MEFA IMP QUESTIONS

1.Define managerial economic. Explain the nature & scope of managerial economics?

ANS

Managerial Economics

Meaning & Definition*:*

In the words of **E. F. Brigham and J. L. Pappas** Managerial Economics is "the applications of economics theory and methodology to business administration practice".

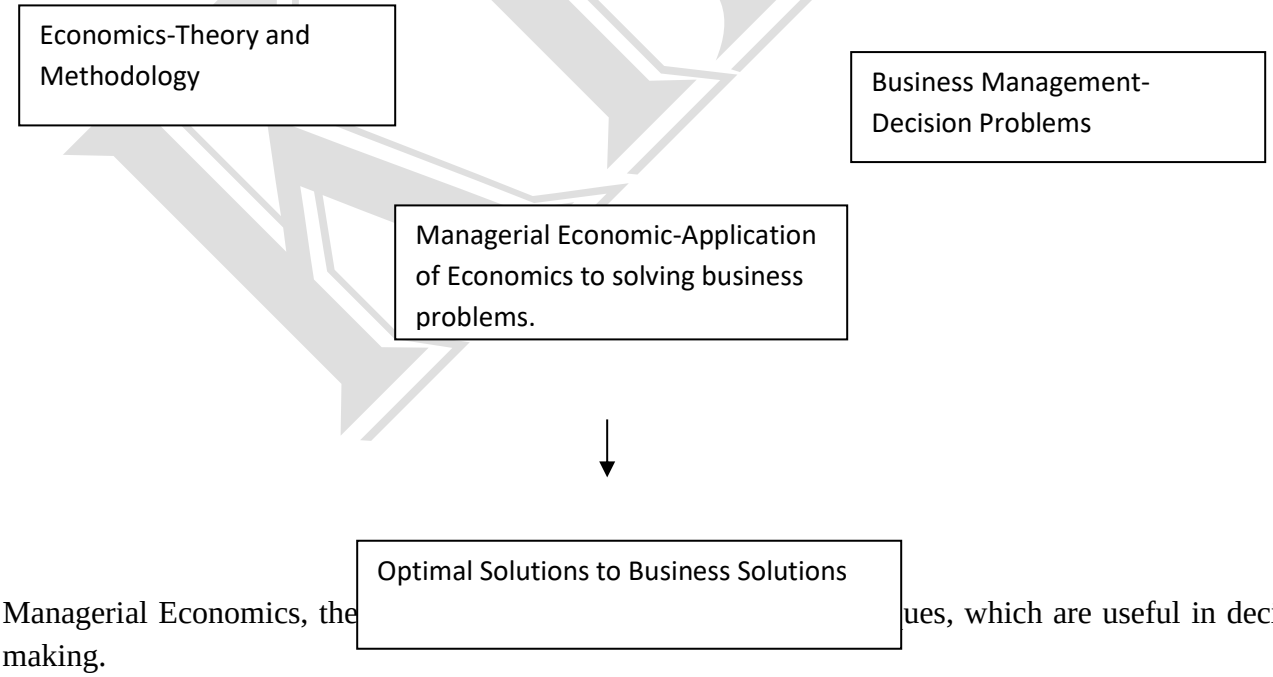
According to **McNair and Meriam**, Managerial Economics is concerned with the use of economc modes of thought to analyze business situation.

M. H. **Spencer and Louis Siegelman** explain the "Managerial Economics is the integration of economic theory with business practice for the purpose of facilitating decision making and forward planning by management".

It is clear, therefore, that managerial economics deals with economic aspects of managerial decisions of with those managerial decisions, which have an economics contest.

Managerial Economics refers to the firm's decision making process. It could be also interpreted as "Economics of Management" or "Economics of Management". Managerial Economics is also called as "Industrial Economics" or "Business Economics".

Economics, Business Management and Managerial Economics



Managerial Economics, the ues, which are useful in decision-making.

Nature of Managerial Economics

Managerial economics is, perhaps, the youngest of all the social sciences. Since it originates from Economics, it has the basis features of economics, such as assuming that other things remaining the same, to simplify the complexity of the managerial phenomenon under study in a dynamic business environment.

The other features of managerial economics are explained as below:

- ***(a) Close to microeconomics***: Managerial economics is concerned with finding the solutions for different managerial problems of a particular firm. Thus, it is more close to microeconomics.
- ***(b) Operates against the backdrop of macroeconomics***: The macroeconomics conditions of the economy are also seen as limiting factors for the firm to operate. In other words, the managerial economist has to be aware of the limits set by the macroeconomics conditions such as government industrial policy, inflation and so on.
- ***(c) Normative statements***: A normative statement usually includes or implies the words 'ought' or 'should'. They reflect people's moral attitudes and are expressions of what a team of people ought to do. For instance, it deals with statements such as 'Government of India should open up the economy. Such statement are based on value judgments and express views of what is 'good' or 'bad', 'right' or ' wrong'. One problem with normative statements is that they cannot to verify by looking at the facts, because they mostly deal with the future. Disagreements about such statements are usually settled by voting on them.
- ***(d) Prescriptive actions***: Prescriptive action is goal oriented. Given a problem and the objectives of the firm, it suggests the course of action from the available alternatives for optimal solution. If does not merely mention the concept, it also explains whether the concept can be applied in a given context on not. For instance, the fact that variable costs are marginal costs can be used to judge the feasibility of an export order.
- ***(e) Applied in nature***: 'Models' are built to reflect the real life complex business situations and these models are of immense help to managers for decision-making. The different areas where models are extensively used include inventory control, optimization, project management etc. In managerial economics, we also employ case study methods to conceptualize the problem, identify that alternative and determine the best course of action.
- ***(f) Offers scope to evaluate each alternative***: Managerial economics provides an opportunity to evaluate each alternative in terms of its costs and revenue. The managerial economist can decide which is the better alternative to maximize the profits for the firm.
- ***(g) Interdisciplinary***: The contents, tools and techniques of managerial economics are drawn from different subjects such as economics, management, mathematics, statistics, accountancy, psychology, organizational behavior, sociology and etc.
- ***(h) Assumptions and limitations***: Every concept and theory of managerial economics is based on certain assumption and as such their validity is not universal. Where there is change in assumptions, the theory may not hold good at all.

SCOPE OF MANAGERIAL ECONOMICS:

The scope of managerial economics refers to its area of study. Managerial economics, Provides management with a strategic planning tool that can be used to get a clear perspective of the way the business world works and what can be done to maintain profitability in an ever-changing environment.

Managerial economics is primarily concerned with the application of economic principles and theories to five types of resource decisions made by all types of business organizations.

a. The selection of product or service to be produced.
b. The choice of production methods and resource combinations.
c. The determination of the best price and quantity combination
d. Promotional strategy and activities.
e. The selection of the location from which to produce and sell goods or service to consumer.

The production department, marketing and sales department and the finance department usually handle these five types of decisions.

The scope of managerial economics covers two areas of decision making

a. Operational or Internal issues
b. Environmental or External issues

2. What is Elasticity of Demand? Explain how do you measure elasticity of Demand?
Ans)

Elasticity of demand explains the relationship between a change in price and consequent change in amount demanded. "Marshall" introduced the concept of elasticity of demand. Elasticity of demand shows the extent of change in quantity demanded to a change in price.

In the words of "Marshall", "The elasticity of demand in a market is great or small according as the amount demanded increases much or little for a given fall in the price and diminishes much or little for a given rise in Price"

Elastic demand: A small change in price may lead to a great change in quantity demanded. In this case, demand is elastic.

In-elastic demand: If a big change in price is followed by a small change in demanded then the demand in "inelastic".

Types of Elasticity of Demand: There are three types of elasticity of demand:

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

1. Price elasticity of demand:

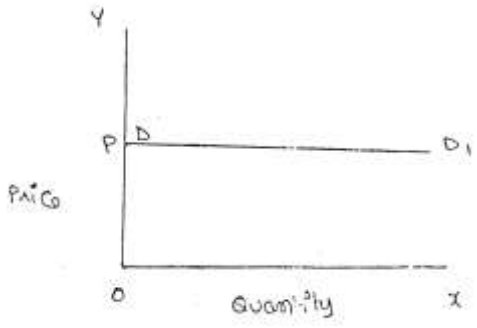
Marshall was the first economist to define price elasticity of demand. Price elasticity of demand measures changes in quantity demand to a change in Price. It is the ratio of percentage change in quantity demanded to a percentage change in price.

$$\textbf{Price elasticity} = \frac{\text{Proportionate change in the quantity demand of commodity}}{\text{Proportionate change in the price of commodity}}$$

There are five cases of price elasticity of demand

A. Perfectly elastic demand:

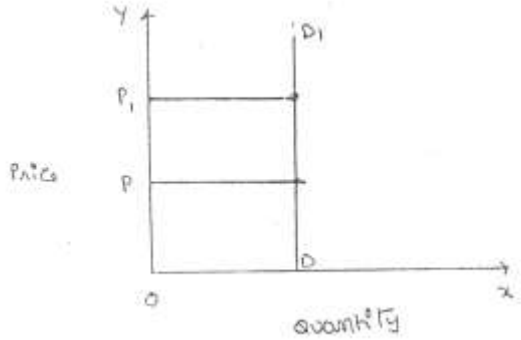
When small change in price leads to an infinitely large change is quantity demand, it is called perfectly or infinitely elastic demand. In this case E=∞



The demand curve DD1 is horizontal straight line. It shows the at "OP" price any amount is demand and if price increases, the consumer will not purchase the commodity.

B. Perfectly Inelastic Demand

In this case, even a large change in price fails to bring about a change in quantity demanded.

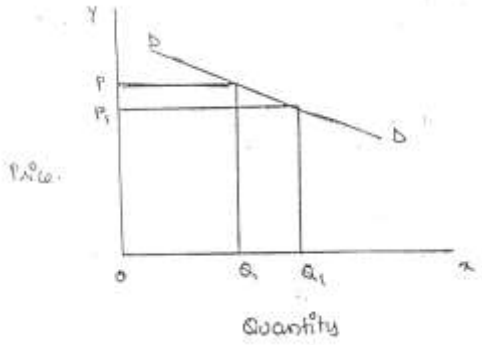


When price increases from ‘OP’ to ‘OP’, the quantity demanded remains the same. In other words the response of demand to a change in Price is nil. In this case ‘E’=0.

C. Relatively elastic demand:

Demand changes more than proportionately to a change in price. i.e. a small change in price loads to a very big change in the quantity demanded. In this case

E > 1. This demand curve will be flatter.

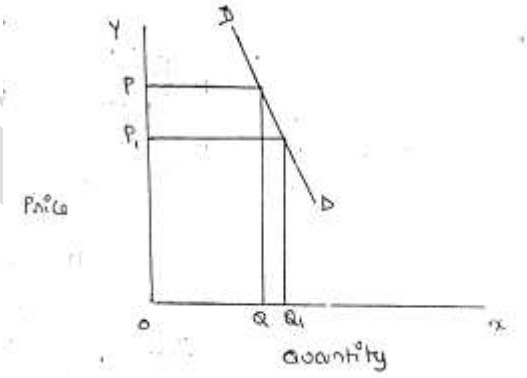


When price falls from ‘OP’ to ‘OP’, am

ount demanded in crease from “OQ’ to “OQ1’ which is larger than the change in price.

D. Relatively in-elastic demand.

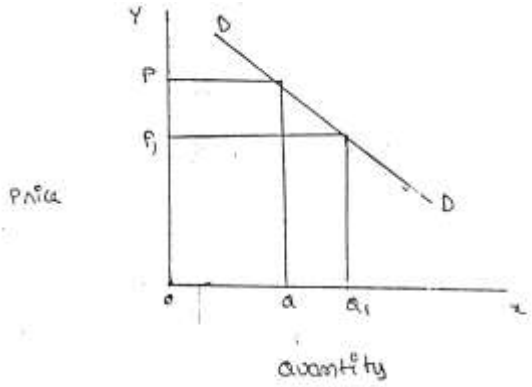
Quantity demanded changes less than proportional to a change in price. A large change in price leads to small change in amount demanded. Here E < 1. Demanded carve will be steeper.



When price falls from “OP’ to ‘OP1 amount demanded increases from OQ to OQ1, which is smaller than the change in price.

E. Unit elasticity of demand:

The change in demand is exactly equal to the change in price. When both are equal E=1 and elasticity if said to be unitary.



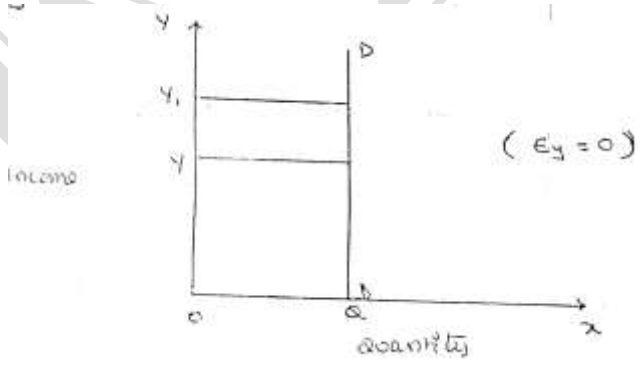
When price falls from 'OP' to 'OP1' quantity demanded increases from 'OP' to 'OP1', quantity demanded increases from 'OQ' to 'OQ1'. Thus a change in price has resulted in an equal change in quantity demanded so price elasticity of demand is equal to unity.

2. Income elasticity of demand: Income elasticity of demand shows the change in quantity demanded as a result of a change in income. Income elasticity of demand may be slated in the form of a formula.

$$\text{Income Elasticity} = \frac{\text{Proportionate change in the quantity demand of commodity}}{\text{Proportionate change in the income of the people}}$$

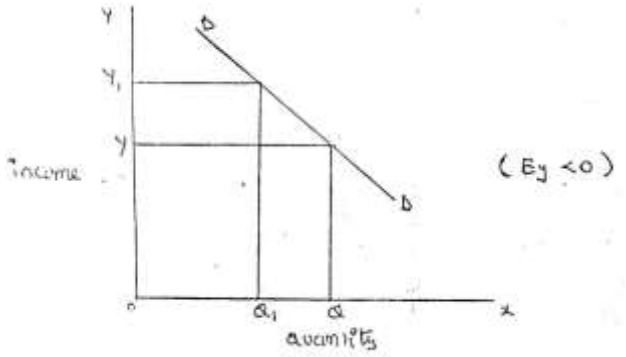
Income elasticity of demand can be classified in to **five** types.

A. Zero income elasticity: Quantity demanded remains the same, even though money income increases. Symbolically, it can be expressed as Ey=0. It can be depicted in the following way:



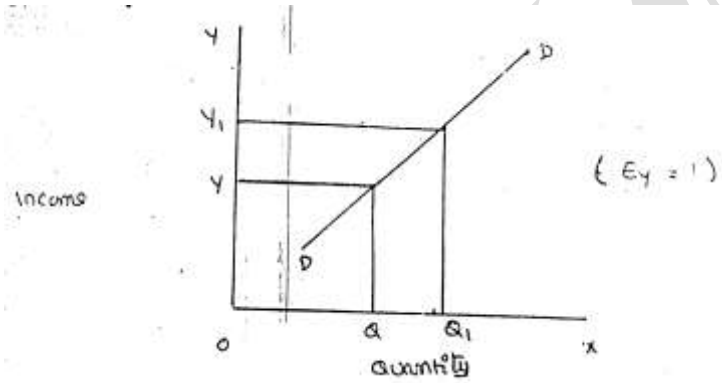
As income increases from OY to OY1, quantity demanded never changes.

B. Negative Income elasticity: When income increases, quantity demanded falls. In this case, income elasticity of demand is negative. i.e., $Ey < 0$.



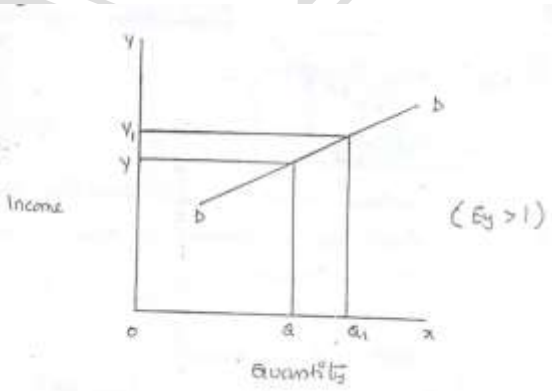
When income increases from OY to OY1, demand falls from OQ to OQ1.

C. Unit income elasticity: When an increase in income brings about a proportionate increase in quantity demanded, and then income elasticity of demand is equal to one. Ey = 1



When income increases from OY to OY1, Quantity demanded also increases from OQ to OQ1.

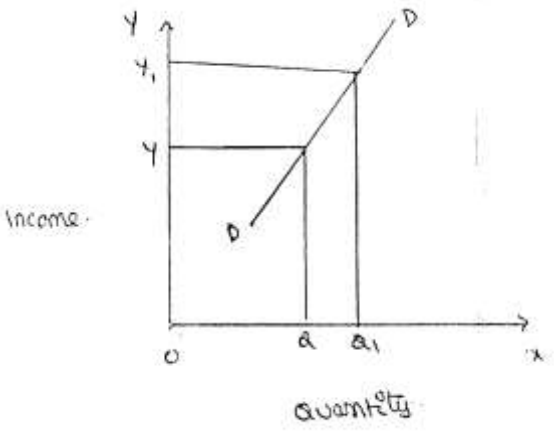
D. Income elasticity greater than unity: In this case, an increase in come brings about a more than proportionate increase in quantity demanded. Symbolically it can be written as Ey > 1.



It shows high-income elasticity of demand. When income increases from OY to OY1, Quantity demanded increases from OQ to OQ1.

E. Income elasticity leas than unity:

When income increases quantity demanded also increases but less than proportionately. In this case E < 1.



An increase in income from OY to OY, brings what an increase in quantity demanded from OQ to OQ1, But the increase in quantity demanded is smaller than the increase in income. Hence, income elasticity of demand is less than one.

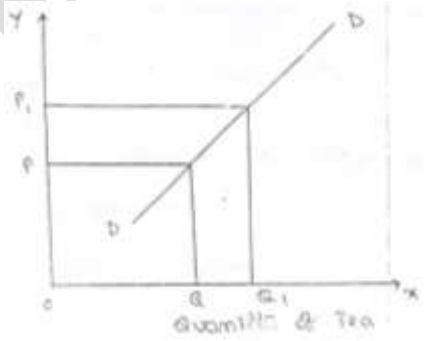
3. Cross elasticity of Demand:

A change in the price of one commodity leads to a change in the quantity demanded of another commodity. This is called a cross elasticity of demand. The formula for cross elasticity of demand is:

$$\text{Cross elasticity} = \frac{\text{Proportionate change in the quantity demand of commodity "X"}}{\text{Proportionate change in the price of commodity "Y"}}$$

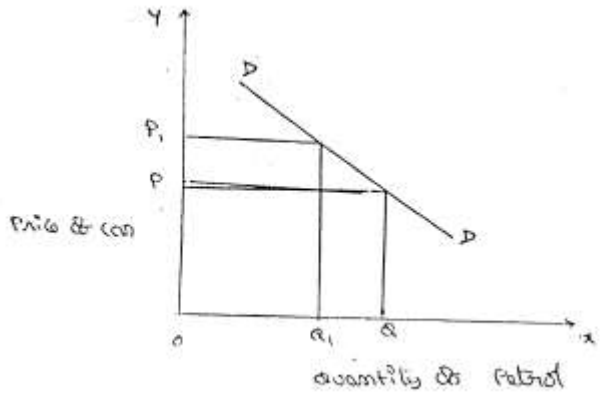
A.. In case of substitutes, cross elasticity of demand is positive. Eg: Coffee and Tea

When the price of coffee increases, Quantity demanded of tea increases. Both are substitutes.



Price of Coffee

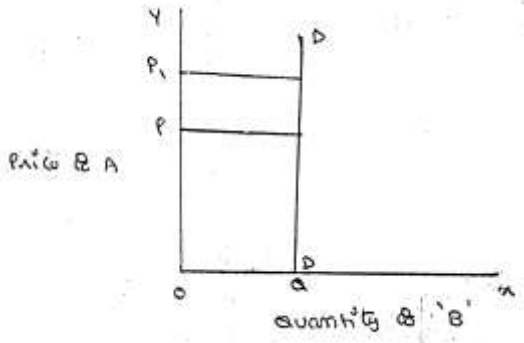
B. Incase of compliments, cross elasticity is negative. If increase in the price of one commodity leads to a decrease in the quantity demanded of another and vice versa.



$$E_c = \frac{\%\ \Delta Q_1}{\%\ PP_1} \quad \text{(negative)}$$

When price of car goes up from OP to OP!, the quantity demanded of petrol decreases from OQ to OQ!. The cross-demanded curve has negative slope.

c. In case of unrelated commodities, cross elasticity of demanded is zero. A change in the price of one commodity will not affect the quantity demanded of another.



Quantity demanded of commodity "b" remains unchanged due to a change in the price of 'A', as both are unrelated goods.

MEASUREMENT OF ELASTICITY OF DEMAND:

1. Percentage Method:

In this method the elasticity of demand is measured by comparing the percentage change in price with the percentage change in demand.

A. When the percentage change in demand is greater than the percentage change in price, then it is said to be elastic demand. Then the elasticity of demand will be greater than one.

Price	Demand
10	1000
8	1500

In them above table the percentage change in price is 20 and the percentage change in demand is 50. Here the percentage change in demand is greater than the percentage change in price. So the elasticity of demand is greater than one.

B. When the percentage change in demand equal to the percentage change in price, then it is said to be unitary elastic demand. Then the elasticity of demand will equal to one.

Price	Demand
10	1000
8	1200

In them above table the percentage change in price is 20 and the percentage change in demand is 20. Here the percentage change in demand is equal to the percentage change in price. Therefore demand is said to be unitary elastic demand. So the elasticity of demand is equal to one.

C. When the percentage change in demand less than the percentage change in price, then it is said to be inelastic demand. Then the elasticity of demand will be less than one.

Price	Demand
10	1000
8	1100

In them above table the percentage change in demand is 10 and the percentage change in price is 20. Here the percentage change in demand is less than the percentage change in price. So the elasticity of demand is less than one.

3. Define Break-even point and explain in detail BEP with assumptions and chart?
Ans)

Break-even analysis refers to analysis of break-even point (BEP). It is also called the Cost-Volume-Profit analysis.

The break-even is defined as **"a point at which firm has no profit and no loss. Cost is equal to revenue."** Before a firm plans for profit maximization it has to determine the Break-Even Quantity or value of output it should produce.

Significance of Break-even Analysis: Break-even Analysis has a lot of practical importance to decision makers. They are:

- To understand the Break-even Quantity.
- To known the impact of changes in fixed costs on the Break-even Quantity and profits.
- To known the impact of changes in variable costs on the Break-even Quantity and profits.
- To get target profits.
- To understand the margin of safety.

- To initiate changes in prices.
- Add or Drop decision.
- Make or Buy decision.

Limitations of Break-even Analysis:

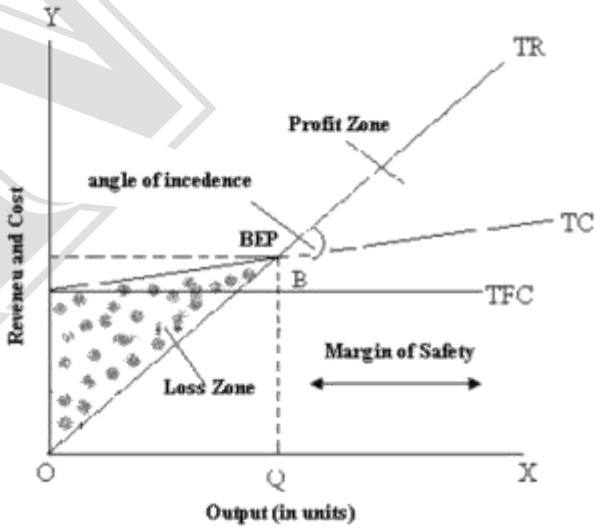
- It assumes price to remain constant.
- Seperability of costs into Fixed and Variable.
- It has limited use in case of Multi-product firms.
- There is no change in government policies.
- Availability of Cost-Volume-Profit data.

CALCULATION OF BREAK-EVEN POINT: Break-even point can be calculated in two methods.

They are:

1. Graphical Method
2. Mathematical Method.

1. Graphical Representation of BEP:



In the above graph, at output level of 'OQ' the total revenue is equal to total cost i.e., BQ, where the firm is neither getting profit not loss. Hence OQ is the break-even quantity of output. At output level less than OQ the firm is suffering losses and beyond that it is reaping profits.

2. Mathematical Method: In this method by applying the following formulas BEP can be calculated.

BEP formulas

<u>When Per Unit data is Given</u>

1. Contribution Per Unit = Selling Price Per Unit - Variable Cost Per Unit

$$\text{2. P/V Ratio or Contribution Ratio} = \frac{\text{Selling Price Per Unit - Variable Cost Per Unit}}{\text{Selling Price Per Unit}} \times 100$$

$$\text{3. BEP (Units)} = \frac{\text{Fixed Cost}}{\text{Selling Price Per Unit - Variable Cost Per Unit}}$$

$$\text{4. BEP (Sales)} = \frac{\text{Fixed Cost}}{\text{Selling Price Per Unit - Variable Cost Per Unit}} \times \text{Selling Price Per Unit.}$$

$$\text{5. Number of Units Sale to Get Target Profit} = \frac{\text{Fixed Cost + Desired Profit}}{\text{Selling Price Per Unit - Variable Cost Per Unit}}$$

$$\text{6. Sales to Get Target Profit} = \frac{\text{Fixed Cost + Desired Profit}}{\text{Selling Price Per Unit - Variable Cost Per Unit}} \times \text{Selling Price Per Unit}$$

7. Change in Price:

$$\text{New Sales Volume} = \frac{\text{Fixed Cost}}{\text{New Selling Price - Variable Cost Per Unit}}$$

$$\text{New Sales Value} = \frac{\text{Fixed Cost}}{\text{New Selling Price - Variable Cost Per Unit}} \times \text{New Selling Price}$$

8. Margin of Safety = -------No formula----------

1. Contribution = Sales - Variable Cost

$$\text{2. P/V Ratio or Contribution Ratio} = \frac{\text{Sales - Variable Cost}}{\text{Sales}} \times 100 \quad \text{Or} \quad \frac{\text{Contribution}}{\text{Sales}} \times 100$$

3. BEP (Units) = ------- No Formula ---------

$$\text{4. BEP (Sales)} = \frac{\text{Fixed Cost}}{\text{P/V Ratio}}$$

5. Number of Units Sale to Get Target Profit = --------- No Formula

When Overall Data is Given

$$\text{6. Sales to Get Target Profit} = \frac{\text{Fixed Cost + Desired Profit}}{\text{P/V Ratio}}$$

7. Change in Price:

--------- No Formulas ---------

8. Margin of Safety:

i. Margin of Safety in Units = Actual Sales in Units - BEP Sales in Units

ii. Margin of Safety in Rupees = Actual Sales - Break-even Sales

$$\text{iii. Magin of Safety in Percentage} = \frac{\text{Actual Sales - Break-even Sales}}{\text{Actual Sales}} \times 100$$

When two years data is given P/v ratio formula is:

$$\text{P/v ratio} = \frac{\text{Change in Profit}}{\text{Change in Sales}} \times 100$$

4. Explain production function with one variable input factor?
Ans)

The affect of output of variations in factor proportions is called *"The Law of Variable Proportions"*. This law examines the production function with one factor input variable, while other factor inputs remain unchanged.

Definition:

The law of variable proportion is defined as **"The quantity of one input is increased, keeping the quantity of other inputs fixed; the output increased in the beginning and afterwards decreases"**.

Tabular Representation:

Suppose a former has one acre of land to cultivate. The amount of land and capital are supposed to fixed factors. The former can vary the number of labour to be employed on its cultivation. The changes in the number of labours will change the output also.-

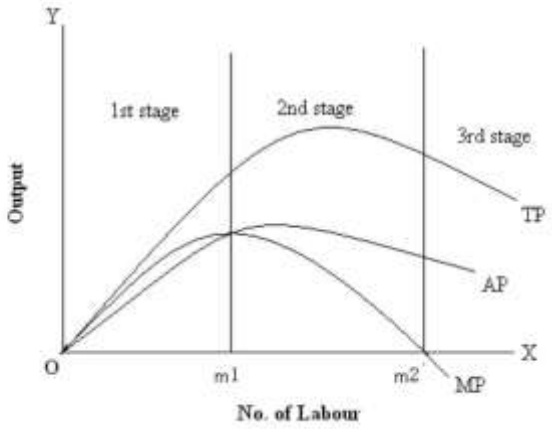
No. of Labour	Total Product (TP)	Average Product (AP)	Marginal Product (MP)	
1	5	5	5	
2	12	6	7	Stage- I
3	21	7	9	
4	28	7	7	
5	30	6	2	Stage- II
6	30	5	0	
7	28	4	-2	
8	24	3	-4	Stage-III

In the above table we assume that the land is fixed and successive units of labour are employed. It can be seen that there are three different stages of law of diminishing returns.

1. The Law of Diminishing Total Returns: In the total output the returns begin to diminish from the 7^{th} labour. Every successive labour employed does make some addition to the total output but 6^{th} adds nothing and 7^{th} unit of labour causes diminishing output.

2. Law of Diminishing Average Returns: The average product reaches maximum at the 3rd labour. The marginal product and average product are equal at the point at where 4th labour is employed. It starts diminishing from 5th labour.

3. Law of Diminishing Marginal Returns: The marginal Product is increasing up to 3rd labour employed. The additional return is falling from the 4th labour onwards till it drops down to zero, at the 6th labour and after negative.



In the above diagram output is shown on Y-axis and No. of labour shown on X-axis. The curves TP, AP and MP represent the Total Product, Average Product, and Marginal Product respectively. This diagram shows three stages of returns.

1st Stage – Increasing Returns: In the 1st stage the average product of labour increases, which reflects the increase in efficiency of labour. Hence, this stage is known as increasing returns.

2nd Stage – Constant Returns: In the second stage it shows decreasing average and marginal product of labour. Since the total output goes on increasing, the marginal product is positive. This stage shows the decreasing efficiency of labour but the efficiency of land continues to increase.

3rd Stage – Diminishing Returns: In this stage, the average product decreases still further. The MP becomes negative and the TP starts decreasing. Hence, in this stage both labour and land efficiency has been used inefficient.

Assumptions or conditions of Law of Variable Proportions: The Law of Diminishing Returns is based on the following assumptions:

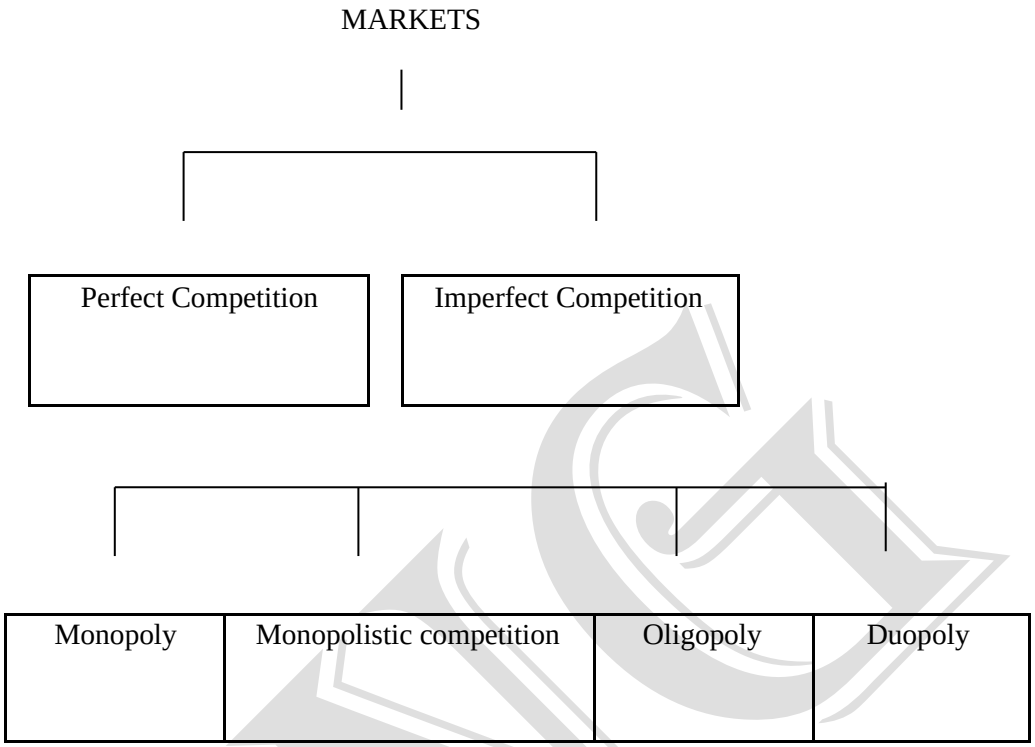
- Constant Technology
- Short-run
- Homogeneous factors
- Factor Proportions

6. What is market? Explain in detail the various types of markets based on competition

Ans)

Differences in the competition for a product or service in the market is called as market structure.

Based on the competition markets can be classified into two broad categories. They are:



1. ***"The market, where the large number of buyers and sellers are existed and the product dealt with all the firms is homogeneous it is called as perfect competition".***
2. ***"Monopoly is a market structure in which a single firm sells a product and for which there is no close substitute***
3. The concept Monopolistic competition was developed by **Edward.H.Chamberlain**. According to him monopolistic competition means ***"a large number of firms produce somewhat different products which are close substitutes of each other."***
4. ***"Oligopoly is a market structure, in which a few large firms produce either homogeneous or differentiated products and which are close substitutes to each other."***
5. ***"Duopoly is a market structure, in which there are only two firms produce somewhat different products or homogeneous products and which are close substitutes to each other".***

5. What is Perfect Competition? What are the features of Perfect Competition?

Ans)

Definition:

"The market, where the large number of buyers and sellers are existed and the product dealt with all the firms is homogeneous it is called as perfect competition".

- **<u>Features of Perfect Competition Market</u>:** Perfect competition markets are characterized by the following features:

1. **Large number of buyers and sellers:** An important feature of the perfect competition is the existence of large number of buyers and sellers in the market. Each buyer purchases so little and each seller sells so little, that none of them is in a position to influence existing price in the market.

2. **Homogeneous Product:** The product being sold by various firms must be homogeneous. Since the product is homogeneous no seller can change a price slightly above the ruling market price.

3. **Freedom to enter or exit the market:** Another feature of perfect competition is that there should be complete freedom for firms to enter into or to leave the industry whenever they choose to do so.

4. **Perfect Knowledge about the market:** All buyers and sellers have perfect knowledge about the market for the commodity.

5. **Existence of Single Price:** There should be only one price for the product. They should not take selling costs into account.

6. **No-existence of Transport Cost:** In a perfect competitive market, it is assumed that there are no transport costs. If transport costs are incurred, Prices should be different sectors of the market.

7. **Perfect Mobility of Production Factors:** The existence of perfect competition depends on perfect mobility of Production factors. The factor should be free to move from one firm to another easily depending on the remuneration they get.

SET-2

7. Define managerial economic. Explain the interdisciplinary of managerial economics?
Ans)
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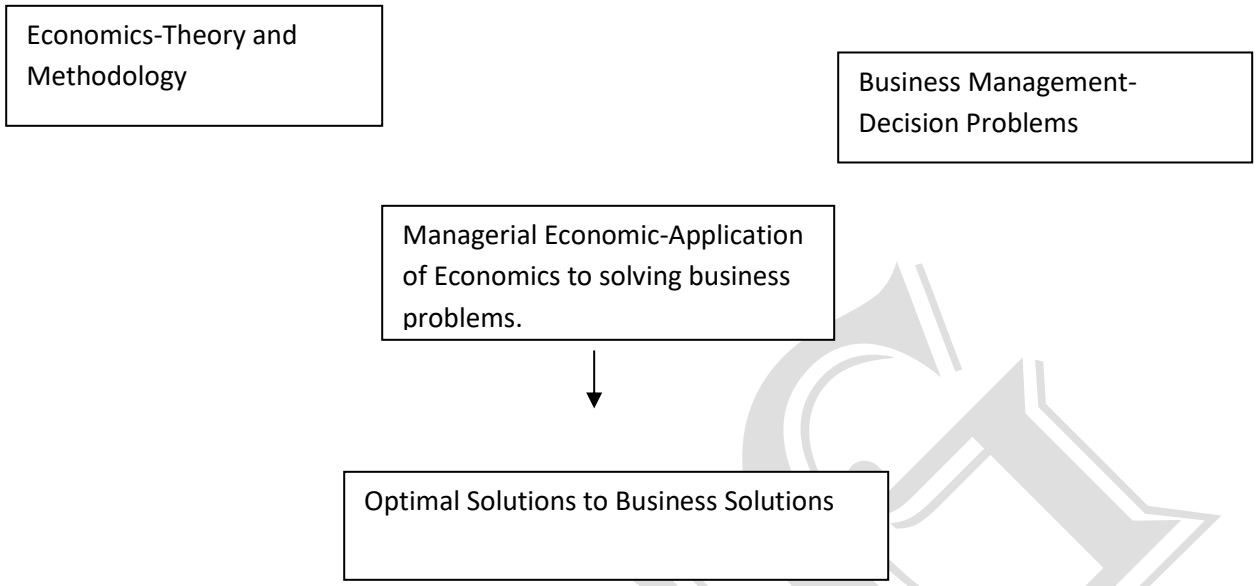
Managerial Economics refers to the firm's decision making process. It could be also interpreted as "Economics of Management" or "Economics of Management". Managerial Economics is also called as "Industrial Economics" or "Business Economics".

Economics, Business Management and Managerial Economics



Managerial Economics, therefore, focuses on those tools and techniques, which are useful in decision-making.

Nature of Managerial Economics

Managerial economics is, perhaps, the youngest of all the social sciences. Since it originates from Economics, it has the basis features of economics, such as assuming that other things remaining the same, to simplify the complexity of the managerial phenomenon under study in a dynamic business environment.

The other features of managerial economics are explained as below:

(a) Interdisciplinary: The contents, tools and techniques of managerial economics are drawn from different subjects such as economics, management, mathematics, statistics, accountancy, psychology, organizational behavior, sociology and etc.

8. What is demand forecasting? What are the factors influencing demand forecasting?
Ans)
DEMAND FORECASTING

Introduction:

The information about the future is essential for both new firms and those planning to expand the scale of their production. Demand forecasting refers to an estimate of future demand for the product.

It is an 'objective assessment of the future course of demand". Demand forecasting has an important influence on production planning. It is essential for a firm to produce the required quantities at the right time.

It is essential to distinguish between forecasts of demand and forecasts of sales. Sales forecast is important for estimating revenue cash requirements and expenses. Demand forecasts relate to production, inventory control, timing, reliability of forecast etc. However, there is not much difference between these two terms.

Types of demand Forecasting:

Based on the time span and planning requirements of business firms, demand forecasting can be classified in to 1. Short-term demand forecasting and

2. Long – term demand forecasting.

1. Short-term demand forecasting:

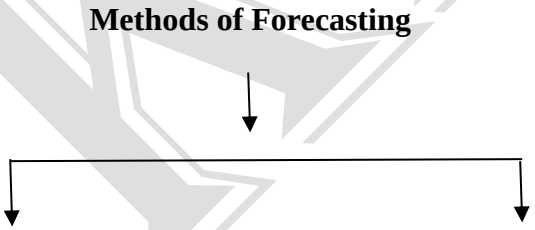
Short-term demand forecasting is limited to short periods, usually for one year. It relates to policies regarding sales, purchase, price and finances. It refers to existing production capacity of the firm..

2. Long – term forecasting:

In long-term forecasting, the businessmen should now about the long-term demand for the product. Planning of a new plant or expansion of an existing unit depends on long-term demand.

Methods of forecasting:

Several methods are employed for forecasting demand. All these methods can be grouped under survey method and statistical method. Survey methods and statistical methods are further subdivided in to different categories.



Survey Method ***Statistical Methods***

A. Opinion survey method
B. Expert opinion method:
C. Delphi Method:
D. Consumers interview method:

a. Time series analysis or trend projection methods:
b. Barometric Technique:
c. Regression and correlation method:

1. Survey Method:

Under this method, information about the desires of the consumer and opinion of exports are collected by interviewing them. Survey method can be divided into four type's viz., Option survey method; expert opinion; Delphi method and consumers interview methods.

a. Opinion survey method:

This method is also known as **sales-force composite method** (or) **collective opinion method**. Under this method, the company asks its salesman to submit estimate of future sales in their respective territories. Since the forecasts of the salesmen are biased due to their optimistic or pessimistic attitude ignorance about economic developments etc. these estimates are consolidated, reviewed and adjusted by the top executives. In case of wide differences, an average is struck to make the forecasts realistic.

This method is more useful and appropriate because the salesmen are more knowledge. They can be important source of information. They are cooperative. The implementation within unbiased or their basic can be corrected.

B. Expert opinion method:

Apart from salesmen and consumers, distributors or outside experts may also e used for forecasting. In the United States of America, the automobile companies get sales estimates directly from their dealers. Firms in advanced countries make use of outside experts for estimating future demand. Various public and private agencies all periodic forecasts of short or long term business conditions.

C. Delphi Method:

A variant of the survey method is Delphi method. It is a sophisticated method to arrive at a consensus. Under this method, a panel is selected to give suggestions to solve the problems in hand. Both internal and external experts can be the members of the panel. Panel members one kept apart from each other and express their views in an anonymous manner. There is also a coordinator who acts as an intermediary among the panelists. He prepares the questionnaire and sends it to the panelist. At the end of each round, he prepares a summary report. On the basis of the summary report the panel members have to give suggestions. This method has been used in the area of technological forecasting. It has proved more popular in forecasting. It has provided more popular in forecasting non-economic rather than economic variables.

D. Consumers interview method:

In this method the consumers are contacted personally to know about their plans and preference regarding the consumption of the product. A list of all potential buyers would be drawn and each buyer will be approached and asked how much he plans to buy the listed product in future. He would be asked the proportion in which he intends to buy. This method seems to be the most ideal method for forecasting demand.

2. Statistical Methods:

Statistical method is used for long run forecasting. In this method, statistical and mathematical techniques are used to forecast demand. This method relies on post data.

a. Time series analysis or trend projection methods:

A well-established firm would have accumulated data. These data are analyzed to determine the nature of existing trend. Then, this trend is projected in to the future and the results are used as the basis for forecast. This is called as time series analysis. This data can be presented either in a tabular form or a graph. In the time series post data of sales are used to forecast future.

b. Barometric Technique:

Simple trend projections are not capable of forecasting turning paints. Under Barometric method, present events are used to predict the directions of change in future. This is done with the help of economics and statistical indicators. Those are (1) Construction Contracts awarded for building materials (2) Personal income (3) Agricultural Income. (4) Employment (5) Gross national income (6) Industrial Production (7) Bank Deposits etc.

c. Regression and correlation method:

Regression and correlation are used for forecasting demand. Based on past data the future data trend is forecasted. If the functional relationship is analyzed with the independent variable it is simple correction. When there are several independent variables it is multiple correlation. In correlation we analyze the nature of relation between the variables while in regression; the extent of relation between the variables is analyzed. The results are expressed in mathematical form. Therefore, it is called as econometric model building. The main advantage of this method is that it provides the values of the independent variables from within the model itself.

9.

A firm has declared the following details about its sales:

	Year 1	**Year 2**
Sales (Rs.)	**1,50,000**	**1,50,000**
Profit (Rs.)	**15,000**	**25,000**

a) Calculate PV Ratio. (b) Find out the firm's BEP (c) How much should the company produceand sell to earn profit of Rs.50, 000?

Ans)

10. Define economies of scale? Discuss the economies of scale that accrue to a firm?
Ans)

As a result of the large scale production the production cost is low, and it is known as economies of scale.

Definition:"*As long as the output is increased in the long-run, the cost of production will be at minimum level; this is known as economies of scale".*

Alfred Marshall divided the economies of scale into two groups. They are:

Internal Economies

- Labour economies
- Technical economies
- Managerial economies
- Marketing economies
- Financial economies
- Risk bearing economies

External Economies

- Economies of Localisation
- Economies of Information
- Growth of Subsidiary Industry

Economies of By-Products

A. <u>Internal Economies:</u>

Internal economies are those benefits or advantages enjoyed by an individual firm if it increases its size and the output.

1. **Labour economies:** A large firm can attract specialist or efficient labour and due to increasing specializations the efficiency and productivity will be increased, leading to decrease in the labour cost per unit of output.

2. **Technical Economies:** A large firm can adopt and implement the new and latest technology which helps in reducing the cost of manufacturing process, whereas the small firm may not have the capability to implement latest technologies.

3. **Managerial Economies:** The managerial cost per unit will decrease due to mass scale production. Like the salary of general manager which remains the same whether the output is high or low. Moreover, a large firm can recruit the skilled professionals by paying them much of capacity to pay high salaries. Thus, mass scale of production will decrease the managerial cost per unit.

4. **Marketing Economies:** A large firm can purchase their requirements on a bulk scale therefore, they get a discount. Similarly the advertisement cost will be reduced because a large firm produces a variety of different types of products. Moreover, a large firm can employ scale professional for marketing their products effectively.

5. **Financial Economies:** A large firm can raise their financial requirements easily from different sources than a small one. A large firm can raise their capital easily from the capital market because the investor has more confidence on the large firm than in small firm.
6. **Risk Bearing Economies:** The large firm can minimize the business risk because it produces a variety of products. The loss in one product line can be balanced by the profit in other product line.

B. <u>External Economies:</u>

External economies are those benefits which are enjoyed by all the firms in an industry irrespective of their increased size and output.

1. **Economies of Localization:** When all the firms are situated at one place, all the firms will be enjoying the benefits of skilled labour, infrastructure facilities and cheap transport thereby reducing the manufacturing cost.

2. **Economies of Information:** All the firms in an industry can have a common research and development centre through which the research work can be undertaken jointly. They can also have the information related to market and technology.

3. **Growth of Subsidiary Industry:** The production function process can be divided into different components. Each component can be manufactured by specialized firms at a low cost.

4. **Economies of By-Products:** The waste materials released by a particular firm can be used as an input by the other firm to manufacture a by-product.

11. Explain how price is determined under perfect competition.

Ans) ***Definition:***

"The market, where the large number of buyers and sellers are existed and the product dealt with all the firms is homogeneous it is called as perfect competition market".

<u>Features of Perfect Competition Market</u>:

1. Large number of buyers and sellers
2. Homogeneous Product
3. Freedom to enter or exit the market
4. Perfect Knowledge on the part of buyers and sellers
5. Existence of Single Price

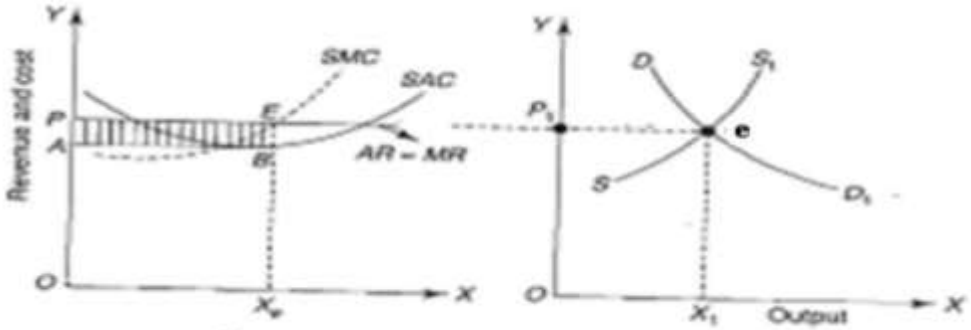
6. No-existence of Transport Cost

7. Perfect Mobility of Production Factors

➢ **Price and Output determination:**

The price and output of the firm are determined under perfect competition, based on the industry price and its own costs. The industry price has greater say in this process because the firm‟s own sales are very small. The process of price and output determination in case of perfect competition is as follows.

In the Short run:



The firm‟s marginal revenue curve is horizontal at the price determined in the industry (MR=AR=Price). This curve is also known as average revenue curve.

When the average revenue is constant, it will coincide with the marginal revenue curve. Thus CC curve representing the price, average revenue curve, and also the marginal revenue curve (MR=AR=Price).Curves SAC, SMC represents firm‟s short-run average cost and short-run marginal cost respectively.

In the above diagram the firm satisfies both conditions: i) MR=MC; and ii) MC curve must cut the MR curve from below. The firm attains equilibrium at point E where MR=MC.

In the Long-run:

In the long run new firms enter into the industry, because, they are attracted by high profits. So, there will be a huge demand for scarce inputs among the competing firms pushing the input prices. Hence, the average cost increases. The entry of more firms will expand the supply pulling down the market price. As a result, in the long-run firms will be in a position to enjoy only normal profits. The long-run equilibrium of a firm can be observed from the following diagram.

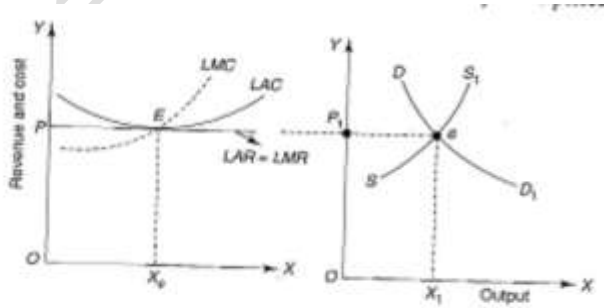


Figure 11.6 *Long-run equilibrium.*

From the above diagram, it is to be observed that at OP price the firm‟s LMC curve is intersecting the MR curve from below at point „E‟. „OX‟ is the equilibrium output. At the equilibrium level the firm‟s AR is

equal to „EX" and the LAC is also equal to „EX". Since LAC equals AR the firm is neither getting abnormal profits not suffering losses. The firm is only getting normal profits. The long-run equilibrium conditions are:

1. MC is equal to MR.
2. MC must cut MR from below.
3. AR must be equal to minimum AC.

Thus in the long-run P=AR=MR=MC.

IMPERFEC T COMPETITION

If there are imperfections in the market conditions, it is known as imperfect market that i.e. no single price, no equal number of buyers and sellers, etc. Ex: Monopoly, Monopolistic competition, oligopoly and duopoly competition.

12. What is monopolistic competition? How the price is determined under monopolistic competition?

Ans)

The concept Monopolistic competition was developed by **Edward.H.Chamberlain**. According to him monopolistic competition means ***"a large number of firms produce somewhat different products which are close substitutes of each other."***

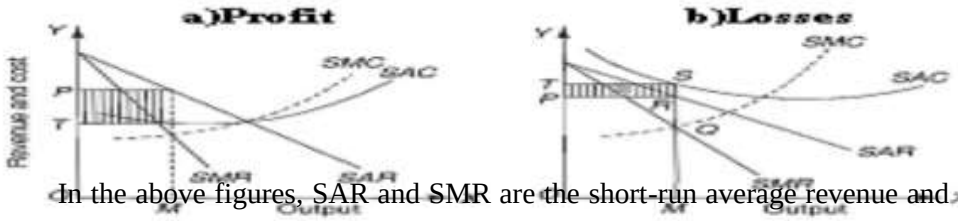
- **Features of Monopolistic Competition:** The following are the main features of monopolistic competition.

1. Existence of Large Number of Firms
2. Product Differentiation
3. Free Entry and Free Exit for Firms
4. Selling Cost
5. Large Number of Buyers
6. Close Substitutes

➢ **Price and Output Determination under Monopolistic Competition:**

In the Short-run:

In the short-run, under conditions of monopolistic competition, every seller is interested in maximizing his profits. The profits are maximized where marginal revenue (MR) is equal to marginal cost (MC) of production. The following figures illustrate the profit and loss situations facing a firm under monopolistic competition in the short-run:

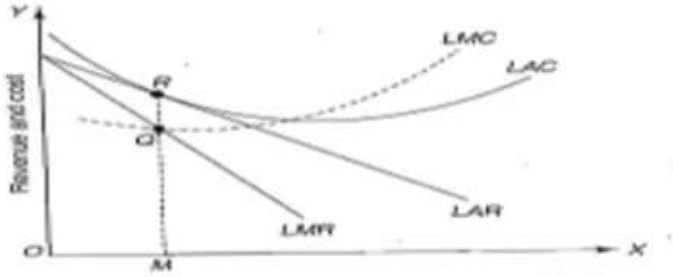


In the above figures, SAR and SMR are the short-run average revenue and short-run marginal revenue curves respectively. SAC and SMC are the short-run average cost and short-run marginal cost curves respectively. The MC curve intersects the MR curve at the output OM in both figures (a and b). Therefore, OM is the equilibrium level of output.

At the equilibrium output OM, price is RM. The firm, shown under figure „**a**", is making an abnormal profit shown by the shaded area PRST while the firm shown under figure „**b**" is incurring a minimum loss (TSRP).

In the long-run:

In the long-run, if the existing firms are making abnormal profits, many new firms would be attracted to come in and join the industry. This would increase the supply and thus reduce the price. The following figure illustrates the long-run equilibrium under the conditions of monopolistic competition:



Pricing under long-run monopolistic competition.

The above figure shows, at the equilibrium output OM, the price and average cost both are equal to RM.

There are no abnormal profits. Hence OM is the output which shows long-run equilibrium.

In the long-run, profits are normal when average revenue (AR) is equal to average cost (AC). Hence the condition of long-run equilibrium under monopolistic competition is that MR should be equal to MC and the AR is equal to AC. In short, in the long-run MR=MC=AR=AC.

MEFA BITS

1. Which subject bridges gap between Economic Theory and Management Practice? ( )
(a) Managerial Economics (b) Micro Economics

(c) Welfare Economics (d) Macro Economics

2. Application of Economics for managerial decision-making is called . ( )
(a)Macro Economics **(b) Managerial Economics**

(c) Welfare Economics (d) Micro Economics

3. Which areas covered by the subject "Managerial Economics". ( )
(a)Operational issues (b) Environmental issues

(c) Operational & Environmental issues (d) None

4. Managerial Economics is close to_____Economics ( )

(a) National (b) Industrial (c) Business **(d) Micro**

5. Making decisions and processing information are the two Primary tasks of

the Managers . It was explained by the subject . ( )
(a)Managerial Economics (b) Engineering Science

(c) Physics (d) Chemistry

6. Managerial Economics is close to_____Economics ( )

(a) National **(b) Micro** (c) Business (d) Industrial

7. _____costs are theoretical costs, which are not recognized by the accounting system ( )
(a) Past (b) Explicit
(c) Implicit (d) Historical
8. _____cost is the additional cost to produce an additional unit of output. ( )
(a) Incremental (b) Sunk
(c)) Total **(d Marginal**
9. Which subject studies the behavior of the firm in theory and practice? ( )
(a) Managerial Economics **(b) Macro Economics**
(c) Micro Economics (d) Welfare Economics

10. _____ costs are the costs, which are varies with the level of output. ( )
(a) Fixed **(b) Variable**
(c)Past (d) Historical
11. _____ costs are those business costs, which do not involve any cash payment. ( )
(a) Past (b) Historical
(c) Implicit (d) Explicit

12. The opposite of past cost is _____. ( )
(a) Historical (b) Fixed cost
(c)Variable cost **(d) Future cost**
13. _____ is a period during which the existing physical capacity of the firm can be changed. ( )
(a) Long period (b) Short period
(c)Market period (d) Medium period

14. _____ is a place in which goods and services are bought and sold. ( )

(a) Factory **(b)Market**
(c) Workshop (d) Warehouse
15. What is the formula for Profit-Volume Ratio? ( )

(a) Sales / **Contribution** **X 100** **(b)** Variable cost / Sales **X 100**

(c) Contribution / Sales X 100 (b) Fixed cost / Sales X 100
16. _is a position where the firm has no incentive either to expand or contrast its output ( )

(a) Maximum output (b) Minimum output
(c) None **(d) Equilibrium**

17. Which of the following markets have the fewest number of firms? ( )
(a) Monopoly (b) Perfect competition (c) Oligopoly (d) Monopolistic competition

18. If average Revenue is greater than the Average cost, monopolist earns

(a) Loss **(b) Profit**
(c) No loss No profit (d) None
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. Which of the following market types has only a few competing firms? ( )

(a) perfect competition (b) monopolistic competition (c) monopoly **(d) oligopoly**

21. A differentiated product has ( )
(a) close but not perfect substitutes (b) many perfect substitutes.
(c) no close substitutes. (d) no substitutes of any kind

2.2 If average Revenue is greater than the Average cost, monopolist earns ( )

(a) Loss **(b) Profit**
(c) No loss No profit (d) None

23. The firm is said to be in equilibrium, when it is Marginal Cost (MC) equals to__( )

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

24. _____ is a position where the firm has no incentive either to expand or contrast its output ( )

(a) Maximum output (b) Minimum output
(c) None **(d) Equilibrium**

25. _____ is a period during which the existing physical capacity of the firm can be changed. ( )
(a) Long period (b) Short period
(c)Market period (d) Medium period

26. _____ is a place in which goods and services are bought and sold. ( )

(a) Factory **(b)Market**
(c) Workshop (d) Warehouse

27. What is the formula for Profit-Volume Ratio? ( )

(a) Sales / **Contribution** **X 100** **(b)** Variable cost / **Sales** **X 100**

(c) Contribution / Sales X 100 (b) Fixed cost / Sales X 100

28. Which of the following is the best example of a perfectly competitive market? ( )

(a) diamonds (b) athletic shoes (c) soft drinks (**d) farming**

29. Which subject studies the behavior of the firm in theory and practice? ( )
(a) Managerial Economics (b) Macro Economics
(c) Micro Economics (d) Welfare Economics

30. _____ costs are the costs, which are varies with the level of output. ( )
(a) Fixed **(b) Variable**
(c)Past (d) Historical

31. _____ costs are those business costs, which do not involve any cash payment.( )
(a) Past (b) Historical
(c) Implicit (d) Explicit

32. The opposite of Past cost is _____. ( )
(a) Historical (b) Fixed cost
(c)Variable cost **(d)Future cost**

33. Which of the following market types has all firms selling products so identical that buyers do not care from
which firm they buy? ( )

(a) perfect competition (b) oligopoly (c) monopolistic competition (d) monopoly

34. Managerial Economics is close to_____Economics ( )

(a) National **(b) Micro** (c) Business (d) Industrial

35. _____costs are theoretical costs, which are not recognized by the accounting system ( )
(a) Past (b) Explicit
(c) Implicit (d) Historical

36. _____cost is the additional cost to produce an additional unit of output. ( )
(a) Incremental (b) Sunk
(c) Total **(d) Marginal**

37. In perfect competition, a firm maximizes profit in the short run by deciding
(a**) how much output to produce**. (b) whether or not to enter a market.
(c) what price to charge. (d) how much capital to use

38. Application of Economics for managerial decision-making is called_____. ( )
(a)Macro Economics **(b) Managerial Economics**
(c) Welfare Economics (d) Micro Economics

39. Which of the following is an example of a monopolistically competitive industry?
(a) Wheat farming (b) the local electricity producer
(c) Colleges and universities (d) the domestic automobile producing industry

40. Which of the following markets have the fewest number of firms?

(a) Monopolistic competition (b) Perfect competition (c) Oligopoly (d) Monopoly