to take investment decisions.

Out-Of Pocket and Books Costs:

Out-of pocket costs also known as explicit costs are those costs that involve current cash payment. Book costs also called implicit costs do not require current cash payments. Depreciation, unpaid interest, salary of the owner is examples of back costs.

But the book costs are taken into account in determining the level dividend payable during a period. Both book costs and out-of-pocket costs are considered for all decisions. Book cost is the cost of self-owned factors of production.

Market Structures

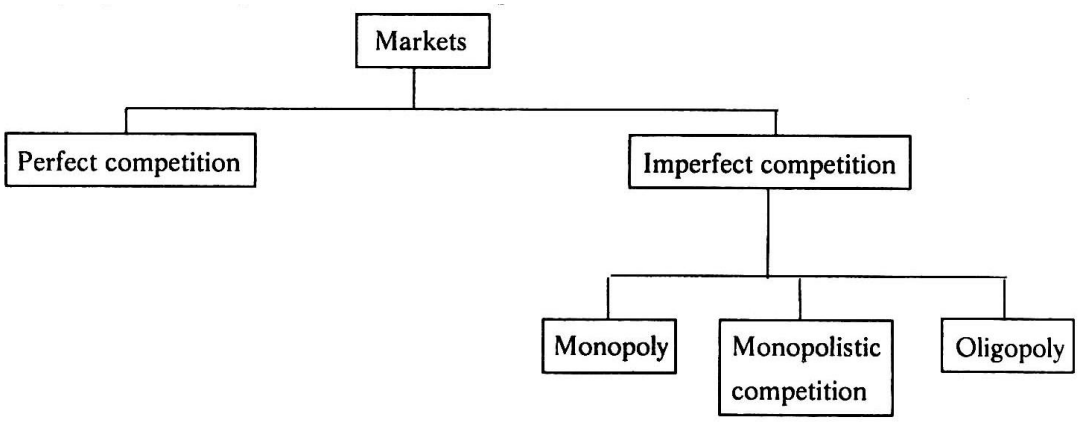
Market:

Market is a place where buyer and seller meet, goods and services are offered for the sale and transfer of ownership occurs. A market may be also defined as the demand made by a certain

group of potential buyers for a good or service. For business purpose we define a market as people or organizations with wants (needs) to satisfy, money to spend, and the willingness to spend it. Broadly, market represents the structure and nature of buyers and sellers for a commodity/service and the process by which the price of the commodity or service is established.

Market Structures

Market structure describes the competitive environment in the market for any good or service



Perfect Competition

Perfect competition refers to a market structure where competition among the sellers and buyers prevails in its most perfect form. In a perfectly competitive market, a single market price prevails for the commodity, which is determined by the forces of total demand and total supply in the market.

A market structure in which all firms in an industry are price takers and in which there is freedom of entry into and exit from the industry is called perfect competition. The market with perfect competition conditions is known as perfect market.

Features of perfect competition

1. **A large number of buyers and sellers:** The number of buyers and sellers is large and the share of each one of them in the market is so small that none has any influence on the market price.
2. **Homogenous products or services:** the products and services of each seller should be homogeneous. They cannot be differentiated from that of one another. Freedom to enter or exit the market:.
3. **Prefect information available to the buyers and sellers:** each buyer and seller has total knowledge of the prices prevailing in the market at every given point of time, quantity supplied, costs, demand, nature of product, and other relevant information.
4. **Perfect mobility of factors of production:** there should not be any restrictions on the utilization of factors of production such as land , labour, capital and so on. In words,

the firm or buyer should have free access to the factors of production. Whenever capital or labour is required, it should instantly be made available.

5. **Each firm is a price taker:** an individual firm can alter its rate of production or sales without significantly affecting the market price of the product, a firm in a perfect market cannot influence the market through its own individual actions. It has no alternative other than selling its products at the price prevailing in the market. It cannot sell as much as it wants at its own set price

Monopoly

The word monopoly is made up of two syllables, Mono and poly. Mono means single while poly implies selling. Thus monopoly is a form of market organization in which there is only one seller of the commodity. There are no close substitutes for the commodity sold by the seller. Pure monopoly is a market situation in which a single firm sells a product for which there is no good substitute.

Features of monopoly

1. **Single person or a firm:** A single person or a firm controls the total supply of the commodity. There will be no competition for monopoly firm. The monopolist firm is the only firm in the whole industry.
2. **No close substitute:** The goods sold by the monopolist shall not have closely competition substitutes. Even if price of monopoly product increase people will not go in far substitute. For example: If the price of electric bulb increase slightly, consumer will not go in for kerosene lamp.
3. **Large number of Buyers:** Under monopoly, there may be a large number of buyers in the market who compete among themselves.
4. **Price Maker:** Since the monopolist controls the whole supply of a commodity, he is a price-maker, and then he can alter the price.
5. **Supply and Price:** The monopolist can fix either the supply or the price. He cannot fix both. If he charges a very high price, he can sell a small amount. If he wants to sell more, he has to charge a low price. He cannot sell as much as he wishes for any price he pleases.
6. **Downward Sloping Demand Curve:** The demand curve (average revenue curve) of monopolist slopes downward from left to right. It means that he can sell more only by lowering price.

Monopolistic competition

Monopolistic competition is said to exist when there are many firms and each one produces such goods and services that are close substitutes to each other. They are similar but not identical. Product differentiation is the essential feature of monopolistic. Products can be differentiated by means of unique facilities, advertising, brand loyalty, packaging, pricing, terms of credit, superior maintenance services, convenient location and so on

Features of Monopolistic Competition

1. **Existence of Many firms:** Industry consists of a large number of sellers, each one of whom does not feel dependent upon others. Every firm acts independently without bothering about the reactions of its rivals.
2. **Product Differentiation:** Product differentiation means that products are different in some ways, but not altogether so. The products are not identical but the same time they will not be entirely different from each other. It really means that there are various monopolist firms competing with each other.
3. **Large Number of Buyers:** There are large number buyers in the market. But the buyers have their own brand preferences. So the sellers are able to exercise a certain degree of monopoly over them.
4. **Free Entry and Exist of Firms:** As in the perfect competition, in the monopolistic competition too, there is freedom of entry and exit. That is, there is no barrier as found under monopoly.
5. **Selling costs:** Since the products are close substitute much effort is needed to retain the existing consumers and to create new demand. So each firm has to spend a lot on selling cost, which includes cost on advertising and other sale promotion activities.
6. **Imperfect Knowledge:** Imperfect knowledge about the product leads to monopolistic competition. If the buyers are fully aware of the quality of the product they cannot be influenced much by advertisement or other sales promotion techniques.
7. **The Group:** Under perfect competition the term industry refers to all collection of firms producing a homogenous product. But under monopolistic competition the products of various firms are not identical through they are close substitutes

Pricing Methods

Cost – Based Pricing Pricing Methods

Cost plus pricing: This is also called full cost or mark up pricing. Here the average cost normal capacity of output is ascertained and then a conventional margin of profit is added to the cost to arrive at the price. In other words, find out the product unit's total cost and add percentage of profit to arrive at the selling price.

Marginal cost pricing : In marginal cost pricing, selling price is fixed in such a way that it covers fully the variable or marginal cost and contributes towards recovery of fixed costs fully or partly, depending upon the market situations.

Competition – Oriented Pricing:

Some commodities are priced according to the competition in their markets. Thus we have the going rate method of price and the sealed bid pricing technique. Under the former a firm prices its new product according to the prevailing prices of comparable products in the market.

a. **Sealed bid pricing:** This method is more popular in tenders and contracts. Each contracting firm quotes its price in a sealed cover called tender. All the tenders are

opened on a scheduled date and the person who quotes the lowest prices, other things remaining the same, is awarded the contract.

b. **Going rate pricing:_** here the price charged by the firm is in tune with the price charged in the industry as a whole. In other words, the prevailing market price at a given point of time is the guiding factor.

Demand – Oriented Pricing

The higher the demand, the higher can be the price. Cost is not the consideration here. The key to pricing here is the value as perceived by the consumer. This is a relatively modern marketing concept.

a. **Price discrimination:** Price discrimination refer to the practice of charging different prices to customers for the same good. The firm uses its discretion to charge differently the different customer. It is also called differential pricing.
b. **Perceived value pricing:** perceived value pricing refers to where the price is fixed on the basis of the perception of the buyer of the value of the product.

Strategy – Based Pricing:

1. **Market skimming**: when the product is introduced for the first time in the market, the company follows this method. Under this method, the company fixes a very high price for the product. The main idea is to charge the customer maximum possible.
2. **Market penetration**: Here the price of the product is fixed so low that the company can increase its market share. the company attains profits with increasing volumes and increase in the market share.

Breakeven Analysis/ Cost-Volume-Profit Analysis

A business is said to break even when its total sales are equal to its total costs. It is a point of **No Profit No Loss.** Break even analysis is defined as analysis of costs and their possible impact on revenues and volume of the firm. Hence, it is also called the cost – volume- profit analysis. A firm is said to attain the BEP when its total revenue is equal to total cost.

Assumptions:

1. All costs are classified into two – fixed and variable.
2. Fixed costs remain constant at all levels of output.
3. Variable costs vary proportionally with the volume of output.
4. Selling price per unit remains constant in spite of competition or change in the volume of production.
5. There will be no change in operating efficiency.
6. There will be no change in the general price level.
7. Volume of production is the only factor affecting the cost.
8. Volume of sales and volume of production are equal. Hence there is no unsold stock.
9. There is only one product or in the case of multiple products. Sales mix remains constant.

10. All the goods produced are sold. There is no closing stock.

Significance of BEA

- To ascertain the profit on a particular level of sales volume or a given capacity of production
- To calculate sales required to earn a particular desired level of profit.
- To compare the product lines, sales area, methods of sales for individual company
- To compare the efficiency of the different firms
- To decide whether to add a particular product to the existing product line or drop one from it
- To decide to "make or buy" a given component or spare part
- To decide what promotion mix will yield optimum sales
- To assess the impact of changes in fixed cost, variable cost or selling price on BEP and profits during a given period.

Limitations of BEA

- Break – even - point is based on fixed cost, variable cost and total revenue.
- A change in one variable is going to affect the BEP
- All cost cannot be classified into fixed and variable costs. We have semi-variable costs also
- In case of multi-product firm, a single chart cannot be of any use. Series of charts have to be made use of..
- It is based on fixed cost concept and hence holds good only in the short – run.
- Total cost and total revenue lines are not always straight as shown in the figure. The quantity and price discounts are the usual phenomena affecting the total revenue line.
- Where the business conditions are volatile, BEP cannot give stable results

Determination of Break Even Point

1. Fixed cost
2. Variable cost
3. Contribution
4. Margin of safety
5. Angle of incidence
6. Profit volume ratio

Fixed cost: Expenses that do not vary with the volume of production are known as fixed expenses. Eg. Manager's salary, rent and taxes, insurance etc. It should be noted that fixed changes are fixed only within a certain range of plant capacity.

Variable Cost*:* Expenses that vary almost in direct proportion to the volume of production of sales are called variable expenses. Eg. Electric power and fuel, packing materials consumable stores. It should be noted that variable cost per unit is fixed.

Contribution*:* Contribution is the difference between sales and variable costs and it contributed towards fixed costs and profit. It helps in sales and pricing policies and measuring the profitability of different proposals.

Contribution = Sales – Variable cost

Contribution = Fixed Cost + Profit.

Margin of safety*:* Margin of safety is the excess of sales over the break even sales. It can be expressed in absolute sales amount or in percentage. It indicates the extent to which the sales can be reduced without resulting in loss. A large margin of safety indicates the soundness of the business. The formula for the margin of safety is:

Present sales – Break even sales **or** $\frac{\text{Profit}}{\text{P. V. ratio}}$

Angle of incidence: This is the angle between sales line and total cost line at the Break-even point. It indicates the profit earning capacity of the concern. Large angle of incidence indicates a high rate of profit; a small angle indicates a low rate of earnings.

Profit Volume Ratio is usually called P. V. ratio. It is one of the most useful ratios for studying the profitability of business. The ratio of contribution to sales is the P/V ratio. It may be expressed in percentage. Therefore, every organization tries to improve the P. V. ratio of each product by reducing the variable cost per unit or by increasing the selling price per unit. The concept of P. V. ratio helps in determining break even-point, a desired amount of profit etc.

Questions

1. Define production function, explain is equate and is cost curves.
2. Why does the law of diminishing returns operate? Explain with the help of a diagram.
3. Explain and illustrate Law of Returns to scale.
4. (a) Explain Cobb-Douglas Production function.

   (b) Internal and External Economies
5. Explain the following with reference to production functions

   (a) MRTS

   (b) Isocosts
6. Explain Cost/Output relationship in the short run
7. What is a market? Explain, in brief, the different market structures.
8. Explain how a firm attains equilibrium in the short run and in the long run under conditions of perfect competition.

9. Define monopoly. How is price under monopoly determined?

10. Describe the BEP with the help of a diagram and its uses in business decision making

11. What cost concepts are mainly used for management decision making? Illustrate.

12. Explain the various methods of strategy-based pricing.

13. Explain different Characteristics of Oligopoly?

14. A Company reported the following results for two period Sales Profit I Rs. 20,00,000 Rs. 2,00,000 II Rs. 25,00,000 Rs. 3,00,000 Ascertain the BEP, PV ratio, fixes cost and Margin of Safety.

15. If sales in 10000 units and selling price Rs. 20/- per unit. Variable cost is Rs. 10/- per unit and fixed cost is Rs. 80000. Find out BEP in Units and sales revenue what is profit earned? What should be the sales for earning a profit of Rs. 60000/-

16. Sales are 1,10,000 producing a profit of Rs. 4000/- in period I, sales are 150000 producing a profit of Rs. 12000/- in period II. Determine BEP & fixed expenses.

Objective Questions

1. Conversion of inputs in to output is called as _____. ( )

(a) Sales (b) Income (c) Production (d) Expenditure

2. How many stages are there in 'Law of Variable Proportions'? ( )

(a) Five (b) Two (c) Three (d) Four

3. When a firm expands its Size of production by increasing all factors, It secures certain advantages, known as ( )

(a) Optimum Size (b) Diseconomies of Scale (c) Economies of Scale (d) None

4. When producer secures maximum output with the least cost combination Of factors of production, it is known as_____ ( )

(a) Consumer's Equilibrium (b) Price Equilibrium (c) Producer's Equilibrium (d) Firm's Equilibrium

5. The 'Law of Variable Proportions' is also called as _____. ( )

(a) Law of fixed proportions (b) Law of returns to scale (c) Law of variable proportions (d) None

6. _____ Is a 'group of firms producing the same are slightly Different products for the same market or using same raw material'. ( )

(a) Plant (b) Firm (c) Industry (d) Size

7. When proportionate increase in all inputs results in an equal Proportionate increase in output, then we call_____. ( )

(a) Increasing Returns to Scale (b) Decreasing Returns to Scale (c) Constant Returns to Scale (d) None

8. When different combinations of inputs yield the same level of output Known as _____. ( )

(a) Different Quants (b) Output differentiation (c) Isoquants (d) Production differentiation

9. When Proportionate increase in all inputs results in more than equal Proportionate increase in output, then we call _____. ( )

(a) Decreasing Returns to Scale (b) Constant Returns to Scale (c) Increasing Returns to Scale (d) None

10. When Proportionate increase in all inputs results in less than Equal Proportionate increase in output, then we call _____. ( )

(a) Increasing Returns to Scale (b) Constant Returns to Scale (c) Decreasing Returns to Scale (d) None

11. A curve showing equal amount of outlay with varying Proportions of Two inputs are called _____. ( )

(a) Total Cost Curve (b) Variable Cost Curve (c) Isocost Curve (d) Marginal Cost Curve

12. The cost of best alternative forgone is_____ ( )

(a) Outlay cost (b) Past cost (c) Opportunity cost (d) Future cost

13. If we add up total fixed cost (TFC) and total variable cost (TVC), we get__ ( )

(a) Average cost (b) Marginal cost (c) Total cost (d) Future cost

14. _____cost is the additional cost to produce an additional unit of output. ( )

(a) Incremental (b) Sunk (c) Marginal (d) Total

15. _____ costs are the costs, which are varies with the level of output. ( )

(a) Fixed (b) Past (c) Variable (d) Historical

16. The price of a product is determined by the _____of that product ( )

(a) Place and time (b) Production and sales (c) Demand and supply (d) Cost and income

17. The price at which demand and supply of a commodity equal is ( ) Known as

(a) High price (b) Low price (c) Equilibrium price (d) Marginal price

18. _____is a form of market organization in which There is only one seller of the commodity. ( )

(a) Perfect Competition (b) Duopoly (c) Monopoly (d) Oligopoly

19. The firm is said to be in equilibrium, when it's Marginal Cost (MC) Equals to___ . ( )

(a) Total cost (b) Total revenue (c) Marginal Revenue (d) Average Revenue

20. Charging very high price in the beginning and reducing it gradually is called ( )

(a) Differential pricing (b) Sealed bid pricing (c) Skimming pricing (d) Penetration pricing

21. What is the formula for Margin of Safety? ( )

(a) Break Even sales – Actual sales (b) Maximum sales – Actual sales (c) Actual sales – Break Even sales (d) Actual sales – Minimum sales

22. 'Contribution" is the excess amount of Actual Sales over _____. ( )

(a) Fixed cost (b) Sales (c) Variable cost (d) Total cost