GUDLAVALLERU ENGINEERING COLLEGE
(An Autonomous Institute with Permanent Affiliation to JNTUK, Kakinada)
Seshadri Rao Knowledge Village, Gudlavalleru – 521 356.

Department of Computer Science Engineering

HANDOUT

on

MANAGERIAL ECONOMICS AND FINANCIAL ANALYSIS

Vision

To be a Centre of Excellence in computer science and engineering education and training to meet the challenging needs of the industry and society.

Mission

- To impart quality education through well-designed curriculum in tune with the growing software needs of the industry
- To serve our students by inculcating in them problem solving, leadership, teamwork skills and the value of commitment to quality, ethical behavior & respect for others
- To foster industry-academia relationship for mutual benefit and growth

Program Educational Objectives

PEO1: To Identify, analyze, formulate and solve Computer Science and Engineering problems both independently and in a team environment by using the appropriate modern tools

PEO2: To manage software projects with significant technical, legal, ethical, social, environmental and economic considerations

PEO3: To demonstrate commitment and progress in lifelong learning, professional development, leadership and Communicate effectively with professional clients and the public

HANDOUT ON MANAGERIAL ECONOMICS AND FINANCIAL ANALYSIS

Class & Sem. : II B.Tech – I Semester Year: 2018-19

Branch : CSE Credits : 2

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1. Brief History and Scope of the Subject

Managerial economics is the application of economic principles to decision-making in business firms or of other management units. The basic concepts are derived mainly from microeconomic theory, which studies the behavior of individual consumers, firms, and industries, but new tools of analysis have been added. Statistical methods, for example, are becoming increasingly important in estimating current and future demand for products. The methods of operations research and programming provide scientific criteria for maximizing profit, minimizing cost, and selecting the most profitable combination of products. Decision-making theory and game theory, which recognize the conditions of uncertainty and imperfect knowledge under which business managers operate, have contributed to systematic methods of assessing investment opportunities.

Pre-Requisites

- Basic knowledge on Production and Operations carried out in an organization.
- Able to generalize the surroundings.

2. Course Objectives

- To familiarize with the importance of Managerial Economics and know its significant role in achieving business objectives.
- To interpret and analyze the financial performance of a business unit.

3. Learning Outcomes

Upon successful completion of the course, the students will be able to

- evaluate the economic concepts and apply them in various changing situations in industry.
- predict the demand for a product of a company and analyze various factors influencing demand elasticity.
- apply various aspects of production and cost analysis in business decision making.
- gain knowledge on various forms of business organisations and their establishment.
- propose various pricing strategies for different products or services.

- apply the accounting rules in determining the financial results and prepare financial statements.
- evaluate various investment opportunities in business.

4. Program Outcomes:

Graduate will be able to

a. Apply knowledge of computing, mathematics, science and engineering fundamentals to solve complex engineering problems.
b. Formulate and analyze a problem, and define the computing requirements appropriate to its solution using basic principles of mathematics, science and computer engineering.
c. Design, implement, and evaluate a computer based system, process, component, or software to meet the desired needs
d. Design and conduct experiments, perform analysis and interpretation of data and provide valid conclusions.
e. Use current techniques, skills, and tools necessary for computing practice.
f. Understand legal, health, security and social issues in Professional Engineering practice.
g. Understand the impact of professional engineering solutions on environmental context and the need for sustainable development.
h. Understand the professional and ethical responsibilities of an engineer.
i. Function effectively as an individual, and as a team member / leader in accomplishing a common goal.
j. Communicate effectively, make effective presentations and write and comprehend technical reports and publications.
k. Learn and adopt new technologies, and use them effectively towards continued professional development throughout the life.
l. Understand engineering and management principles and their application to manage projects in the software industry.

5. Mapping of Course Outcomes with Program Outcomes:

Course Outcomes	**Program Outcomes**											
	a	**b**	**c**	**d**	**e**	**f**	**g**	**h**	**i**	**j**	**k**	**l**
CO1	M	L			H							
CO2	H			M								
CO3		M		H								
CO4									H		M	
CO5							H				M	
CO6							M					H

H: High level mapping M: Medium level mapping

L: Low level mapping.

6. Prescribed Text Books:

1. A R Aryasri, "Managerial Economics and Financial Analysis", 2nd edition, TATA McGraw Hill.
2. H. Craig Peterson, Sudhir K. Jain and W. Cris Lewis, "Managerial Economics", 4th edition, Pearson Education.

7. Reference Books

1. R. L. Varshney, "Managerial Economics", Sultan Chand.
2. Ambrish Gupta, "Financial Accounting for Management-An Analytical Perspective", 5th edition, Pearson Education.
3. Yogesh Maheshwari, "Managerial Economics", PHI Learning Pvt. Ltd.

8. URLs and Other E-Learning Resources

Some important topics in Management, Economics, Financial Management and Accountancy can be seen in the website and down loaded i.e.

- http://www.yourarticlelibrary.com/managerial-economics/managerial-economics-meaning-scope-techniques-other-details/24730
- www.emeraldinsight.com
- http://scitation.aip.org/leo/

9. Digital Learning Materials:

E-Journals:

- Journal of management of engineering http://scitation .aip.org/meo/
- Leadership & Management in engineering http://scitation .aip.org/leo/

Print-Journals:

- Journal of Indian Management
- Indian Journal of Marketing
- Industrial Engineering

Magazines:

- The Economist
- For Eastern Economic Review
- Business Today
- Auto India
- Survey of Indian Industry

10. Lecture Schedule / Lesson Plan

Topic	No. of Periods	
	Theory	
UNIT –1		
Managerial Economics & its definition	1	8
Nature & Scope of ME	1	
Demand, Demand Determinants & Demand Function	1	
Law of Demand, Exceptions	1	
Elasticity of Demand & types	2	
Demand Forecasting methods	2	
UNIT – 2		
Theory of Production & Cobb Douglas Production Function	1	8
Iso-Quants & Iso-Costs, MRTS	1	
Least cost combination of inputs, Law of returns to scale	2	
Cost Concepts	2	
Problems on Breakeven Analysis	2	
UNIT – 3		
Markets & types of competition structures	1	5
Perfect Competition, Monopoly, Monopolistic, other markets	2	
Methods of Pricing	2	
UNIT – 4		
Business Organizations & their types, Features of Sole trader	1	6
Partnership, Joint stock Company	3	
Public Enterprises & their forms	2	
UNIT – 5		
Introduction to Accountancy	2	9
Types of Accounts, Journal	2	
Ledgers, Trial Balance	2	
Problems on Trading , Profit & Loss Account and Balance sheet	3	
UNIT – 6		
Capital & its significance, Introduction to Capital budgeting	1	6
Traditional Methods with problems	2	
Modern Methods with problems	3	
Total No. of Periods:		**42**

11. Seminar Topics

- Pricing Policies – Seminar\GD
- Sole Proprietorship – Seminar
- Monopoly gives career opportunities or not – GD

UNIT – I

Introduction to Managerial Economics

Objective:

- To access the demand for a particular product.
- To make optimal business decisions by integrating the concepts of economics, mathematics and statistics.
- To understand the economic goals of the firms and optimal decision making.

Syllabus:

Unit 1:

Definition, Nature and Scope of Managerial Economics– Relation of Managerial Economics with other disciplines.

Demand Analysis: Demand Determinants, Law of Demand and its exceptions, Significance & Types of Elasticity of Demand. Factors governing demand forecasting- Methods of Demand forecasting.

Learning Outcomes:

- Know the various factors that influence demand of particular product
- Forecast the future demand using various tools & Techniques
- Take the Further Decisions based on demand

Learning Material

Introduction

Managerial Economics as a subject gained popularity in USA after the publication of the book “Managerial Economics” by Joel Dean in 1951.

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”.

As Joel Dean observes managerial economics shows how economic analysis can be used in formulating polices.

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".

Managerial Economics bridges the gap between traditional economics theory and real business practices in two days. First it provides a number of tools and techniques to enable the manager to become more competent to take decisions in real and practical situations. Secondly it serves as an integrating course to show the interaction between various areas in which the firm operates.

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".

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 (or the Latin equivalent ceteris paribus). This assumption is made to simplify the complexity of the managerial phenomenon under study in a dynamic business environment so many things are changing simultaneously. This set a limitation that we cannot really hold other things remaining the same. In such a case, the observations made out of such a study will have a limited purpose or value. Managerial economics also has inherited this problem from economics.

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'.

(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.

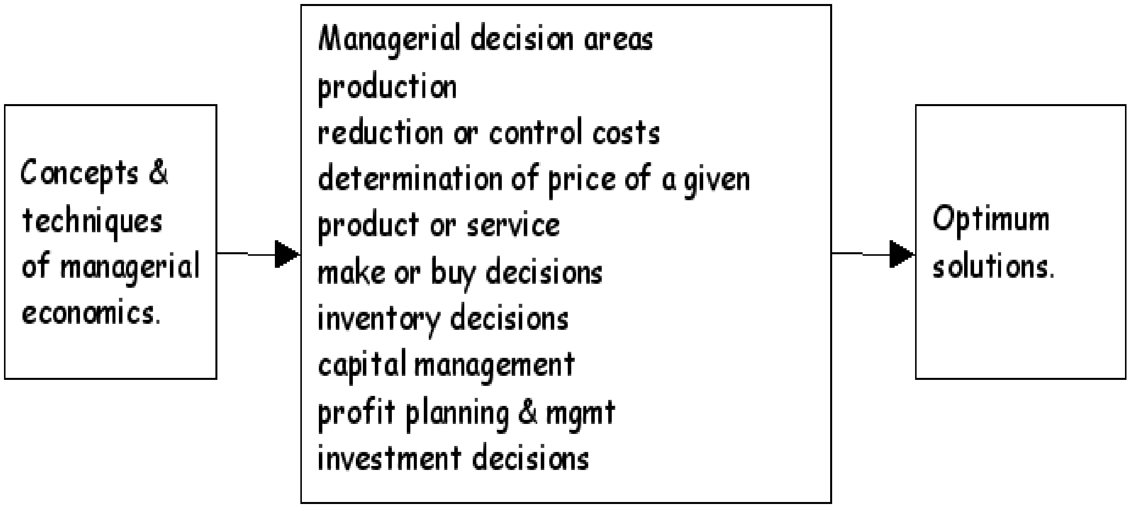
(e) Applied in nature: 'Models' are built to reflect the real life complex business situations and these models are of immense help to managers for decision-making. The different areas where models are extensively used include inventory control, optimization, project management etc. In managerial economics, 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 MAIN AREAS OF MANAGERIAL ECONOMICS:

1. Demand decisions.
2. Input-output decision
3. Price-output decision
4. Price-related decision
5. Investment decision
6. Economic forecasting and forward planning.

DEMAND ANALYSIS

Introduction & Meaning:

Demand in common parlance means the desire for an object. But in economics demand is something more than this. According to Stonier and Hague, "Demand in economics means demand backed up by enough money to pay for the goods demanded". This means that the demand becomes effective only it if is backed by the purchasing power in addition to this there must be willingness to buy a commodity.

Law of Demand:

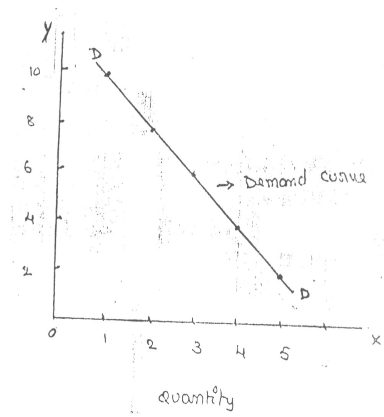
Law of demand shows the relation between price and quantity demanded of a commodity in the market. In the words of Marshall, "the amount demand increases with a fall in price and diminishes with a rise in price".

A rise in the price of a commodity is followed by a reduction in demand and a fall in price is followed by an increase in demand, if a condition of demand remains constant.

The law of demand may be explained with the help of the following demand schedule.

Demand Schedule.

Price of Apple (In. Rs.)	Quantity Demanded
10	1
8	2
6	3
4	4
2	5



When the price falls from Rs. 10 to 8 quantity demand increases from 1 to 2. In the same way as price falls, quantity demand increases on the basis of the demand schedule we can draw the demand curve.

The demand curve DD shows the inverse relation between price and quantity demand of apple. It is downward sloping.

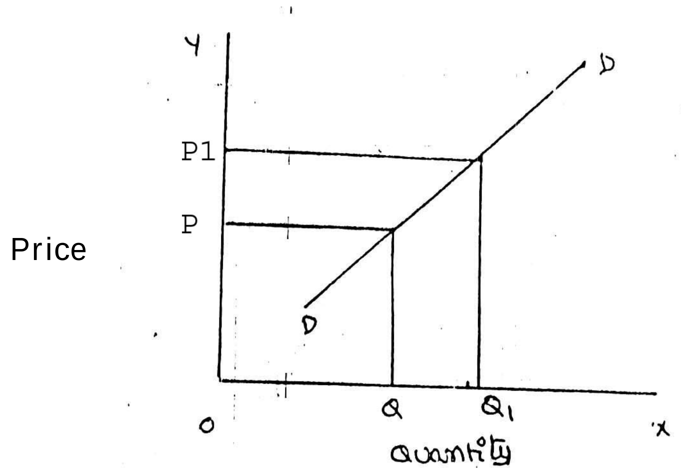
Assumptions:

Law is demand is based on certain assumptions:

1. This is no change in consumers taste and preferences.
2. Income should remain constant.
3. Prices of other goods should not change.
4. There should be no substitute for the commodity
5. The commodity should not confer at any distinction
6. The demand for the commodity should be continuous
7. People should not expect any change in the price of the commodity

Exceptional demand curve:

Sometimes the demand curve slopes upwards from left to right. In this case the demand curve has a positive slope.



When price increases from OP to Op1 quantity demanded also increases from to OQ1 and vice versa. The reasons for exceptional demand curve are as follows.

1. ***Giffen paradox***
2. ***Veblen or Demonstration effect***
3. ***Ignorance***
4. ***Speculative effect***
5. ***Fear of shortage***
6. ***Necessaries***

Factors Affecting Demand:

There are factors on which the demand for a commodity depends. These factors are economic, social as well as political factors. The effect of all the factors on the amount demanded for the commodity is called Demand Function.

These factors are as follows:

1. *Price of the Commodity*
2. *Income of the Consumer*
3. *Prices of related goods*
4. *Tastes of the Consumers*
5. *Wealth*

6. *Population*
7. *Government Policy*
8. *Expectations regarding the future:*
9. *Climate and weather*
10. *State of business*

ELASTICITY OF DEMAND

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.

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.

Proportionate change in the quantity demand of commodity

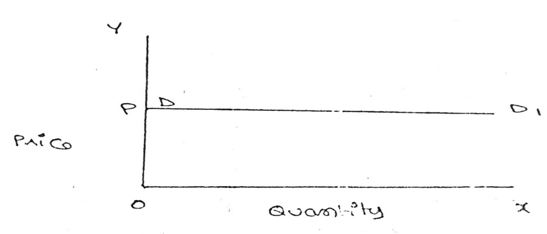
Price elasticity = -- ---

Proportionate change in the price of commodity

There are five cases of price elasticity of demand

A. Perfectly elastic demand:

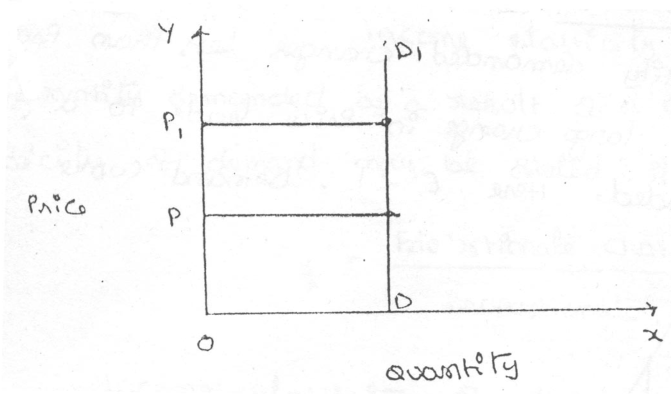
When small change in price leads to an infinitely large change is quantity demand, it is called perfectly or infinitely elastic demand. In this case E=∞



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

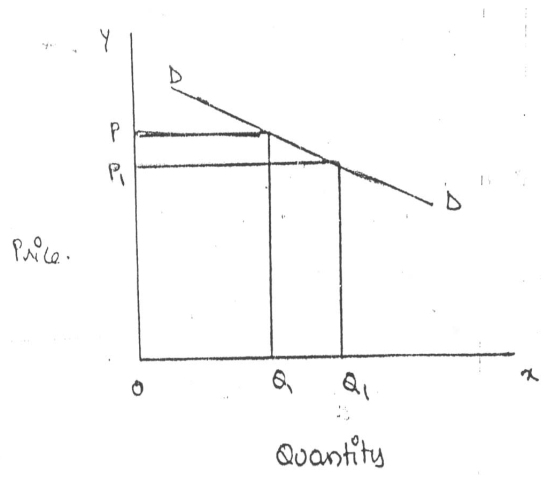
In this case, even a large change in price fails to bring about a change in quantity demanded.



C. Relatively elastic demand:

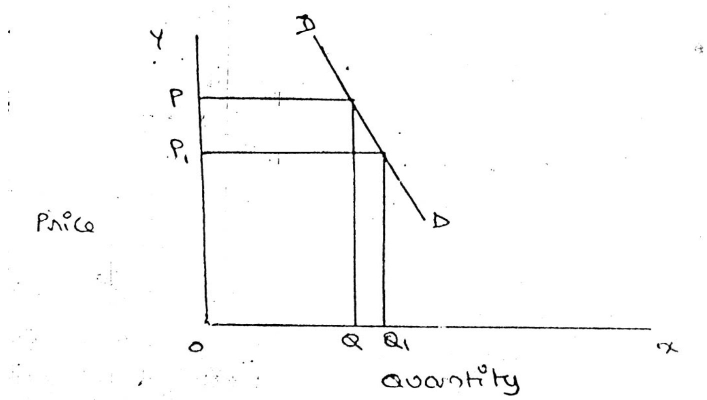
Demand changes more than proportionately to a change in price. i.e. a small change in price loads to a very big change in the quantity demanded. In this case

E > 1. This demand curve will be flatter.



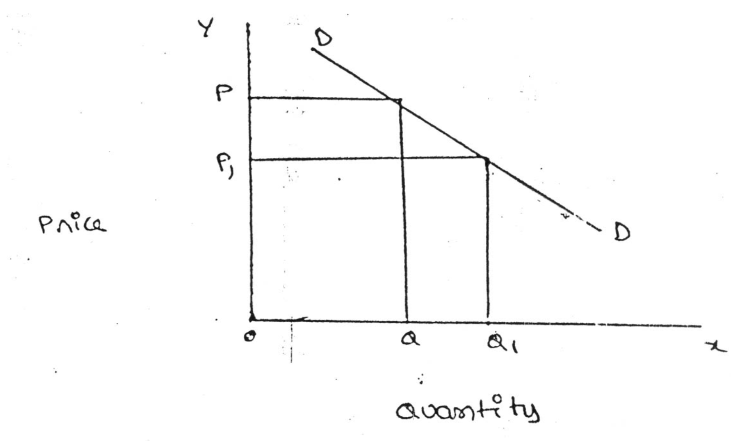
D. Relatively in-elastic demand.

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.



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:

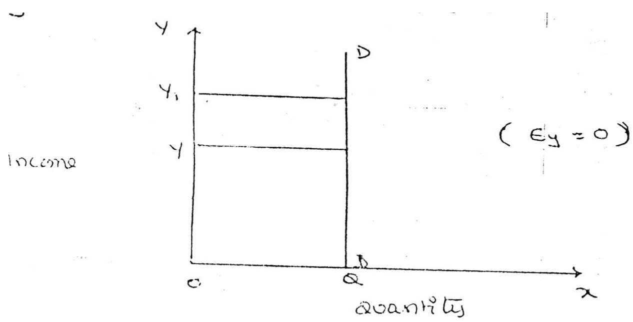
Income elasticity of demand shows the change in quantity demanded as a result of a change in income. Income elasticity of demand may be slated in the form of a formula.

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

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

A. Zero income elasticity:

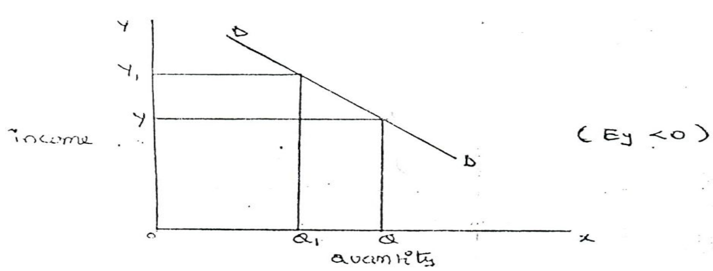
Quantity demanded remains the same, even though money income increases. Symbolically, it can be expressed as Ey=0. It can be depicted in the following way:



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

B. Negative Income elasticity:

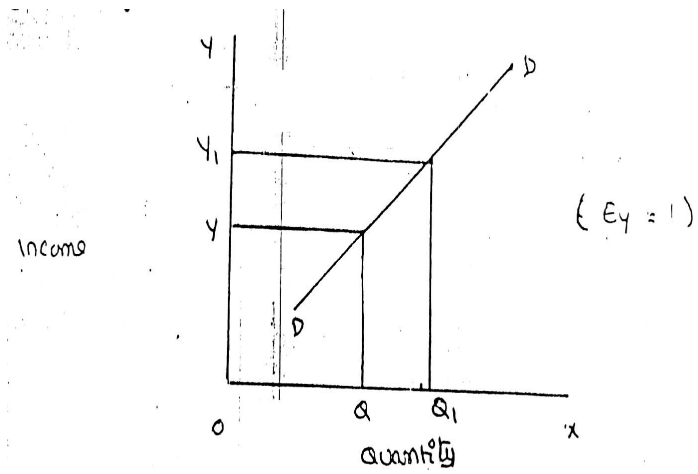
When income increases, quantity demanded falls. In this case, income elasticity of demand is negative. i.e., Ey < 0.



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

c. Unit income elasticity:

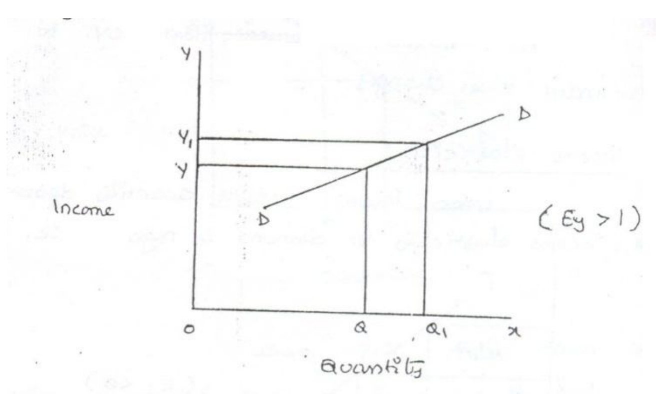
When an increase in income brings about a proportionate increase in quantity demanded, and then income elasticity of demand is equal to one. Ey = 1



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

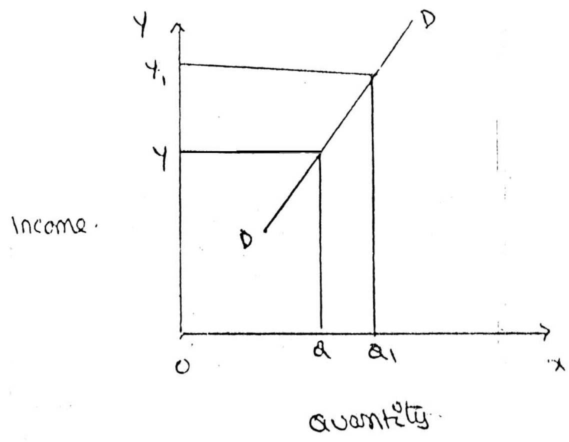
d. Income elasticity greater than unity:

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.



E. Income elasticity leas than unity:

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



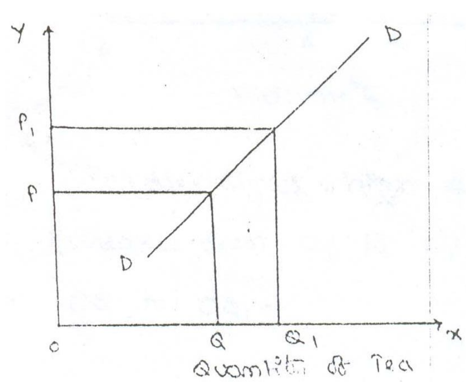
3. Cross elasticity of Demand:

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:

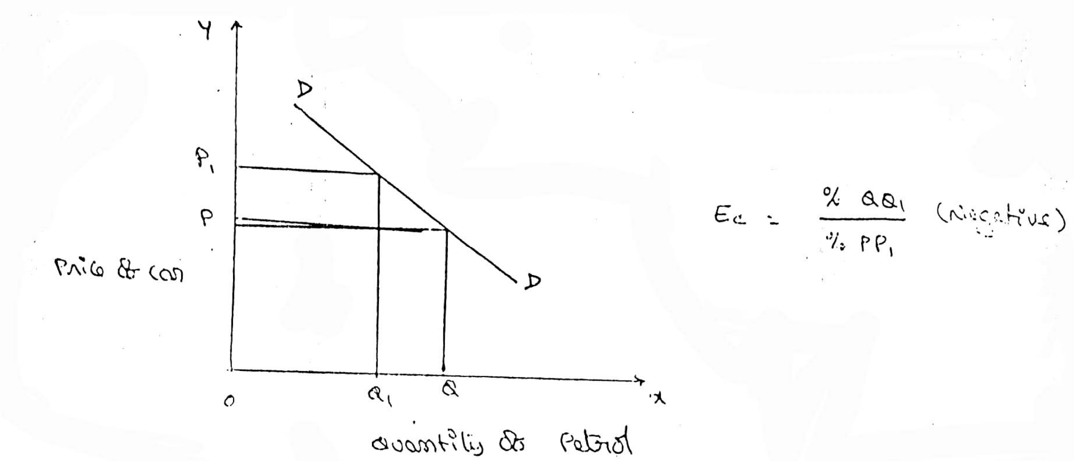
$$\textbf{Cross elasticity} = \frac{\text{Proportionate change in the quantity demand of commodity “}\mathbf{X}\text{”}}{\text{Proportionate change in the price of commodity “}\mathbf{Y}\text{”}}$$

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

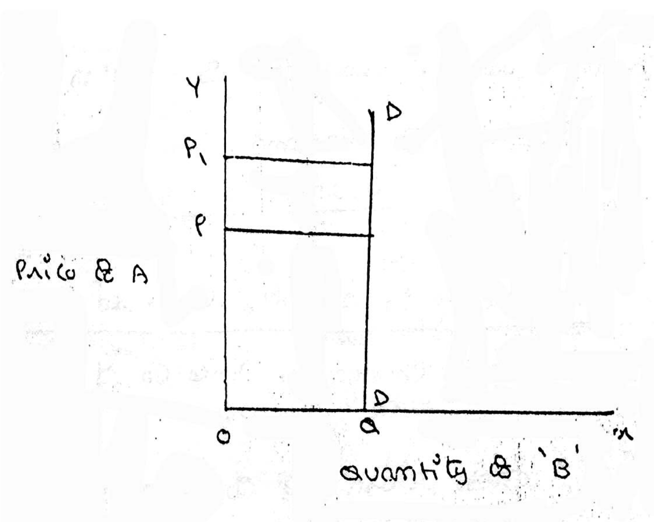
When the price of coffee increases, Quantity demanded of tea increases. Both are substitutes.



b. In case 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.



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.



<u>Factors influencing the elasticity of demand</u>

1. Nature of commodity

2. Availability of substitutes

3. Variety of uses

4. Postponement of demand

5. Amount of money spent

6. Time

7. Range of Prices

Demand Forecasting Methods

I.Survey method.
1) Survey of buyer's intention.
A] Census method
B] Sample method.
2) Sales force opinion method.

II.Statistical methods
1) Trend projection method.
A] Trend line observation.
B] Least square method.
C] Time series analysis.
D] Moving average method.
E] Exponential smoothing.
2) Barometric techniques.
3) Simultaneous equations method.
4) Correlation & regression method.

III. Other methods
1) Expert opinion method
2) Test marketing.
3) Controlled experiments.
4) Judgmental approach.

I. Survey methods:-

Survey of buyer's intention:-

To anticipate what buyers are likely to do under a given set of circumstances, a most useful source of information would be the buyers themselves. It is better to draw a list of all potential buyers, approach each buyer to ask how much does her plans to buy of the given product at a given point of time under particular conditions.

This is the most effective method because the buyer is the ultimate decision maker and we are collecting the information directly from him. The survey of the buyers can be conducted either by covering the whole population or by selecting a sample group of buyers.

Advantages of the survey methods:-

1. Where the product is new in the market for which no data exists previously.
2. When the buyers are few and they are accessible.
3. When the cost of reaching them is not significant.
4. When consumers stick to their intentions.
5. When they are willing to disclose what they are willing to do.

Disadvantages:-

1. Survey may be expensive.
2. Sample size and timing of survey.
3. Methods of sampling.
4. In consisted buying behavior.

Sales Force Opinions:-

Another source of getting reliable information about possible level of sales or demand for a given product or services is the group of people who sell the same. Thus we can control the limitation of cost and delays in contacting the costumers. The sales people are those who are in constant touch with the main and large buyers of particular market. The sales force is capable of assessing the likely reaction of the costumers in their territories quickly; giving the company's marketing strategy. It is less costly and can be conducted through telephones, fax, video conferences and many more.

Here also there is a danger that salesmen may sometimes become biased with their views.

- The sales people are paid based on their results.
- Targets are set for the salesmen.
- The salary of the salesmen depends upon the targets.
- Incentives are paid to the salesmen who achieved the targets.
- Salespersons having more knowledge about the information of sources.
- Salesmen are cooperative.

II. Statistical Methods:-

For forecasting the demand for goods and services in the long-run, statistical and mathematical methods are used considering the past data.

(**a)Trend projection methods:-**

This is based on past sales patterns. The necessary information is already available in company files with different time periods.

There are five main techniques:

1. Trend line by observation.
2. Least square method.
3. Time series analysis.
4. Moving average method.
5. Exponential smoothing.

(1)Trend line by observation:-

It is easy and quick as it involves plotting the actual sales data on a chart and then estimating just by observation when the trend line lies.

(2) Least square method:-

In this statistical method is used. The trend line is the basis to extrapolate the line for future demand for the given product or service on graph. Here it is assumed that there is a proportional exchange in sales over a period of time. In such a case the trend line equation is in linear form.

The estimated linear trend equation of sales is written as:
S = x + y (T)
x & y have been calculated from past data.
S = sales;
T = year no. for which the forecast is made.

To find x & y values,
$\Sigma\Sigma$ S = N x + y$\Sigma\Sigma$ T
$\Sigma\Sigma\Sigma$ ST = x Σ T + yΣ (T * T)
S = sales;
T = year number
N = no. of years.

Example 1:

Year	1996	1998	2000	2002	2004
Sales (lakhs)	75	84	92	98	88

Estimate the sales for the years 2004 & 2006.

Sol:
Σ S = N x + yΣ T
Σ ST = x Σ T + yΣ (T * T)

Year	Year no. (T)	Sales (s)	ST	T * T
1992	1	75	75	1
1994	3	84	252	9
1996	5	92	460	25

1998	7	98	686	49
2000	9	88	792	81
	ΣT = 25	ΣS=437	ΣST=2265	Σ(t*t)=165

Substituting the values in the formula,
437 = 5x + 25 y
2265 = 25x + 165 y

By solving these equations
x=77.4 & y=2;
Years 2004 & 2006 take on the year numbers 11 and 13 respectively.
By substituting the values in the trend equations x + y (T)
S 2002 = 77.4 + 2 (11)= 99.4 lakh units
S 20o4 = 77.4 + 2 (13)= 103.4 lakh units.
Thus the forecast sales for year 2004 & 2006 are 99.4 and 103.4 lakh units.

3) Time Series Analysis:-

Where the surveys or market tests are costly and time consuming, statistical and mathematical analysis of past sales data offers another method to prepare the forecasts that is time series analysis.

The product should have actively been traded in the market for quite sometime in the past.

Considerable data on the performance of the product or service over significantly large period should be available for better results under this method.

Time series emerge from a data when arranged chronologically, given significantly large data.

The following 4 major components analyzed from time series while forecasting the demand.

Trend (T):

It also called as long term trend, is the result f basic developments in the population, capital formation & technology. These developments relate to over a period of long time say 5 t0 10 years, not definitely over night. The trend is considered statistically significant when it has reasonable degree of consistency. A significant trend is central and decisive factor considered while preparing a long range forecast.

Cycle Trend (C):

It is wave like movement of sales inflation, during the period of inflation prices go up and down.

Seasonal Trend (S):

More goods are sold in festivals seasons, weather factors, holidays.

Eratic Trend (E):

Results from the sporadic occurrence of strikes, riots etc.

4) Moving Average Method:

This method considers that the average of past events determine the future events.

This method provides consistent results when the past events are consistent and unaffected by wide changes.

The average keeps on moving depending upon the no. of years selected. Selection of no. of years is the decisive factor in this method. Moving averages get updated as new information flow in.

This method is easy to compute. One major advantage with this method is that the old data can be dispensed with once the averages are calculated. These averages, not original data, are further used as the forecast for next period. It gives equal weightage to data both in the recent past and the earlier one.

Example: - Compute 3-day moving average from the following daily sales data.

Date and month	Daily sales (lakhs)	3-day moving average
Jan 1	40	
Jan 2	44	
Jan 3	48	
Jan 4	45	44
Jan 5	53	45.7

Sol:-

To calculate 3-days moving avg…

S4 = (40 + 44 + 48)/ 3 == 44

S5 = (44 + 48 + 45)/3 == 45.7

5) Exponential Smoothing:

This is a more popular technique used for short-run forecasts. This method is an improvement over moving averages method.

All time periods (ranging from the immediate part to distant part) here are given varying weights , that is the value of the given variable in

the recent times are given higher weights and the values of the given variable in the distant past are given relatively lower weights for further processing.
The formula used for exponential smoothing,
S t + 1 == c S T + (1 -- C) S MT
S t + 1 == exponentially smoothed average for New Year.
S t == actual data in the most recent part.
S Mt == most recent smoothed forecast.
C = smoothing constant.

If the smoothing constant ` c ` is higher, higher weight is given to the most recent information. The value of `c` varies between `0` and inclusive and the exact values of `c` is determined by the magnitude of random variation. If the magnitude of random variations is large, lower values of c are assigned and vice versa. However, it is considered that a value between 0.1 & 0.2 is more appropriate in most of cases.

Barometric Techniques:

Where forecasting based on time series analyses or extrapolation may not yield significant results, barometric techniques can be made use of . Under the barometric technique, one set of data is use to predict another set.
To forecast demand for a particular product or service, use some other relevant indicator which is known as a barometer of future demand.

To assess the demand for services in India and abroad. We can see the percentage of population in each occupation. In the US 78%of the labour force is employed in services 15% of them in manufacturing. In India, according to 1991 census, 21%of work force is engaged in services, 13%in manufacturing, and 67% in agriculture. The world over, an increase in prosperity has been accomplished by an increase in demand for services.

Simultaneous Equation Method

In this method al variables are simultaneously considered, with the conviction that every variable influences the other variable in an economic environment. Hence the set of eqns equal the no. of dependent variable which is also called endogenous variables.

This method is more practical in the sense that it requires to estimate the future values of only predetermined variables. It is difficult to compute where the no. of eqns is larger.

Correlation and Regression Methods:

Correlation and regression methods are statistical techniques. Correlation describes the degree of association between 2 variables such as sales and advertisement expenditure, when the 2 variables tend to change together then they are said to be correlated. The extent to which they are correlated can be measured by correlation coefficient.

In regression analysis an equation is estimated which best fits in the sets of observations of dependent variables and independent variables. The main advantage of this method is that it provides the values of independent variables from within the model itself. Thus it frees the forecaster from the difficulty of estimating them exogenously.

III. Other Methods

Expert Opinion:

Well informed persons are called experts. Experts constitute yet another source of information. These persons are generally the generally the outside experts and they do not have any vested interests in the results of a particular survey.

Main advantages are:

1. Results of this method would be more reliable as the expert is unbiased, has no direct commercial involvement in its primary activities.
2. Independent demand forecast can be made relatively quick and cheap.
3. This method constitutes a valid strategy particularly in the case of new products.

The main disadvantage is that an expert can't be held accountable if his estimates are found incorrect.

Test Marketing:

It is likely that opinions give in by buyers, sales man or other experts may be at times, misleading. This is the reason why most of the manufacturers favour to test their product or service in a limited matter as test-run before they launch their products nationwide.

Advantages:

1. Acceptability of the product can be judged in a limited market.
2. Before its too late, the corrections can be made to product design if necessary, thus major catestrophy, in terms of failure, can be avoided.
3. The customer psychology is more focused in this method and the product and services are aligned or redesigned accordingly to gain more customer acceptance.

Disadvantages:

1. It reveals the quality of product to the competitors before it is launched in his wider market. The competitors may bring about a similar product or often misuse the results of the test marketing against the given company.

2. It is not always easy to select a representative audience or market.
3. It may also be difficult to extrapolate the feedback received from such a test market, particularly where the chosen market is not fully representative.

Controlled Experiments:

Controlled experiments refer to such exercises where some of the major determinants of demand are manipulated to suit to the customers with different tastes and preferences, income groups and such others. This method cannot provide better results, unless these markets are homogenous in terms of, tastes and preferences of customers, their income and soon.

This method is in infancy state and not much tried because of following reasons:

It is costly and time consuming. It involves elaborate process of studying different markets and different permutations and combinations that push the product aggressively. If it fails in one market, it may affect other markets also.

Judgmental Approach:

When none of the above methods are directly related to the given product or service, the management has no other alternative than using its own judgment. Even when the above methods are used, the forecasting process is supplemented with the factor of judgment for the following reasons:

1. Historical data for significantly long period is not available.
2. Turning points in terms of policies or procedures or casual factors cannot be precisely demanded.
3. Sales fluctuations are wide and significant.

UNIT-I
Assignment-Cum-Tutorial Questions
SECTION-A

Objective Questions

1. Managerial Economics is close to________ economics.

2. Managerial Economics is more of _________ in nature.

3. Any activity aimed at earning or spending money is called _______activity".

4. When a great change in price leads small change in the quantity demand, we call it _______.

5. The theory of firm is also called as___________.

6. When PE =1 (Price Elasticity of Demand is one), we call it _____.

7. Estimation of future possible demand is called _____.

8. Demand for a commodity depends on the relative price of its _______

9. An upward sloping demand curve is called ______.

10. The degree of responsiveness of quantity demanded to a change in price of the product is known as_______

Multiple Choice Questions: (10 to 15)

1. The rise in price of two wheeler leads to fall in demand for fuel and vice-versa. These goods are______________. [ ]

(a) Substitutes (b) Complimentary goods (c) Giffen goods (d) Veblen goods.

2. When a great change in price leads to small change in the quantity demand, we call it _______. [ ]

(a) Elastic Demand (b) Positive Demand (c) Inelastic Demand (d) None

3. In the short run, firms can adjust their production by changing their [ ]

(a) fixed factors (b) variable factors
(c) semi- fixed factors (d) both (a) and (b)

4. In case of Giffen goods the demand curve [ ]

(a) Slopes downwards (c) slopes upwards
(b) Intersects supply curve (d) meets cost curve.

5. Demand for a commodity depends on ____________. [ ]

(a) Price of that commodity (b) Price of related commodity
(c) Income (d) All of the above

6. If the price elasticity of demand for a good is 0.75, the demand for the good can be described as: [ ]
(a) Normal (c) elastic
(b) Inferior (d) inelastic.

7. Economists typically assume that the owners of firms wish to [ ]
(a) Produce efficiently. (c) Maximize sales revenues.
(b) Maximize profits. (d) All of these.

8. Isoquants that are downward-sloping straight lines imply that the inputs [ ]
(a) Are perfect substitutes. (c) Are imperfect substitutes.
(b) Cannot be used together. (d) Must be used together in a certain proportion.

9. Demand forecasting is important for ______________. [ ]
(a) Price Control (b) Business Planning (c) Competitive Strategy (d) All of Above

10. "Coffee and Tea are the ________________ goods". [ ]

(a) Relative (b) Complementary
(c) Substitute (d) None

11. Consumers Survey method is one of the Survey Methods to forecast the______________. [ ]

(a) Sales (b) Revenue (c) Demand (d) Production

12. Demand for a commodity refers to_________________. [ ]

(a) Desire for a Commodity (b) Need for a commodity
(c) Quantity demanded of that commodity
(d) Quantity of the commodity demanded at a certain price during any particular period of time

Section B

Descriptive Questions

1. "Managerial Economics is integration of economic theory and with business practice for the purpose of facilitating decision making and forward planning" explain.
2. Discuss the factors affecting demand.
3. Explain law of demand. What do you mean by shifts in demand curve?

4. What is meant by elasticity of demand? Explain the different types of elasticity.
5. Discuss the various techniques of demand forecasting?
6. Explain exceptional demand curve with suitable examples.
7. What are the various factors that influence the demand for a mobile hand set?
8. How do you forecast the demand for washing machines?

Problems

9. If the price of a product is 1000/- and the quantity demand is 10,000 units. When the price falls to 800/- and the quantity demanded rises to 16,000units, calculate the price elasticity of demand.
10. Determine the Advertising elasticity of demand given that
    - The quantity demanded for product M is 10,000 units per day at a monthly advertising budget of Rs.10,000
    - The monthly advertising budget is slashed to Rs.5000; the quantity demanded will fall down to 30,000 units per day.

UNIT – II

Theory of Production and Cost Analysis

Objective:

- To understand the concept of production function
- Know about the various factors of production
- To analyze different costs in solving managerial problems.
- Identify economies and diseconomies of scale

Syllabus:

Production function, isoquants and isocosts, MRTS, least cost combination of inputs, Cobb-Douglas production function, laws of returns, Cost analysis- Cost concepts & break even analysis with simple problems.

Learning Outcomes:

- Understanding and estimating production function.
- Isoquant and Isocost and finding out optimal combinations of inputs.
- Understanding cost function and the difference between short-run and long-run cost function.
- Understanding and calculating break-even point. • BEP and demand analysis.
- Access the minimum level of production that a firm should carry by using BEP and get aware of costs incurred in the production

Learning Material

Production Function

Introduction: 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

$$Q= f (A, B, C, D)$$

Where "Q" stands for the quantity of output and A, B, C, D are various input factors such as land, labour, capital and organization. Here output is the function of inputs. Hence output becomes the dependent variable and inputs are the independent variables.

The above function does not state by how much the output of "Q" changes as a consequence of change of variable inputs. In order to express the quantitative relationship between inputs and output, Production function has been expressed in a precise mathematical equation i.e.

$$Y= a+b(x)$$

Which shows that there is a constant relationship between applications of input (the only factor input ‘X’ in this case) and the amount of output (y) produced.

Importance:

1. When inputs are specified in physical units, production function helps to estimate the level of production.
2. It becomes is equates when different combinations of inputs yield the same level of output.
3. It indicates the manner in which the firm can substitute on input for another without altering the total output.
4. When price is taken into consideration, the production function helps to select the least combination of inputs for the desired output.
5. It considers two types’ input-output relationships namely ‘law of variable proportions’ and ‘law of returns to scale’. Law of variable propositions explains the pattern of output in the short-run as the units of variable inputs are increased to increase the output. On the other hand law of returns to scale explains the pattern of output in the long run as all the units of inputs are increased.
6. The production function explains the maximum quantity of output, which can be produced, from any chosen quantities of various inputs or the minimum quantities of various inputs that are required to produce a given quantity of output.

Production function can be fitted the particular firm or industry or for the economy as whole. Production function will change with an improvement in technology.

Assumptions:

Production function has the following assumptions.

1. The production function is related to a particular period of time.
2. There is no change in technology.
3. The producer is using the best techniques available.
4. The factors of production are divisible.
5. Production function can be fitted to a short run or to long run.

Cobb-Douglas production function:

Production function of the linear homogenous type is invested by Juntwicksell and first tested by C. W. Cobb and P. H. Douglas in 1928. This famous statistical production function is known as Cobb-Douglas production function.

Originally the function is applied on the empirical study of the American manufacturing industry. Cobb – Douglas production function takes the following mathematical form.

$$Y= (AK^{X} L^{1-x})$$

Where Y=output, K=Capital, L=Labour, A, ∞=positive constant

Assumptions:

It has the following assumptions

1. The function assumes that output is the function of two factors viz. capital and labour.
2. It is a linear homogenous production function of the first degree
3. The function assumes that the logarithm of the total output of the economy is a linear function of the logarithms of the labour force and capital stock.
4. There are constant returns to scale
5. All inputs are homogenous
6. There is perfect competition
7. There is no change in technology

Isoquants

The term Isoquant is derived from the words ‘iso’ and ‘quant’ – ‘Iso’ means equal and ‘quent’ implies quantity. Isoquant therefore, means equal quantity. A family of iso-product curves or isoquant or production difference curves can represent a production function with two variable inputs, which are substitutable for one another within limits.

Isoquant are the curves, which represent the different combinations of inputs producing a particular quantity of output. Any combination on the isoquant represents the some level of output.

For a given output level firm’s production become,

$$Q= f (L, K)$$

Where ‘Q’, the units of output is a function of the quantity of two inputs ‘L’ and ‘K’.

Thus an isoquant shows all possible combinations of two inputs, which are capable of producing equal or a given level of output. Since each combination yields same output, the producer becomes indifferent towards these combinations.

Assumptions:

1. There are only two factors of production, viz. labour and capital.
2. The two factors can substitute each other up to certain limit
3. The shape of the isoquant depends upon the extent of substitutability of the two inputs.
4. The technology is given over a period.

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.

Iso Cost:

The isocost line is an important component when analysing producer's behaviour. The isocost line illustrates all the possible combinations of two factors that can be used at given costs and for a given producer's budget. In simple words, an isocost line represents a combination of inputs which all cost the same amount.

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K=Capital

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4. There are constant returns to scale
5. All inputs are homogenous
6. There is perfect competition
7. There is no change in technology.

Least Cost Combination of Inputs:

The tem producer's equilibrium is the counter part of consumer's equilibrium. Just as the consumer is in equilibrium when be secures maximum satisfaction, in the same manner, the producer is in equilibrium when he secures maximum output, with the least cost combination of factors of production.

The optimum position of the producer can be found with the help of iso-product curve. The Iso-product curve or equal product curve or production indifference curve shows different combinations of two factors of production, which yield the same output. This is illustrated as follows.

Let us suppose. The producer can produces the given output of paddy say 100 quintals by employing any one of the following alternative combinations of the two factors labour and capital computation of least cost combination of two inputs.

L Units	K Units	Q Output	L&LP (3Rs.) Cost of labour	KXKP(4Rs.) cost of capital	Total cost
10	45	100	30	180	210
20	28	100	60	112	172
30	16	100	90	64	154
40	12	100	120	48	168
50	8	100	150	32	182

It is clear from the above that 10 units of ‘L’ combined with 45 units of ‘K’ would cost the producer Rs. 20/-. But if 17 units reduce ‘K’ and 10 units increase ‘L’, the resulting cost would be Rs. 172/-. Substituting 10 more units of ‘L’ for 12 units of ‘K’ further reduces cost pf Rs. 154/-/ However, it will not be profitable to continue this substitution process further at the existing prices since the rate of substitution is diminishing rapidly. In the above table the least cost combination is 30 units of ‘L’ used with 16 units of ‘K’ when the cost would be minimum at Rs. 154/-. So this is they stage “the producer is in equilibrium”.

Law of Production:

Production analysis in economics theory considers two types of input-output relationships.

1. When quantities of certain inputs, are fixed and others are variable and
2. When all inputs are variable.

These two types of relationships have been explained in the form of laws.

i) Law of variable proportions
ii) Law of returns to scale

I. Law of variable proportions:

The law of variable proportions which is a new name given to old classical concept of “Law of diminishing returns has played a vital role in the modern economics theory. Assume that a firms production function consists of fixed quantities of all inputs (land, equipment, etc.) except labour which is a variable input when the firm expands output by employing more and more labour it alters the proportion between fixed and the variable inputs. The law can be stated as follows:

"If equal increments of one input are added, the inputs of other production services being held constant, beyond a certain point the resulting increments of product will decrease i.e. the marginal product will diminish". (**G. Stigler**)

The law of variable proportions refers to the behaviour of output as the quantity of one Factor is increased Keeping the quantity of other factors fixed and further it states that the marginal product and average product will eventually do cline. This law states three types of productivity an input factor – Total, average and marginal physical productivity.

Assumptions of the Law: The law is based upon the following assumptions:

i) The state of technology remains constant. If there is any improvement in technology, the average and marginal output will not decrease but increase.
ii) Only one factor of input is made variable and other factors are kept constant. This law does not apply to those cases where the factors must be used in rigidly fixed proportions.
iii) All units of the variable factors are homogenous.

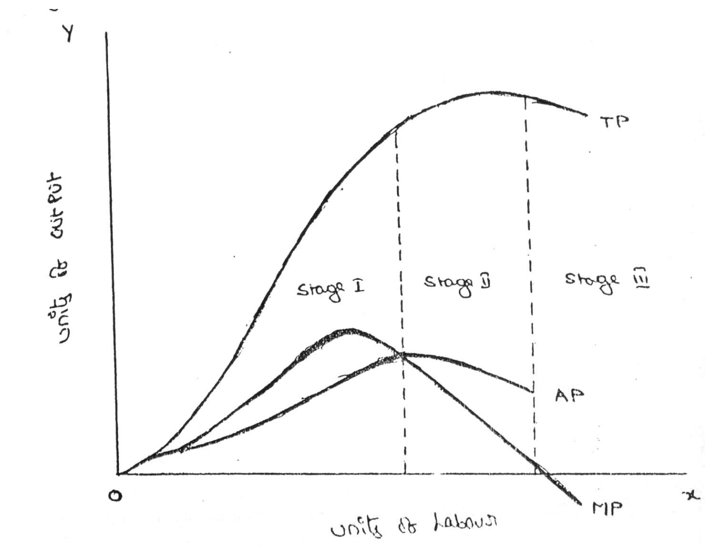
Three stages of law:

The behaviors of the Output when the varying quantity of one factor is combines with a fixed quantity of the other can be divided in to three district stages. The three stages can be better understood by following the table.

Fixed factor	Variable factor (Labour)	Total product	Average Product	Marginal Product	
1	1	100	100	-	Stage I
1	2	220	120	120	
1	3	270	90	50	
1	4	300	75	30	Stage II
1	5	320	64	20	
1	6	330	55	10	
1	7	330	47	0	Stage III
1	8	320	40	-10	

Above table reveals that both average product and marginal product increase in the beginning and then decline of the two marginal products drops of faster than average product. Total product is maximum when the farmer employs 6th worker, nothing is produced by the 7th worker and its marginal productivity is zero, whereas marginal product of 8th worker is '-10', by just creating credits 8th worker not only fails to make a positive contribution but leads to a fall in the total output.

Production function with one variable input and the remaining fixed inputs is illustrated as below



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.

<u>II. Law of Returns of Scale</u>:

The law of returns to scale explains the behavior of the total output in response to change in the scale of the firm, i.e., in response to a simultaneous to changes in the scale of the firm, i.e., in response to a simultaneous and proportional increase in all the inputs. More precisely, the Law of returns to scale explains how a simultaneous and proportionate increase in all the inputs affects the total output at its various levels.

The concept of variable proportions is a short-run phenomenon as in these period fixed factors cannot be changed and all factors cannot be changed. On the other hand in the long-term all factors can be changed as made variable. When we study the changes in output when all factors or inputs are changed, we study returns to scale. An increase in the scale means that all inputs or factors are increased in the same proportion. In variable proportions, the cooperating factors may be increased or decreased and one faster (Ex. Land in agriculture (or) machinery in industry) remains constant so that the changes in proportion among the factors result in certain changes in output. In returns to scale all the necessary factors or production are increased or decreased to the same extent so that whatever the scale of production, the proportion among the factors remains the same.

When a firm expands, its scale increases all its inputs proportionally, then technically there are three possibilities. (i) The total output may increase proportionately (ii) The total output may increase more than proportionately and (iii) The total output may increase less than proportionately. If increase in the total output is proportional to the increase in input, it means constant returns to scale. If increase in the output is greater than the proportional increase in the inputs, it means increasing return to scale. If increase in the output is less than proportional increase in the inputs, it means diminishing returns to scale.

Let us now explain the laws of returns to scale with the help of isoquants for a two-input and single output production system.

Cost Analysis

Profit is the ultimate aim of any business and the long-run prosperity of a firm depends upon its ability to earn sustained profits. Profits are the difference between selling price and cost of production. In general the selling price is not within the control of a firm but many costs are under its control. The firm should therefore aim at controlling and minimizing cost. Since every business decision involves cost consideration, it is necessary to understand the meaning of various concepts for clear business thinking and application of right kind of costs.

Cost Concepts

A managerial economist must have a clear understanding of the different cost concepts for clear business thinking and proper application. The several alternative bases of classifying cost and the relevance of each for different kinds of problems are to be studied. The various relevant concepts of cost are:

1. *Opportunity costs and outlay costs*
2. Explicit and implicit costs
3. Historical and Replacement costs
4. Short – run and long – run costs

5. Out-of pocket and books costs
6. Fixed and variable costs
7. Past and Future costs
8. Avoidable and unavoidable costs.
9. Controllable and uncontrollable costs
10. Incremental and sunk costs
11. Total, average and marginal costs

Accounting costs are the costs recorded for the purpose of preparing the balance sheet and profit and ton statements to meet the legal, financial and tax purpose of the company. The accounting concept is a historical concept and records what has happened in the post.

Economics concept considers future costs and future revenues, which help future planning, and choice, while the accountant describes what has happened, the economics aims at projecting what will happen.

Breakeven Analysis

The study of cost-volume-profit relationship is often referred as BEA. The term BEA is interpreted in two senses. In its narrow sense, it is concerned with finding out BEP; BEP is the point at which total revenue is equal to total cost. It is the point of no profit, no loss. In its broad determine the probable profit at any level of production.

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.

Merits:

1. Information provided by the Break Even Chart can be understood more easily then those contained in the profit and Loss Account and the cost statement.

2. Break Even Chart discloses the relationship between cost, volume and profit. It reveals how changes in profit. So, it helps management in decision-making.
3. It is very useful for forecasting costs and profits long term planning and growth
4. The chart discloses profits at various levels of production.
5. It serves as a useful tool for cost control.
6. It can also be used to study the comparative plant efficiencies of the industry.
7. Analytical Break-even chart present the different elements, in the costs – direct material, direct labour, fixed and variable overheads.

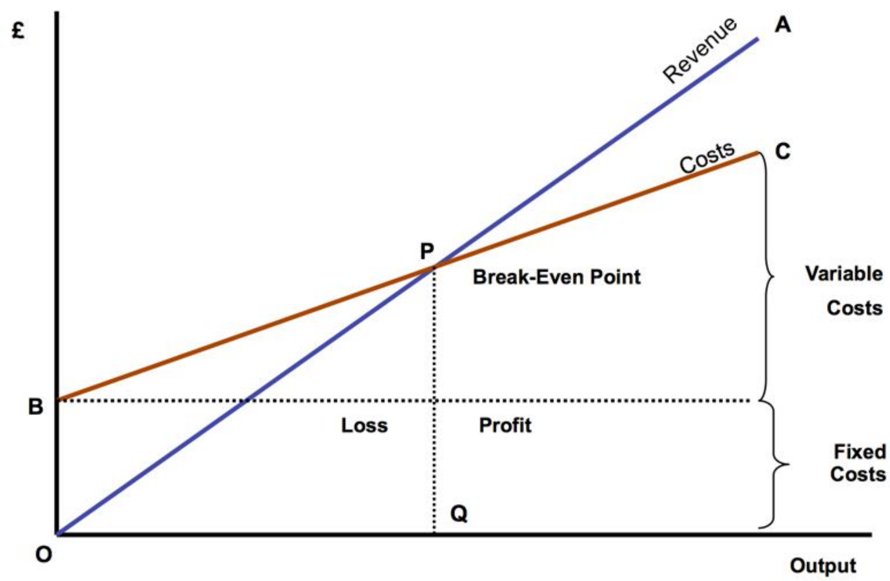
Demerits:

1. Break-even chart presents only cost volume profits. It ignores other considerations such as capital amount, marketing aspects and effect of government policy etc., which are necessary in decision making.
2. It is assumed that sales, total cost and fixed cost can be represented as straight lines. In actual practice, this may not be so.
3. It assumes that profit is a function of output. This is not always true. The firm may increase the profit without increasing its output.
4. A major drawback of BEC is its inability to handle production and sale of multiple products.
5. It is difficult to handle selling costs such as advertisement and sale promotion in BEC.
6. It ignores economics of scale in production.
7. Fixed costs do not remain constant in the long run.
8. Semi-variable costs are completely ignored.
9. It assumes production is equal to sale. It is not always true because generally there may be opening stock.
10. When production increases variable cost per unit may not remain constant but may reduce on account of bulk buying etc.
11. The assumption of static nature of business and economic activities is a well-known defect of BEC.

Important terms in BEP

1. *Fixed cost*
2. *Variable Cost*
3. *Contribution*
4. *Margin of safety*
5. *Angle of incidence*
6. *Profit Volume Ratio*
7. *Break – Even- Point*

Break Even Chart



UNIT-II
Assignment-Cum-Tutorial Questions
SECTION-A

Objective Questions

1. When different combinations of inputs yield the same level of output is known as ______.
2. ________ is a 'group of firms producing the same or slightly different products for the same market or using same raw material'
3. When Total Fixed Cost (TFC) and Total Variable Cost (TVC) are added, we get _______________.
4. The quantities of output through a given ________________ are equal.
5. The costs that are to be paid currently if the asset were to be replaced to be are called ________________.
6. The rate at which one input factor is substituted with the other to attain a given level of output is called ______________
7. Addition to costs as a result of change in the level of business activity is called _______________.
8. Production function mathematically can be written as________.
9. P/V ratio is also known as_______.
10. Conversion of inputs into output is called as _______________.

Multiple Choice Questions: (10 to 15)

1. 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

2. 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

3. The point of no profit and no loss is________ [ ]
(a) Maximum point (b) Minimum point
(c) Break-Even point (d) Average point

4. The price of pen is Rs.18/- and the variable cost to produce 1 unit is Rs.7/-.calculate contribution per unit? [ ]
(a) 10 (b) 11 (c) 21 (d) 25

5. 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

6. __________cost is the additional cost to produce an additional unit of output. [ ]
(a) Incremental (b) Sunk (c) Marginal (d) Total

7. The cost incurred to purchase machinery worth Rs.1,00,000/- is ______ Cost [ ]
(a) Incremental (b) Variable (c) Fixed (d) Total.

8. Telephone charges or Electricity charges are _____ costs. [ ]
(a) Fixed (b) Variable (c) Semi-Fixed and Semi variable (d) Total.

9. The line representing the least cost combination of inputs for different levels of output is called the ____________. [ ]
(a) Straight line (b) Expansion path. (c) Engel line (d) output path

SECTION-B

SUBJECTIVE QUESTIONS

1. Explain the operation of law of diminishing returns and its business implications.
2. Explain Cobb-Douglas Production function.
3. How come Iso-Quants and Iso cost analysis help in Production decision making.
4. Break even analysis is highly important in output Decision making. Discuss?
5. Define cost. Explain the different cost concepts used in the process of cost analysis.
6. Explain the following with reference to production functions
   a. MRTS b. Least cost combination of Inputs

Problems:

1. The information about Raj & Co are given below:
   PV ratio : 20%
   Fixed Cost : Rs. 36,000/-
   Selling Price per Unit: Rs. 150/-
   Calculate (i) BEP in rupees (ii) BEP in Units.
2. Mrs. Venu and co. is producing Water purifiers. The cost incurred in the production are as below
   a) Fixed cost Rs.1, 20,000/-. b) Variable cost per unit is Rs.400/-
   When the organization is selling each unit Rs.800/-find the Break-even point in volume and sales.

UNIT – III

Objective: To understand different types of markets based on market structure and price output determination in those markets and also to understand different pricing methods.

Syllabus:

Market structures- Types of competition, Features of perfect competition, monopoly and monopolistic competition. Pricing strategies**:** Cost based, Demand based, Competitive based and Strategy Based.

Learning Outcomes:

After completing this unit the student is able to understand

- Different types of markets and their competitive situations based on market structure
- Characteristics of perfect market, monopoly and monopolistic competition
- Price output determination under perfect competition and monopoly and monopolistic competition
- Different pricing methods and strategies based on market conditions

Learning Material

INTRODUCTION TO MARKET AND PRICING STRATEGIES

Pricing Introduction: Pricing is an important, if not the most important function of all enterprises. Since every enterprise is engaged in the production of some goods or/and service. Incurring some expenditure, it must set a price for the same to sell it in the market. It is only in extreme cases that the firm has no say in pricing its product; because there is severe or rather perfect competition in the market of the good happens to be of such public significance that its price is decided by the government. In an overwhelmingly large number of cases, the individual producer plays the role in pricing its product.

Price: Price denotes the exchange value of a unit of good expressed in terms of money.

Price determinants – Demand and supply

The price of a product is determined by the demand for and supply of that product. According to Marshall the role of these two determinants is like that of a pair of scissors in cutting cloth. It is possible that at times, while one pair is held fixed, the other is moving to cut the cloth. Similarly, it is conceivable that there could be situations under which either demand or supply is playing a passive role, and the other, which is active, alone appear to be determining the price. However, just as one pair of scissors alone can never cut a cloth, demand or supply alone is insufficient to determine the price.

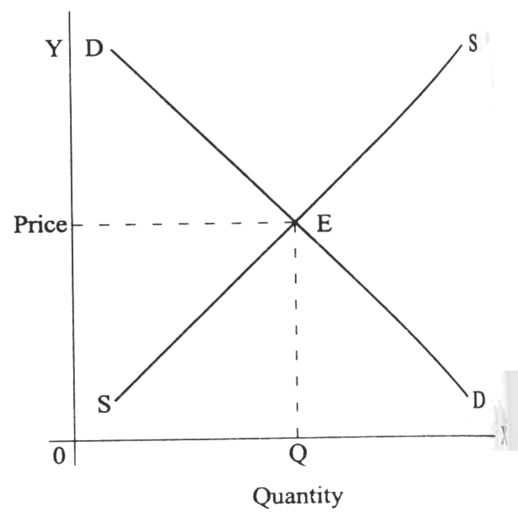
Equilibrium Price: The price at which demand and supply of a commodity is equal known as equilibrium price. The demand and supply schedules of a good are shown in the table below.

Demand supply schedule

Price	Demand	Supply
50	100	200
40	120	180
30	150	150
20	200	110
10	300	50

Of the five possible prices in the above example, price Rs.30 would be the market-clearing price. No other price could prevail in the market. If price is Rs. 50 supply would exceed demand and consequently the producers of this good would not find enough customers for their demand, thereby they would accumulate unwanted inventories of output, which, in turn, would lead to competition among the producers, forcing price to Rs.30. Similarly if price were Rs.10, there would be excess demand, which would give rise to competition among the buyers of good, forcing price to Rs.30. At price Rs.30, demand equals supply and thus both producers and consumers are satisfied. The economist calls such a price as equilibrium price.

The demand for a good depends on, a number of factors and thus, every factor, which influences either demand or supply is in fact a determinant of price. Accordingly, a change in demand or/and supply causes price change.



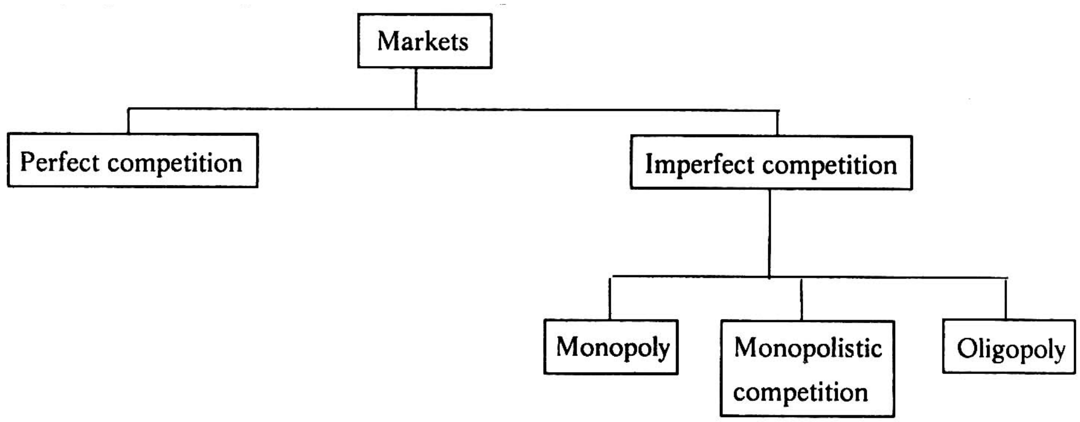
MARKET

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. The former one is a narrow concept and later one, a broader concept. Economists describe a market as a collection of buyers and sellers who transact over a particular product or product class (the housing market, the clothing market, the grain market etc.). 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. Hence the understanding on the market structure and the nature of competition are a pre-requisite in price determination.

Different Market Structures

Market structure describes the competitive environment in the market for any good or service. A market consists of all firms and individuals who are willing and able to buy or sell a particular product. This includes firms and individuals currently engaged in buying and selling a particular product, as well as potential entrants.

The determination of price is affected by the competitive structure of the market. This is because the firm operates in a market and not in isolation. In making decisions concerning economic variables it is affected, as are all institutions in society by its environment.



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.

Characteristics of Perfect Competition: The following features characterize a perfectly competitive market:

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. **Homogeneous product:** The product of each seller is totally undifferentiated from those of the others.
3. **Free entry and exit**: Any buyer and seller is free to enter or leave the market of the commodity.

4. **Perfect knowledge**: All buyers and sellers have perfect knowledge about the market for the commodity.
5. **Indifference:** No buyer has a preference to buy from a particular seller and no seller to sell to a particular buyer.
6. **Non-existence of transport costs**: Perfectly competitive market also assumes the non-existence of transport costs.
7. **Perfect mobility of factors of production**: Factors of production must be in a position to move freely into or out of industry and from one firm to the other.

Under such a market no single buyer or seller plays a significant role in price determination. One the other hand all of them jointly determine the price. The price is determined in the industry, which is composed of all the buyers and seller for the commodity. The demand curve facing the industry is the sum of all consumers' demands at various prices. The industry supply curve is the sum of all sellers' supplies at various prices.

The firm as price taker

The single firm takes its price from the industry, and is, consequently, referred to as a *price taker*. The industry is composed of all firms in the industry and the market price is where market demand is equal to market supply. Each single firm must charge this price and cannot diverge from it.

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: The following are the 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

Perfect competition and pure monopoly are rate phenomena in the real world. Instead, almost every market seems to exhibit characteristics of both perfect competition and monopoly. Hence in the real world it is the state of imperfect competition lying between these two extreme limits that work. Edward. H. Chamberlain developed the theory of monopolistic competition, which presents a more realistic picture of the actual market structure and the nature of competition.

Characteristics of Monopolistic Competition:

The important characteristics of monopolistic competition are:

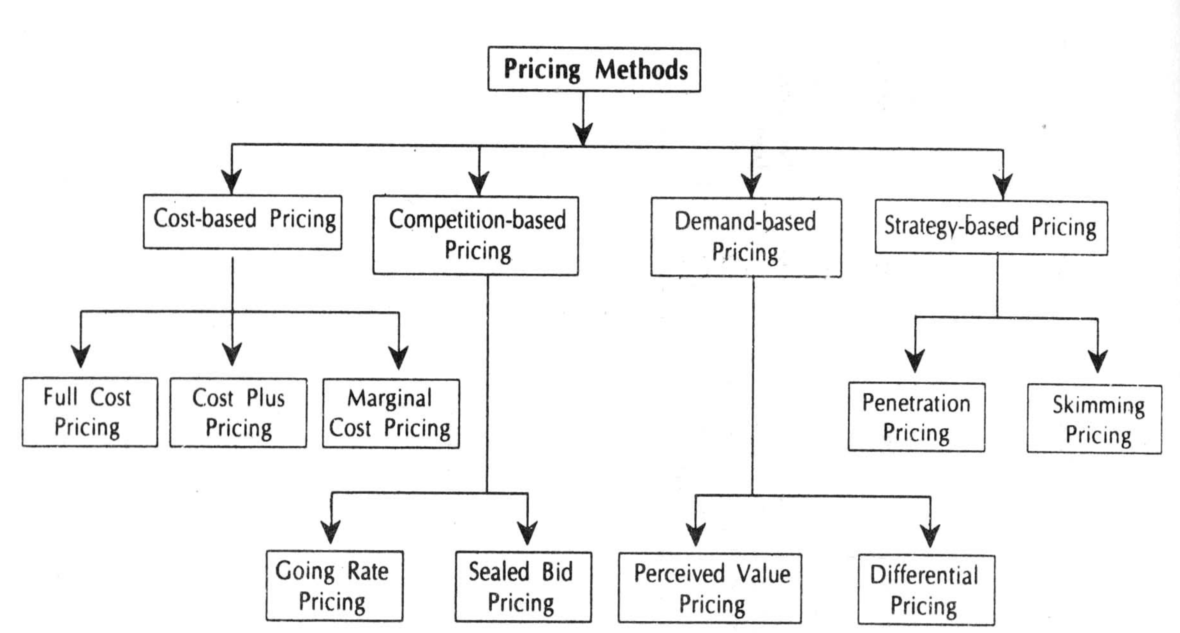
1. **Existence of Many firms:** Industry consists of a large number of sellers, each one of whom does not feel dependent upon others. Every firm acts independently without bothering about the reactions of its rivals. The size is so large that an individual firm has only a relatively small part in the total market, so that each firm has very limited control over the price of the product. As the number is relatively large it is difficult for these firms to determine its price- output policies without considering the possible reactions of the rival forms. A monopolistically competitive firm follows an independent price policy.

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. An example of monopolistic competition and product differentiation is the toothpaste produced by various firms.
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. Each seller has to plan various incentive schemes to retain the customers who patronize his products.
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. But in the business world we can see that thought the quality of certain products is the same, effective advertisement and sales promotion techniques make certain brands monopolistic. For examples, effective dealer service backed by advertisement-helped popularization of some brands through the quality of almost all the cement available in the market remains the same.
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. Prof. Chamberlin called the collection of firms producing close substitute products as a group.

I

Pricing Methods

Pricing objectives or goals give direction to the whole pricing process. Determining what your objectives are is the first step in pricing. When deciding on pricing objectives you must consider: 1) the overall financial, marketing, and strategic objectives of the company; 2) the objectives of your product or brand; 3) consumer price elasticity and price points; and 4) the resources you have available.



1. <u>Cost-oriented methods of pricing:</u>

a) Cost plus pricing:

Cost plus pricing involves adding a certain percentage to cost in order to fix the price. For instance, if the cost of a product is Rs. 200 per unit and the marketer expects 10 per cent profit on costs, then the selling price will be Rs. 220. The difference between the selling price and the cost is the profit. This method is simpler as marketers can easily determine the costs and add a certain percentage to arrive at the selling price.

b) Mark-up pricing:

Mark-up pricing is a variation of cost pricing. In this case, mark-ups are calculated as a percentage of the selling price and not as a percentage of the cost price. Firms that use cost-oriented methods use mark-up pricing.

2. **Competitor-based pricing**

If there is strong competition in a market, customers are faced with a wide choice of who to buy from. They may buy from the cheapest provider or perhaps from the one which offers the best customer service. But customers will certainly be mindful of what is a reasonable or normal price in the market.

Most firms in a competitive market do not have sufficient power to be able to set prices above their competitors. They tend to use **"going-rate" pricing** – i.e. **setting a price that is in line with the prices charged by direct competitors**. In effect such businesses are **"price-takers"** – they must accept the going market price as determined by the forces of demand and supply.

An advantage of using competitive pricing is that selling prices should be line with rivals, so price should not be a competitive disadvantage.

The main problem is that the business needs some other way to attract customers. It has to use non-price methods to compete – e.g. providing distinct customer service or better availability.

3. **Demand – oriented pricing:**

a. Perceived value pricing:

The valuation of good or service according to how much consumers are willing to pay for it, rather than upon its production and delivery costs. Using a perceived value pricing technique might be somewhat arbitrary, but it can greatly assist in the effective marketing of a product since it sets product pricing in line with its perceived value by potential buyers.

b. Price Discrimination

Price discrimination is the practice of charging a different price for the same good or service. The term differential pricing is also used to describe the practice of charging different prices to different buyers for the same quality and quantity of a product, but it can also refer to a combination of price differentiation and product differentiation. **4. Strategy Based Pricing:**

a) Creaming or skimming

In most skimming, goods are sold at higher prices so that fewer sales are needed to break even. Selling a product at a high price, sacrificing high sales to gain a high profit is therefore "skimming" the market. Skimming is usually employed to reimburse the cost of investment of the original research into the product: commonly used in electronic markets when a new range, such as DVD players, are firstly dispatched into the market at a high price. This strategy is often used to target "early adopters" of a product or service. Early adopters generally have a relatively lower price-sensitivity - this can be attributed to: their need for the product outweighing their need to economize; a greater understanding of the product's value; or simply having a higher disposable income. it will maximize profits for the better of the company

b) Penetration Pricing:

A penetration pricing strategy is designed to capture market share by entering the market with a low price relative to the competition to attract buyers. The idea is that the business will be able to raise awareness and get people to try the product. Even though penetration pricing may initially create a loss for the company, the hope is that it will help to generate word-of-mouth and create awareness amid a crowded market category.

c) Two parts Pricing:

Pricing strategy comprising a fixed (lump-sum) charge that does not vary with usage or consumption and an additional charge that does vary with usage or consumption. Providers of services including banking and finance, telecommunications and transport commonly apply two-part pricing. One reason to set a two-part price is to cover some customer-specific fixed cost, such as the cost of connection in telecommunications or the cost of line rental.

d) Bundling pricing:

The act of placing several products or services together in a single package and selling for a lower price than would be charged if the items were sold separately. The package usually includes one big ticket product and at least one complementary good. Bundled pricing is a marketing method used by retailers to sell products in high supply. Common examples include option packages on new cars, value meals at restaurants and cable TV channel plans. Pursuing a bundle pricing strategy allows you to increase your profit by giving customers a discount.

e) Transfer pricing

Transfer pricing is the setting of the price for goods and services sold between controlled (or related) legal entities within an enterprise. For example, if a subsidiary company sells goods to a parent company, the cost of those goods is the transfer price. Legal entities considered under the control of a single corporation include branches and companies that are wholly or majority owned ultimately by the parent corporation. Certain jurisdictions consider entities to be under common control if they share family members on their boards of directors. It can be used as a profit allocation method to attribute a multinational corporation's net profit (or loss) before tax to countries where it does business. Transfer pricing results in the setting of prices among divisions within an enterprise.

f) Cross subsidization

Cross subsidization is the practice of charging higher prices to one group of consumers in order to subsidize lower prices for another group. State trading enterprises with monopoly control over marketing agricultural exports are sometimes alleged to cross subsidize, but lack of transparency in their operations makes it difficult, if not impossible, to determine if that is the case. A strategy where support for a product comes from the profits generated by another product. This is usually done to attract customers to a newly introduced product by giving them a lower price. The low price is sustained by the earnings of another product sold by the same company.

g) **Psychological pricing**

It is a type of pricing which can be translated into a small incentive that can make a huge impact psychologically on customers. Customers are more willing to buy the necessary products at $4,99 than products costing $5. The difference in price is actually completely irrelevant. However, it make a great difference in the mind of the customers. This strategy can frequently be seen in the supermarkets and small shops.

Assignment-Cum-Tutorial Questions

Section A

Objective Questions

1. In Monopoly market environment, seller is the _________.
2. The price at which demand and supply of a commodity equal is known as______________.
3. ______________is a form of market organization in which there is only one seller of the commodity.
4. Perfect competition consists of many firms producing goods that are ________________.
5. ______________ is a market where large number of buyers and sellers deal in differentiated product.
6. A monopolistic can continue to sell as long as his marginal revenue__________ marginal cost.
7. Charging very high price in the beginning and reducing it gradually is called_____________.
8. The system of charging the customer both at the time of taking him into the organization and providing him services is called_____________.
9. Tenders are based on _____________ pricing.
10. Under________, Initially The prices kept low while in ________ it is kept high

1. Based on which of the following, the market can be divided into perfect markets and imperfect markets? [ ]
   (a) Degree of concentration (c) Degree of differentiation
   (b) Degree of condition (d) Degree of competition
2. The price of a product is determined by the _____of that product.
   (a) Demand and supply (c) Place and time [ ]
   (b) Production and sales (d) Cost and income
3. Monopoly is not desirable as [ ]
   (a) Efficient allocation of resources is not possible.
   (b) Lessens the gap of rich and poor.
   (c) Extends the slope for research and development.
   (d) It leads to exploitation of consumers.

4. Which of the following is the best example of a perfectly competitive market? [ ]
   (a) diamonds (c) soft drinks
   (b) Athletic shoes (d) farming.

5. Railways is an example of [ ]
   (a) Oligopoly. (c) Monopolistic
   (b) Monopoly (d) Perfect
6. To achieve more market power, firms can: [ ]
   (a) Differentiate their products from the products of their rivals.
   (b) Reduce their costs of production.
   (c) Raise their profit margin on prices.
   (d) Advertise that they charge low prices

7. The difference between a market and an industry is that [ ]
   (a) Industries consist of firms producing the same good while markets consist of industries producing substitute goods.
   (b) Industries consist of markets producing the same good while markets consist of firms producing substitute goods.
   (c) Industries are collections of markets while markets are collections of firms.
   (d) Firms make up a market while markets make up an industry.

8. New product pricing strategy through which companies set lower prices to gain large market share is classified as [ ]

   (a) optional product pricing
   (b) skimming pricing
   (c) penetration pricing
   (d) captive product pricing.

9. Which of the following refers to the practice of selling the same product at different prices to different buyers? [ ]
   (a) Product Differentiation
   (b) Price Discrimination
   (c) Price Differentiation
   (d) Product Discrimination.

10. The practice of Bundling to or more different products together and selling them at a single bundle price is called______
    (a)Two- part pricing (c) Block Pricing
    (b) Commodity bundling (d) Transfer pricing

Section B.

1. What is a market? Explain about types of Markets?
2. Discuss the differences between Monopoly and Perfect competition.
3. What is price? Explain different types of pricing.
4. Explain the characteristics of Monopoly and Monopolistic markets.
5. Discuss Features of Market structures.

UNIT – IV

Introduction to Business Organizations

Objective:

- To build a foundation of knowledge on the different forms of Business Organizations and Business Cycle.
- To provide a comprehensive introduction to the key elements of the business organisation.

Syllabus:

Factors affecting the choice of business organisations, Forms of business organisations -Sole proprietorship, partnership, joint stock company, Public enterprises.

Learning Outcomes:

- Distinguish among the various forms of business ownership and various ways of getting a business started.
- Describe and discuss the various factors necessary for cultivating a business in a diverse global environment.

Learning Material

Introduction:

Factors affecting the choice of form of business organization
The following are the factors affecting the choice of a business organization:

1. **Easy to start and easy to close:** The form of business organization should be such that it should be easy to close. There should not be hassles or long procedures in the process of setting up business or closing the same.
2. **Division of labour:** There should be possibility to divide the work among the available owners.
3. **Large amount of resources:** Large volume of business requires large volume of resources. Some forms of business organization do not permit to raise larger resources. Select the one which permits to mobilize the large resources.
4. **Liability:** The liability of the owners should be limited to the extent of money invested in business. It is better if their personal properties are not brought into business to make up the losses of the business.

5. **Secrecy:** The form of business organization you select should be such that it should permit to take care of the business secrets. We know that century old business units are still surviving only because they could successfully guard their business secrets.
6. **Transfer of ownership:** There should be simple procedures to transfer the ownership to the next legal heir.
7. **Ownership, Management and control:** If ownership, management and control are in the hands of one or a small group of persons, communication will be effective and coordination will be easier. Where ownership, management and control are widely distributed, it calls for a high degree of professional's skills to monitor the performance of the business.
8. **Continuity:** The business should continue forever and ever irrespective of the uncertainties in future.
9. **Quick decision-making:** Select such a form of business organization, which permits you to take decisions quickly and promptly. Delay in decisions may invalidate the relevance of the decisions.
10. **Personal contact with customer:** Most of the times, customers give us clues to improve business. So choose such a form, which keeps you close to the customers.
11. **Flexibility:** In times of rough weather, there should be enough flexibility to shift from one business to the other. The lesser the funds committed in a particular business, the better it is.
12. **Taxation:** More profit means more tax. Choose such a form, which permits to pay low tax.

SOLE TRADER

The sole trader is the simplest, oldest and natural form of business organization. It is also called sole proprietorship. 'Sole' means one. 'Sole trader' implies that there is only one trader who is the owner of the business.

It is a one-man form of organization wherein the trader assumes all the risk of ownership carrying out the business with his own capital, skill and intelligence. He is the boss for himself. He has total operational freedom. He is the owner, Manager and controller. He has total freedom and flexibility. Full control lies with him. He can take his own decisions. He can choose or drop a particular product or business based on its merits. He need not discuss this with anybody. He is responsible for himself. This form of organization is popular all over the world. Restaurants, Supermarkets, pan shops, medical shops, hosiery shops etc.

Features

- It is easy to start a business under this form and also easy to close.
- He introduces his own capital. Sometimes, he may borrow, if necessary
- He enjoys all the profits and in case of loss, he lone suffers.

- He has unlimited liability which implies that his liability extends to his personal properties in case of loss.
- He has a high degree of flexibility to shift from one business to the other.
- Business secretes can be guarded well
- There is no continuity. The business comes to a close with the death, illness or insanity of the sole trader. Unless, the legal heirs show interest to continue the business, the business cannot be restored.
- He has total operational freedom. He is the owner, manager and controller.
- He can be directly in touch with the customers.
- He can take decisions very fast and implement them promptly.
- Rates of tax, for example, income tax and so on are comparatively very low.

Advantages

The following are the advantages of the sole trader from of business organization:

1. **Easy to start and easy to close**: Formation of a sole trader from of organization is relatively easy even closing the business is easy.
2. **Personal contact with customers directly:** Based on the tastes and preferences of the customers the stocks can be maintained.
3. **Prompt decision-making:** To improve the quality of services to the customers, he can take any decision and implement the same promptly. He is the boss and he is responsible for his business Decisions relating to growth or expansion can be made promptly.
4. **High degree of flexibility:** Based on the profitability, the trader can decide to continue or change the business, if need be.
5. **Secrecy:** Business secrets can well be maintained because there is only one trader.
6. **Low rate of taxation:** The rate of income tax for sole traders is relatively very low.
7. **Direct motivation:** If there are profits, all the profits belong to the trader himself. In other words. If he works more hard, he will get more profits. This is the direct motivating factor. At the same time, if he does not take active interest, he may stand to lose badly also.
8. **Total Control:** The ownership, management and control are in the hands of the sole trader and hence it is easy to maintain the hold on business.
9. **Minimum interference from government:** Except in matters relating to public interest, government does not interfere in the business matters of the sole trader. The sole trader is free to fix price for his products/services if he enjoys monopoly market.
10. **Transferability:** The legal heirs of the sole trader may take the possession of the business.

Disadvantages

The following are the disadvantages of sole trader form:

1. **Unlimited liability:** The liability of the sole trader is unlimited. It means that the sole trader has to bring his personal property to clear off the loans of his business. From the legal point of view, he is not different from his business.
2. **Limited amounts of capital:** The resources a sole trader can mobilize cannot be very large and hence this naturally sets a limit for the scale of operations.
3. **No division of labour:** All the work related to different functions such as marketing, production, finance, labour and so on has to be taken care of by the sole trader himself. There is nobody else to take his burden. Family members and relatives cannot show as much interest as the trader takes.
4. **Uncertainty:** There is no continuity in the duration of the business. On the death, insanity of insolvency the business may be come to an end.
5. **Inadequate for growth and expansion:** This from is suitable for only small size, one-man-show type of organizations. This may not really work out for growing and expanding organizations.
6. **Lack of specialization:** The services of specialists such as accountants, market researchers, consultants and so on, are not within the reach of most of the sole traders.
7. **More competition:** Because it is easy to set up a small business, there is a high degree of competition among the small businessmen and a few who are good in taking care of customer requirements along can service.
8. **Low bargaining power:** The sole trader is the in the receiving end in terms of loans or supply of raw materials. He may have to compromise many times regarding the terms and conditions of purchase of materials or borrowing loans from the finance houses or banks.

PARTNERSHIP

Partnership is an improved from of sole trader in certain respects. Where there are like-minded persons with resources, they can come together to do the business and share the profits/losses of the business in an agreed ratio. Persons who have entered into such an agreement are individually called ‘partners’ and collectively called ‘firm’. The relationship among partners is called a partnership.

Indian Partnership Act, 1932 defines partnership as the relationship between two or more persons who agree to share the profits of the business carried on by all or any one of them acting for all.

Features

1. **Relationship:** Partnership is a relationship among persons. It is relationship resulting out of an agreement.
2. **Two or more persons:** There should be two or more number of persons.
3. **There should be a business**: Business should be conducted.
4. **Agreement:** Persons should agree to share the profits/losses of the business
5. **Carried on by all or any one of them acting for all:** The business can be carried on by all or any one of the persons acting for all. This means that the business can be carried on by one person who is the agent for all other persons. Every partner is both an agent and a principal. Agent for other partners and principal for himself. All the partners are agents and the 'partnership' is their principal.

The following are the other features:

(a) **Unlimited liability:** The liability of the partners is unlimited. The partnership and partners, in the eye of law, and not different but one and the same. Hence, the partners have to bring their personal assets to clear the losses of the firm, if any.

(b) **Number of partners:** According to the Indian Partnership Act, the minimum number of partners should be two and the maximum number if restricted, as given below:

- 10 partners is case of banking business
- 20 in case of non-banking business

(c) **Division of labour:** Because there are more than two persons, the work can be divided among the partners based on their aptitude.

(d) **Personal contact with customers:** The partners can continuously be in touch with the customers to monitor their requirements.

(e) **Flexibility:** All the partners are likeminded persons and hence they can take any decision relating to business.

Partnership Deed

The written agreement among the partners is called 'the partnership deed'. It contains the terms and conditions governing the working of partnership. The following are contents of the partnership deed.

1. Names and addresses of the firm and partners
2. Nature of the business proposed
3. Duration
4. Amount of capital of the partnership and the ratio for contribution by each of the partners.
5. Their profit sharing ration (this is used for sharing losses also)
6. Rate of interest charged on capital contributed, loans taken from the partnership and the amounts drawn, if any, by the partners from their respective capital balances.
7. The amount of salary or commission payable to any partner

8. Procedure to value good will of the firm at the time of admission of a new partner, retirement of death of a partner
9. Allocation of responsibilities of the partners in the firm
10. Procedure for dissolution of the firm
11. Name of the arbitrator to whom the disputes, if any, can be referred to for settlement.
12. Special rights, obligations and liabilities of partners(s), if any.

KIND OF PARTNERS

The following are the different kinds of partners:

1. **Active Partner:** Active partner takes active part in the affairs of the partnership. He is also called working partner.
2. **Sleeping Partner:** Sleeping partner contributes to capital but does not take part in the affairs of the partnership.
3. **Nominal Partner:** Nominal partner is partner just for namesake. He neither contributes to capital nor takes part in the affairs of business. Normally, the nominal partners are those who have good business connections, and are well places in the society.
4. **Partner by Estoppels:** Estoppels means behavior or conduct. Partner by estoppels gives an impression to outsiders that he is the partner in the firm. In fact be neither contributes to capital, nor takes any role in the affairs of the partnership.
5. **Partner by holding out:** If partners declare a particular person (having social status) as partner and this person does not contradict even after he comes to know such declaration, he is called a partner by holding out and he is liable for the claims of third parties. However, the third parties should prove they entered into contract with the firm in the belief that he is the partner of the firm. Such a person is called partner by holding out.
6. **Minor Partner:** Minor has a special status in the partnership. A minor can be admitted for the benefits of the firm. A minor is entitled to his share of profits of the firm. The liability of a minor partner is limited to the extent of his contribution of the capital of the firm.

Right of partners

Every partner has right

(a) To take part in the management of business
(b) To express his opinion
(c) Of access to and inspect and copy and book of accounts of the firm
(d) To share equally the profits of the firm in the absence of any specific agreement to the contrary
(e) To receive interest on capital at an agreed rate of interest from the profits of the firm
(f) To receive interest on loans, if any, extended to the firm.

(g) To be indemnified for any loss incurred by him in the conduct of the business
(h) To receive any money spent by him in the ordinary and proper conduct of the business of the firm.

Advantages

The following are the advantages of the partnership from:

1. **Easy to form:** Once there is a group of like-minded persons and good business proposal, it is easy to start and register a partnership.
2. **Availability of larger amount of capital:** More amount of capital can be raised from more number of partners.
3. **Division of labour:** The different partners come with varied backgrounds and skills. This facilities division of labour.
4. **Flexibility:** The partners are free to change their decisions, add or drop a particular product or start a new business or close the present one and so on.
5. **Personal contact with customers**: There is scope to keep close monitoring with customers requirements by keeping one of the partners in charge of sales and marketing. Necessary changes can be initiated based on the merits of the proposals from the customers.
6. **Quick decisions and prompt action:** If there is consensus among partners, it is enough to implement any decision and initiate prompt action. Sometimes, it may more time for the partners on strategic issues to reach consensus.
7. **The positive impact of unlimited liability:** Every partner is always alert about his impending danger of unlimited liability. Hence he tries to do his best to bring profits for the partnership firm by making good use of all his contacts.

Disadvantages:

The following are the disadvantages of partnership:

1. **Formation of partnership is difficult:** Only like-minded persons can start a partnership. It is sarcastically said,' it is easy to find a life partner, but not a business partner'.
2. **Liability:** The partners have joint and several liabilities beside unlimited liability. Joint and several liability puts additional burden on the partners, which means that even the personal properties of the partner or partners can be attached. Even when all but one partner become insolvent, the solvent partner has to bear the entire burden of business loss.
3. **Lack of harmony or cohesiveness:** It is likely that partners may not, most often work as a group with cohesiveness. This result in mutual conflicts, an attitude of suspicion and crisis of confidence. Lack of

harmony results in delay in decisions and paralyses the entire operations.

4. **Limited growth:** The resources when compared to sole trader, a partnership may raise little more. But when compare to the other forms such as a company, resources raised in this form of organization are limited. Added to this, there is a restriction on the maximum number of partners.
5. **Instability:** The partnership form is known for its instability. The firm may be dissolved on death, insolvency or insanity of any of the partners.
6. **Lack of Public confidence:** Public and even the financial institutions look at the unregistered firm with a suspicious eye. Though registration of the firm under the Indian Partnership Act is a solution of such problem, this cannot revive public confidence into this form of organization overnight. The partnership can create confidence in other only with their performance.

JOINT STOCK COMPANY

The joint stock company emerges from the limitations of partnership such as joint and several liability, unlimited liability, limited resources and uncertain duration and so on. Normally, to take part in a business, it may need large money and we cannot foretell the fate of business. It is not literally possible to get into business with little money. Against this background, it is interesting to study the functioning of a joint stock company. The main principle of the joint stock company from is to provide opportunity to take part in business with a low investment as possible say Rs.1000. Joint Stock Company has been a boon for investors with moderate funds to invest.

The word ‘ company’ has a Latin origin, com means ‘ come together’, pany means ‘ bread’, joint stock company means, people come together to earn their livelihood by investing in the stock of company jointly.

Company Defined

Lord justice Lindley explained the concept of the joint stock company from of organization as ‘an association of many persons who contribute money or money’s worth to a common stock and employ it for a common purpose.

Features

This definition brings out the following features of the company:

1. **Artificial person:** The Company has no form or shape. It is an artificial person created by law. It is intangible, invisible and existing only, in the eyes of law.
2. **Separate legal existence**: it has an independence existence, it separate from its members. It can acquire the assets. It can borrow for the company. It can sue other if they are in default in payment of dues,

breach of contract with it, if any. Similarly, outsiders for any claim can sue it. A shareholder is not liable for the acts of the company. Similarly, the shareholders cannot bind the company by their acts.

3. **Voluntary association of persons**: The Company is an association of voluntary association of persons who want to carry on business for profit. To carry on business, they need capital. So they invest in the share capital of the company.
4. **Limited Liability**: The shareholders have limited liability i.e., liability limited to the face value of the shares held by him. In other words, the liability of a shareholder is restricted to the extent of his contribution to the share capital of the company. The shareholder need not pay anything, even in times of loss for the company, other than his contribution to the share capital.
5. **Capital is divided into shares**: The total capital is divided into a certain number of units. Each unit is called a share. The price of each share is priced so low that every investor would like to invest in the company. The companies promoted by promoters of good standing (i.e., known for their reputation in terms of reliability character and dynamism) are likely to attract huge resources.
6. **Transferability of shares**: In the company form of organization, the shares can be transferred from one person to the other. A shareholder of a public company can cell sell his holding of shares at his will. However, the shares of a private company cannot be transferred. A private company restricts the transferability of the shares.
7. **Common Seal**: As the company is an artificial person created by law has no physical form, it cannot sign its name on a paper; so, it has a common seal on which its name is engraved. The common seal should affix every document or contract; otherwise the company is not bound by such a document or contract.
8. **Perpetual succession**: 'Members may comes and members may go, but the company continues for ever and ever' A. company has uninterrupted existence because of the right given to the shareholders to transfer the shares.
9. **Ownership and Management separated**: The shareholders are spread over the length and breadth of the country, and sometimes, they are from different parts of the world. To facilitate administration, the shareholders elect some among themselves or the promoters of the company as directors to a Board, which looks after the management of the business. The Board recruits the managers and employees at different levels in the management. Thus the management is separated from the owners.
10. **Winding up**: Winding up refers to the putting an end to the company. Because law creates it, only law can put an end to it in special circumstances such as representation from creditors of financial institutions, or shareholders against the company that their interests are

not safeguarded. The company is not affected by the death or insolvency of any of its members.

11. **The name of the company ends with 'limited'**: it is necessary that the name of the company ends with limited (Ltd.) to give an indication to the outsiders that they are dealing with the company with limited liability and they should be careful about the liability aspect of their transactions with the company.

Formation of Joint Stock Company

There are two stages in the formation of a joint stock company. They are:

(a) To obtain Certificates of Incorporation
(b) To obtain certificate of commencement of Business

Certificate of Incorporation: The certificate of Incorporation is just like a 'date of birth' certificate. It certifies that a company with such and such a name is born on a particular day.

Certificate of commencement of Business: A private company need not obtain the certificate of commencement of business. It can start its commercial operations immediately after obtaining the certificate of Incorporation.

The persons who conceive the idea of starting a company and who organize the necessary initial resources are called promoters. The vision of the promoters forms the backbone for the company in the future to reckon with.

The promoters have to file the following documents, along with necessary fee, with a registrar of joint stock companies to obtain certificate of incorporation:

(a) **Memorandum of Association**: The Memorandum of Association is also called the charter of the company. It outlines the relations of the company with the outsiders. If furnishes all its details in six clause such as (ii) Name clause (II) situation clause (iii) objects clause (iv) Capital clause and (vi) subscription clause duly executed by its subscribers.
(b) **Articles of association**: Articles of Association furnishes the byelaws or internal rules government the internal conduct of the company.
(c) The list of names and address of the proposed directors and their willingness, in writing to act as such, in case of registration of a public company.
(d) A statutory declaration that all the legal requirements have been fulfilled. The declaration has to be duly signed by any one of the following: Company secretary in whole practice, the proposed director, legal solicitor, chartered accountant in whole time practice or advocate of High court.

The registrar of joint stock companies peruses and verifies whether all these documents are in order or not. If he is satisfied with the information furnished, he will register the documents and then issue a certificate of incorporation, if it is private company, it can start its business operation immediately after obtaining certificate of incorporation.

Advantages

The following are the advantages of a joint Stock Company

1. **Mobilization of larger resources:** A joint stock company provides opportunity for the investors to invest, even small sums, in the capital of large companies. The facilities rising of larger resources.
2. **Separate legal entity:** The Company has separate legal entity. It is registered under Indian Companies Act, 1956.
3. **Limited liability:** The shareholder has limited liability in respect of the shares held by him. In no case, does his liability exceed more than the face value of the shares allotted to him.
4. **Transferability of shares:** The shares can be transferred to others. However, the private company shares cannot be transferred.
5. **Liquidity of investments**: By providing the transferability of shares, shares can be converted into cash.
6. **Inculcates the habit of savings and investments**: Because the share face value is very low, this promotes the habit of saving among the common man and mobilizes the same towards investments in the company.
7. **Democracy in management**: the shareholders elect the directors in a democratic way in the general body meetings. The shareholders are free to make any proposals, question the practice of the management, suggest the possible remedial measures, as they perceive, The directors respond to the issue raised by the shareholders and have to justify their actions.
8. **Economics of large scale production**: Since the production is in the scale with large funds at
9. **Continued existence**: The Company has perpetual succession. It has no natural end. It continues forever and ever unless law put an end to it.
10. **Institutional confidence**: Financial Institutions prefer to deal with companies in view of their professionalism and financial strengths.
11. **Professional management**: With the larger funds at its disposal, the Board of Directors recruits competent and professional managers to handle the affairs of the company in a professional manner.
12. **Growth and Expansion**: With large resources and professional management, the company can earn good returns on its operations, build good amount of reserves and further consider the proposals for growth and expansion.

Disadvantages

1. **Formation of company is a long drawn procedure**: Promoting a joint stock company involves a long drawn procedure. It is expensive and involves large number of legal formalities.
2. **High degree of government interference**: The government brings out a number of rules and regulations governing the internal conduct of the operations of a company such as meetings, voting, audit and so on, and any violation of these rules results into statutory lapses, punishable under the companies act.
3. **Inordinate delays in decision-making**: As the size of the organization grows, the number of levels in organization also increases in the name of specialization. The more the number of levels, the more is the delay in decision-making. Sometimes, so-called professionals do not respond to the urgencies as required. It promotes delay in administration, which is referred to 'red tape and bureaucracy'.
4. **Lack or initiative**: In most of the cases, the employees of the company at different levels show slack in their personal initiative with the result, the opportunities once missed do not recur and the company loses the revenue.
5. **Lack of responsibility and commitment**: In some cases, the managers at different levels are afraid to take risk and more worried about their jobs rather than the huge funds invested in the capital of the company lose the revenue.
6. **Lack of responsibility and commitment:** In some cases, the managers at different levels are afraid to take risk and more worried about their jobs rather than the huge funds invested in the capital of the company. Where managers do not show up willingness to take responsibility, they cannot be considered as committed. They will not be able to handle the business risks.

PUBLIC ENTERPRISES

Public enterprises occupy an important position in the Indian economy. Today, public enterprises provide the substance and heart of the economy. Its investment of over Rs.10,000 crore is in heavy and basic industry, and infrastructure like power, transport and communications. The concept of public enterprise in Indian dates back to the era of pre-independence.

Genesis of Public Enterprises

In consequence to declaration of its goal as socialistic pattern of society in 1954, the Government of India realized that it is through progressive extension of public enterprises only, the following aims of our five years plans can be fulfilled.

- Higher production
- Greater employment

- Economic equality, and
- Dispersal of economic power

The government found it necessary to revise its industrial policy in 1956 to give it a socialistic bent.

Need for Public Enterprises

The Industrial Policy Resolution 1956 states the need for promoting public enterprises as follows:

- To accelerate the rate of economic growth by planned development
- To speed up industrialization, particularly development of heavy industries and to expand public sector and to build up a large and growing cooperative sector.
- To increase infrastructure facilities
- To disperse the industries over different geographical areas for balanced regional development
- To increase the opportunities of gainful employment
- To help in raising the standards of living
- To reducing disparities in income and wealth (By preventing private monopolies and curbing concentration of economic power and vast industries in the hands of a small number of individuals)

Achievements of public Enterprises

The achievements of public enterprise are vast and varied. They are:

1. Setting up a number of public enterprises in basic and key industries
2. Generating considerably large employment opportunities in skilled, unskilled, supervisory and managerial cadres.
3. Creating internal resources and contributing towards national exchequer for funds for development and welfare.
4. Bringing about development activities in backward regions, through locations in different areas of the country.
5. Assisting in the field of export promotion and conservation of foreign exchange.
6. Creating viable infrastructure and bringing about rapid industrialization (ancillary industries developed around the public sector as its nucleus).
7. Restricting the growth of private monopolies
8. Stimulating diversified growth in private sector
9. Taking over sick industrial units and putting them, in most of the vases, in order,
10. Creating financial systems, through a powerful networking of financial institutions, development and promotional institutions, which has resulted in social control and social orientation of investment, credit and capital management systems.

11. Benefiting the rural areas, priority sectors, small business in the fields of industry, finance, credit, services, trade, transport, consultancy and so on.

Forms of public enterprises
Public enterprises can be classified into three forms:

(a) Departmental undertaking
(b) Public corporation
(c) Government company

Departmental Undertaking
This is the earliest from of public enterprise. Under this form, the affairs of the public enterprise are carried out under the overall control of one of the departments of the government. The government department appoints a managing director (normally a civil servant) for the departmental undertaking. He will be given the executive authority to take necessary decisions. The departmental undertaking does not have a budget of its own. As and when it wants, it draws money from the government exchequer and when it has surplus money, it deposits it in the government exchequer. However, it is subject to budget, accounting and audit controls.

Examples for departmental undertakings are Railways, Department of Posts, All India Radio, Doordarshan, Defence undertakings like DRDL, DLRL, ordinance factories, and such.

Features
1. **Under the control of a government department**: The departmental undertaking is not an independent organization. It has no separate existence. It is designed to work under close control of a government department. It is subject to direct ministerial control.
2. **More financial freedom:** The departmental undertaking can draw funds from government account as per the needs and deposit back when convenient.
3. **Like any other government department**: The departmental undertaking is almost similar to any other government department
4. **Budget, accounting and audit controls**: The departmental undertaking has to follow guidelines (as applicable to the other government departments) underlying the budget preparation, maintenance of accounts, and getting the accounts audited internally and by external auditors.

5. **More a government organization, less a business organization** . The set up of a departmental undertaking is more rigid, less flexible, slow in responding to market needs.

Advantages

1. **Effective control**: Control is likely to be effective because it is directly under the Ministry.
2. **Responsible Executives**: Normally the administration is entrusted to a senior civil servant. The administration will be organized and effective.
3. **Less scope for mystification of funds**: Departmental undertaking does not draw any money more than is needed, that too subject to ministerial sanction and other controls. So chances for mis-utilisation are low.
4. **Adds to Government revenue**: The revenue of the government is on the rise when the revenue of the departmental undertaking is deposited in the government account.

Disadvantages

1. **Decisions delayed**: Control is centralized. This results in lower degree of flexibility. Officials in the lower levels cannot take initiative. Decisions cannot be fast and actions cannot be prompt.
2. **No incentive to maximize earnings**: The departmental undertaking does not retain any surplus with it. So there is no inventive for maximizing the efficiency or earnings.
3. **Slow response to market conditions**: Since there is no competition, there is no profit motive; there is no incentive to move swiftly to market needs.
4. **Redtapism and bureaucracy**: The departmental undertakings are in the control of a civil servant and under the immediate supervision of a government department. Administration gets delayed substantially.
5. **Incidence of more taxes**: At times, in case of losses, these are made up by the government funds only. To make up these, there may be a need for fresh taxes, which is undesirable.

Any business organization to be more successful needs to be more dynamic, flexible, and responsive to market conditions, fast in decision making and prompt in actions. None of these qualities figure in the features of a departmental undertaking. It is true that departmental undertaking operates as a extension to the government. With the result, the government may miss certain business opportunities. So as not to miss business opportunities, the government has thought of another form of public enterprise, that is, Public corporation.

PUBLIC CORPORATION

Having released that the routing government administration would not be able to cope up with the demand of its business enterprises, the Government of India, in 1948, decided to organize some of its enterprises as statutory corporations. In pursuance of this, Industrial Finance Corporation, Employees' State Insurance Corporation was set up in 1948.

Public corporation is a 'right mix of public ownership, public accountability and business management for public ends'. The public corporation provides machinery, which is flexible, while at the same time retaining public control.

Definition

A public corporation is defined as a 'body corporate create by an Act of Parliament or Legislature and notified by the name in the official gazette of the central or state government. It is a corporate entity having perpetual succession, and common seal with power to acquire, hold, dispose off property, sue and be sued by its name".

Examples of a public corporation are Life Insurance Corporation of India, Unit Trust of India, Industrial Finance Corporation of India, Damodar Valley Corporation and others.

Features

1. **A body corporate**: It has a separate legal existence. It is a separate company by itself. If can raise resources, buy and sell properties, by name sue and be sued.
2. **More freedom and day-to-day affairs**: It is relatively free from any type of political interference. It enjoys administrative autonomy.
3. **Freedom regarding personnel**: The employees of public corporation are not government civil servants. The corporation has absolute freedom to formulate its own personnel policies and procedures, and these are applicable to all the employees including directors.
4. **Perpetual succession**: A statute in parliament or state legislature creates it. It continues forever and till a statue is passed to wind it up.
5. **Financial autonomy**: Through the public corporation is fully owned government organization and the initial finance are provided by the Government, it enjoys total financial autonomy, Its income and expenditure are not shown in the annual budget of the government, it enjoys total financial autonomy. Its income and expenditure are not shown in the annual budget of the government. However, for its freedom it is restricted regarding capital expenditure beyond the laid down limits, and raising the capital through capital market.
6. **Commercial audit**: Except in the case of banks and other financial institutions where chartered accountants are auditors, in all

corporations, the audit is entrusted to the comptroller and auditor general of India.

7. **Run on commercial principles**: As far as the discharge of functions, the corporation shall act as far as possible on sound business principles.

Advantages

1. **Independence, initiative and flexibility**: The corporation has an autonomous set up. So it is independent, take necessary initiative to realize its goals, and it can be flexible in its decisions as required.
2. **Scope for Redtapism and bureaucracy minimized**: The Corporation has its own policies and procedures. If necessary they can be simplified to eliminate redtapism and bureaucracy, if any.
3. **Public interest protected**: The corporation can protect the public interest by making its policies more public friendly, Public interests are protected because every policy of the corporation is subject to ministerial directives and board parliamentary control.
4. **Employee friendly work environment**: Corporation can design its own work culture and train its employees accordingly. It can provide better amenities and better terms of service to the employees and thereby secure greater productivity.
5. **Competitive prices**: the corporation is a government organization and hence can afford with minimum margins of profit, It can offer its products and services at competitive prices.
6. **Economics of scale**: By increasing the size of its operations, it can achieve economics of large-scale production.
7. **Public accountability**: It is accountable to the Parliament or legislature; it has to submit its annual report on its working results.

Disadvantages

1. **Continued political interference**: the autonomy is on paper only and in reality, the continued.
2. **Misuse of Power**: In some cases, the greater autonomy leads to misuse of power. It takes time to unearth the impact of such misuse on the resources of the corporation. Cases of misuse of power defeat the very purpose of the public corporation.
3. **Burden for the government**: Where the public corporation ignores the commercial principles and suffers losses, it is burdensome for the government to provide subsidies to make up the losses.

Government Company

Section 617 of the Indian Companies Act defines a government company as "any company in which not less than 51 percent of the paid up share capital" is held by the Central Government or by any State Government or Governments or partly by Central Government and partly by one or more of the state Governments and includes and company which is subsidiary of government company as thus defined".

A government company is the right combination of operating flexibility of privately organized companies with the advantages of state regulation and control in public interest.

Government companies differ in the degree of control and their motive also.

Some government companies are promoted as

- industrial undertakings (such as Hindustan Machine Tools, Indian Telephone Industries, and so on)
- Promotional agencies (such as National Industrial Development Corporation, National Small Industries Corporation, and so on) to prepare feasibility reports for promoters who want to set up public or private companies.
- Agency to promote trade or commerce. For example, state trading corporation, Export Credit Guarantee Corporation and so such like.
- A company to take over the existing sick companies under private management (E.g. Hindustan Shipyard)
- A company established as a totally state enterprise to safeguard national interests such as Hindustan Aeronautics Ltd. And so on.
- Mixed ownership company in collaboration with a private consult to obtain technical knowhow and guidance for the management of its enterprises, e.g. Hindustan Cables)

Features

1. **Like any other registered company**: It is incorporated as a registered company under the Indian companies Act. 1956. Like any other company, the government company has separate legal existence. Common seal, perpetual succession, limited liability, and so on. The provisions of the Indian Companies Act apply for all matters relating to formation, administration and winding up. However, the government has a right to exempt the application of any provisions of the government companies.
2. **Shareholding**: The majority of the share are held by the Government, Central or State, partly by the Central and State Government(s), in the name of the President of India, It is also common that the collaborators and allotted some shares for providing the transfer of technology.
3. **Directors are nominated**: As the government is the owner of the entire or majority of the share capital of the company, it has freedom to nominate the directors to the Board. Government may consider the requirements of the company in terms of necessary specialization and appoints the directors accordingly.
4. **Administrative autonomy and financial freedom**: A government company functions independently with full discretion and in the normal administration of affairs of the undertaking.

5. **Subject to ministerial control**: Concerned minister may act as the immediate boss. It is because it is the government that nominates the directors, the minister issue directions for a company and he can call for information related to the progress and affairs of the company any time.

Advantages:

1. **Formation is easy**: There is no need for an Act in legislature or parliament to promote a government company. A Government company can be promoted as per the provisions of the companies Act. Which is relatively easier?
2. **Separate legal entity**: It retains the advantages of public corporation such as autonomy, legal entity.
3. **Ability to compete:** It is free from the rigid rules and regulations. It can smoothly function with all the necessary initiative and drive necessary to complete with any other private organization. It retains its independence in respect of large financial resources, recruitment of personnel, management of its affairs, and so on.
4. **Flexibility**: A Government company is more flexible than a departmental undertaking or public corporation. Necessary changes can be initiated, which the framework of the company law. Government can, if necessary, change the provisions of the Companies Act. If found restricting the freedom of the government company. The form of Government Company is so flexible that it can be used for taking over sick units promoting strategic industries in the context of national security and interest.
5. **Quick decision and prompt actions**: In view of the autonomy, the government company take decision quickly and ensure that the actions and initiated promptly.
6. **Private participation facilitated**: Government company is the only from providing scope for private participation in the ownership. The facilities to take the best, necessary to conduct the affairs of business, from the private sector and also from the public sector.

Disadvantages

1. **Continued political and government interference**: Government seldom leaves the government company to function on its own. Government is the major shareholder and it dictates its decisions to the Board. The Board of Directors gets these approved in the general body. There were a number of cases where the operational polices were influenced by the whims and fancies of the civil servants and the ministers.
2. **Higher degree of government control**: The degree of government control is so high that the government company is reduced to mere

adjuncts to the ministry and is, in majority of the cases, not treated better than the subordinate organization or offices of the government.

3. **Evades constitutional responsibility**: A government company is creating by executive action of the government without the specific approval of the parliament or Legislature.
4. **Poor sense of attachment or commitment**: The members of the Board of Management of government companies and from the ministerial departments in their ex-officio capacity. The lack the sense of attachment and do not reflect any degree of commitment to lead the company in a competitive environment.
5. **Divided loyalties**: The employees are mostly drawn from the regular government departments for a defined period. After this period, they go back to their government departments and hence their divided loyalty dilutes their interest towards their job in the government company.
6. **Flexibility on paper:** The powers of the directors are to be approved by the concerned Ministry, particularly the power relating to borrowing, increase in the capital, appointment of top officials, entering into contracts for large orders and restrictions on capital expenditure. The government companies are rarely allowed to exercise their flexibility and independence.

UNIT-IV
Assignment-Cum-Tutorial Questions
SECTION-A

Objective Questions

1. The liability extending to the personal property of the trader is called _______

2. Joint Stock Company has ____________Liability.

3. Company is treated as ____________________Person.

4. The shares of a __________company can be transferred.

5. Maximum number of persons required to form a partnership in case of non-banking Business __________.

6. Forms of Public Enterprises are _______________________________________.

7. The stages in the formation of a joint stock company are ____________and__________.

8. Which one of the following is not a factor affecting the choice of a business organization? [ ]

(a) Liability (b)Agreement (c) Quick Decision making (d) Flexibility

9. An agreement to share profit implies______________________. [ ]

(a) To share only profits (c) To share only negative profits

(b) To share both profits and losses (d) Neither to share profits nor losses

10.“People may come and people may leave, but I go on forever” is applicable to _____ Business organization. [ ]

(a) Sole proprietorship (b) Partnership

(c) Company (d) Joint Hindu Family

11. In the absence of agreement the partners are entitled to share the profits

(a) Proportionate to capital brought in (c) equally

(b) Proportionate to their drawings (d) based on their admission.

12. Certificate of commencement of business should be obtained by _________ company to start its functions. [ ]
(a) Private (b) Statutory (c) Public (d) Chartered

13. _____________ is not required to private company to start its functions.
(a) Certificate of incorporation (b) Registration

(c) Certificate of commencement of business (d) None [ ]

14. _______________ partner can enjoy profits but no liability for losses.
(a) Active (b) Sleeping (c) Minor (d) Nominal [ ]

15. In public sector unit's ownership is in the hands of _________ [ ]
(a) Private persons (b) Public (c) Government (d) None

16. If either state government of central government or both have got not less than 51% of share in the organization. Then that is called____. [ ]

(a) Private organization (b) Partnership organization

(c) Government organization (d) Joint sector organization

Section B

1. Discuss the factors affecting the choice of form of business organization.
2. Define a joint stock company & explain its basic features, advantages & disadvantages
3. Explain in basic features of Government Company from of public enterprise.
4. What do you mean by sole proprietorship? Explain its merits and limitations.
5. Define partnership form of business. Explain its salient features.
6. Explain the formation of Joint Stock Company.
7. What is partnership deed and explain the different types of partners.
8. Explain the advantages and disadvantages of partnership form of organisation.

UNIT – V

Introduction to Accountancy

Objective:

The student will be able to understand

- concept and significance of accounting
- branches of accounting
- the concept and preparation of trail balance
- accounting concepts
- types of accounts and rules
- preparation of journal and ledger accounts
- preparation of final accounts with simple adjustments

Syllabus: Introduction to Accountancy, Types of Accounts, Ledgers, Maintenance of Ledgers & Trial Balance, Introduction to Final Accounts, Problems on Trading , Profit & Loss Account and Balance sheet, Problems with simple adjustments.

Learning Outcomes:

At the end of the Unit, Student will be able to

- learn about the fundamentals of accounting
- learn how to prepare profit and loss account
- identify the differences between assets and liabilities
- gain understanding about various adjustments in accounting

Learning Material

Definition of Accounting:

Smith and Ashburne: "Accounting is a means of measuring and reporting the results of economic activities."

R.N. Anthony: "Accounting system is a means of collecting summarizing, analyzing and reporting in monetary terms, the information about the business.

American Institute of Certified Public Accountants (AICPA): "The art of recording, classifying and summarizing in a significant manner and in terms of money transactions and events, which are in part at least, of a financial character and interpreting the results thereof."

Thus, accounting is an art of identifying, recording, summarizing and interpreting business transactions of financial nature. Hence accounting is the **Language of Business**.

Branches of Accounting:

The important branches of accounting are:

1. **Financial Accounting:** The purpose of Accounting is to ascertain the financial results i.e. profit or loss in the operations during a specific period. It is also aimed at knowing the financial position, i.e. assets, liabilities and equity position at the end of the period. It also provides other relevant information to the management as a basic for decision-making for planning and controlling the operations of the business.
2. **Cost Accounting:** The purpose of this branch of accounting is to ascertain the cost of a product / operation / project and the costs incurred for carrying out various activities. It also assists the management in controlling the costs. The necessary data and information are gatherr4ed form financial and other sources.
3. **Management Accounting:** Its aim to assist the management in taking correct policy decision and to evaluate the impact of its decisions and actions. The data required for this purpose are drawn accounting and cost-accounting.
4. **Inflation Accounting:** It is concerned with the adjustment in the values of assets and of profit in light of changes in the price level. In a way it is concerned with the overcoming of limitations that arise in financial statements on account of the cost assumption (i.e. recording of the assets at their historical or original cost) and the assumption of stable monetary unit.
5. **Human Resource Accounting:** It is a branch of accounting which seeks to report and emphasize the importance of human

resources in a company's earning process and total assets. It is concerned with the process of identifying and measuring data about human resources and communicating this information to interested parties. In simple words, it is accounting for people as organizational resources.

Functions of an Accountant

The job of an accountant involves the following types of accounting works:

1. **Designing Work:** It includes the designing of the accounting system, basis for identification and classification of financial transactions and events, forms, methods, procedures, etc.
2. **Recording Work:** The financial transactions are identified, classified and recorded in appropriate books of accounts according to principles. This is "Book Keeping". The recording of transactions tends to be mechanical and repetitive.
3. **Summarizing Work:** The recorded transactions are summarized into significant form according to generally accepted accounting principles. The work includes the preparation of profit and loss account, balance sheet. This phase is called 'preparation of final accounts'
4. **Analysis and Interpretation Work:** The financial statements are analysed by using ratio analysis, break-even analysis, funds flow and cash flow analysis.
5. **Reporting Work:** The summarized statements along with analysis and interpretation are communicated to the interested parties or whoever has the right to receive them. For Ex. Share holders. In addition, the accou8nting departments has to prepare and send regular reports so as to assist the management in decision making. This is 'Reporting'.
6. **Preparation of Budget:** The management must be able to reasonably estimate the future requirements and opportunities. As an aid to this process, the accountant has to prepare budgets, like cash budget, capital budget, purchase budget, sales budget etc. this is 'Budgeting'.

7. **Taxation Work:** The accountant has to prepare various statements and returns pertaining to income-tax, sales-tax, excise or customs duties etc., and file the returns with the authorities concerned.
8. **Auditing:** It involves a critical review and verification of the books of accounts statements and reports with a view to verifying their accuracy. This is 'Auditing'

This is what the accountant or the accounting department does. A person may be placed in any part of Accounting Department or MIS (Management Information System) Department or in small organization; the same person may have to attend to all this work.

Users of Accounting Information

Different categories of users need different kinds of information for making decisions. The users of accounting can be divided in two board groups (1). Internal users and (2). External users.

Internal Users:

Managers: These are the persons who manage the business, i.e. management at the top, middle and lower levels. Their requirements of information are different because they make different types of decisions.

Accounting reports are important to managers for evaluating the results of their decisions. In additions to external financial statements, managers need detailed internal reports either branch division or department or product-wise. Accounting reports for managers are prepared much more frequently than external reports.

Accounting information also helps the managers in appraising the performance of subordinates. As such Accounting is termed as "the eyes and ears of management."

External Users:

1. Investors: Those who are interested in buying the shares of company are naturally interested in the financial statements to know how safe the investment already made is and how safe the proposed investments will be.

2. Creditors: Lenders are interested to know whether their load, principal and interest, will be paid when due. Suppliers and other creditors are also interested to know the ability of the firm to pay their dues in time.

3. Workers: In our country, workers are entitled to payment of bonus which depends on the size of profit earned. Hence, they would like to be satisfied that he bonus being paid to them is correct. This knowledge also helps them in conducting negotiations for wages.

4. Customers: They are also concerned with the stability and profitability of the enterprise. They may be interested in knowing the financial strength of the company to rent it for further decisions relating to purchase of goods.

5. Government: Governments all over the world are using financial statements for compiling statistics concerning business which, in turn, helps in compiling national accounts. The financial statements are useful for tax authorities for calculating taxes.

6. Public : The public at large interested in the functioning of the enterprises because it may make a substantial contribution to the local economy in many ways including the number of people employed and their patronage to local suppliers.

7. Researchers: The financial statements, being a mirror of business conditions, is of great interest to scholars undertaking research in accounting theory as well as business affairs and practices.

Advantages from Accounting

The role of accounting has changed from that of a mere record keeping during the 1st decade of 20th century of the present stage, which it is accepted as information system and decision making activity. The following are the advantages of accounting.

1. **Provides for systematic records:** Since all the financial transactions are recorded in the books, one need not rely on memory. Any information required is readily available from these records.

2. **Facilitates the preparation of financial statements:** Profit and loss accountant and balance sheet can be easily prepared with the help of the information in the records. This enables the trader to know the net result of business operations (i.e. profit / loss) during the accounting period and the financial position of the business at the end of the accounting period.
3. **Provides control over assets:** Book-keeping provides information regarding cash in hand, cash at bank, stock of goods, accounts receivables from various parties and the amounts invested in various other assets. As the trader knows the values of the assets he will have control over them.
4. **Provides the required information:** Interested parties such as owners, lenders, creditors etc., get necessary information at frequent intervals.
5. **Comparative study:** One can compare the present performance of the organization with that of its past. This enables the managers to draw useful conclusion and make proper decisions.
6. **Less Scope for fraud or theft:** It is difficult to conceal fraud or theft etc., because of the balancing of the books of accounts periodically. As the work is divided among many persons, there will be check and counter check.
7. **Tax matters:** Properly maintained book-keeping records will help in the settlement of all tax matters with the tax authorities.
8. **Ascertaining Value of Business:** The accounting records will help in ascertaining the correct value of the business. This helps in the event of sale or purchase of a business.
9. **Documentary evidence:** Accounting records can also be used as evidence in the court to substantiate the claim of the business. These records are based on documentary proof. Every entry is supported by authentic vouchers. As such, Courts accept these records as evidence.
10. **Helpful to management:** Accounting is useful to the management in various ways. It enables the management to assess the achievement of its performance. The weakness of the business can be identified and corrective measures can be applied to remove them with the helps accounting.

Limitations of Accounting

The following are the limitations of accounting.

1. **Does not record all events:** Only the transactions of a financial character will be recorded under book-keeping. So it does not reveal a complete picture about the quality of human resources, location advantage, business contacts etc.
2. **Does not reflect current values:** The data available under book-keeping is historical in nature. So they do not reflect current values. For instance, we record the value of stock at cost price or market price, whichever is less. In case of, building, machinery etc., we adopt historical cost as the basis. In fact, the current values of buildings, plant and machinery may be much more than what is recorded in the balance sheet.
3. **Estimates based on Personal Judgment:** The estimate used for determining the values of various items may not be correct. For example, debtor are estimated in terms of collectability, inventories are based on marketability, and fixed assets are based on useful working life. These estimates are based on personal judgment and hence sometimes may not be correct.
4. **Inadequate information on costs and Profits:** Book-keeping only provides information about the overall profitability of the business. No information is given about the cost and profitability of different activities of products or divisions.

Basic Accounting Concepts

Accounting has been evolved over a period of several centuries. During this period, certain rules and conventions have been adopted. They serve as guidelines in identifying the events and transactions to be accounted for measuring, recording, summarizing and reporting them to the interested parties. These rules and conventions are termed as **Generally Accepted Accounting Principles.** These principles are also referred as standards, assumptions, concepts, conventions doctrines, etc. Thus, the accounting concepts are the fundamental ideas or basic assumptions underlying the theory and practice of financial accounting.

They are the broad working rules for all accounting activities developed and accepted by the accounting profession.

Basic accounting concepts may be classified into two broad categories.

1. Concept to be observed at the time of recording transactions.(Recording Stage).
2. Concept to be observed at the time of preparing the financial accounts (Reporting Stage)

Basic Accounting Concepts

Accounting is a system evolved to achieve a set of objectives. In order to achieve the goals, we need a set of rules or guidelines. These guidelines are termed here as "basic accounting concepts". The term concept means an idea or thought. Basic accounting concepts are the fundamental ideas or basic assumptions underlying the theory and profit of financial accounting. These concepts help in bringing about uniformity in the practice of accounting. In accountancy following concepts are quite popular.

1. *Business Entity Concept*: in this concept "business is treated as separate from the proprietor". All the transactions recorded in the book of business and not in the books of proprietor. the proprietor is also treated as a creditor for the business.

2. *Going Concern Concept*: this concept relates with the long life of business. The assumption is that business will continue to exist for unlimited period unless it is dissolved due to some reasons or the other.

3. *Money Measurement Concept*: in this concept "only those transactions are recorded in accounting which can be expressed in terms of money, those transactions which cannot be expressed in terms of money are not recorded in the books of accounting".

4. *Cost Concept*: accounting to this concept, can asset is recorded at its cost in the books of account. i.e., the price, which is paid at the time of acquiring it. In balance sheet, these assets appear not at cost price every year, but depreciation is deducted and they appear at the amount, which is cost, less classification.

5. *Accounting Period Concept*: every businessman wants to know the result of his investment and efforts after a certain period. usually one-year period is regarded as an ideal for this purpose. This period is called accounting period. it depends on the nature of the business and object of the proprietor of business.

6. *Dual Aspect Concept*: according to this concept "every business transactions has two aspects", one is the receiving benefit aspect another one is giving benefit aspect. the receiving benefit aspect is termed as "debit", where as the giving benefit aspect is termed as "credit". Therefore, for every debit, there will be corresponding credit.

7. *Matching Cost Concept*: according to this concept "the expenses incurred during an accounting period, e.g., if revenue is recognized on all goods sold during a period, cost of those good sole should also be charged to that period.

8. *Realization Concept*: according to this concept revenue is recognized when a sale is made. Sale is considered to be made at the point when the property in goods posses to the buyer and he becomes legally liable to pay.

Accounting Conventions

Accounting is based on some customs or usages. Naturally accountants here to adopt that usage or custom. They are termed as convert conventions in accounting. the following are some of the important accounting conventions.

1. *Full Disclosure*: according to this convention accounting reports should disclose fully and fairly the information. They purport to represent. They should be prepared honestly and sufficiently disclose information which is if material interest to proprietors, present and potential creditors and investors. The companies act, 1956 makes it compulsory to provide all the information in the prescribed form.

2. *Materiality*: under this convention the trader records important factor about the commercial activities. In the form of financial statements if

any unimportant information is to be given for the sake of clarity it will be given as footnotes.

3. *Consistency*: it means that accounting method adopted should not be changed from year to year. It means that there should be consistent in the methods or principles followed or else the results of a year cannot be conveniently compared with that of another.

4. *Conservatism*: this convention warns the trader not to take unrealized income in to account. That is why the practice of valuing stock at cost or market price, whichever is lower is in vague. This is the policy of "playing safe"; it takes in to consideration all prospective losses but leaves all prospective profits.

Classification of Business Transactions

All business transactions are classified into three categories:
1. Those relating to persons
2. Those relating to property (Assets)
3. Those relating to income & expenses

Thus, three classes of accounts are maintained for recording all business transactions. They are:
1. Personal accounts
2. Real accounts
3. Nominal accounts

1. Personal Accounts: Accounts which are transactions with persons are called "Personal Accounts".

A separate account is kept on the name of each person for recording the benefits received from, or given to the person in the course of dealings with him.

E.g.: Krishna's A/C, Gopal's A/C, SBI A/C, Nagarjuna Finanace Ltd. A/C, ObulReddy & Sons A/C, HMT Ltd. A/C, Capital A/C, Drawings A/C etc.

2. Real Accounts: The accounts relating to properties or assets are known as "Real Accounts" .Every business needs assets such as

machinery, furniture etc, for running its activities .A separate account is maintained for each asset owned by the business.
E.g.: cash A/C, furniture A/C, building A/C, machinery A/C etc.

3. NominalAccounts: Accounts relating to expenses, losses, incomes and gains are known as "Nominal Accounts". A separate account is maintained for each item of expenses, losses, income or gain.
E.g.: Salaries A/C, stationery A/C, wages A/C, postage A/C, commission A/C, interest A/C, purchases A/C, rent A/C, discount A/C, commission received A/C, interest received A/C, rent received A/C, discount received A/C.

Before recording a transaction, it is necessary to find out which of the accounts is to be debited and which is to be credited. The following three different rules have been laid down for the three classes of accounts....

1. Personal Accounts: The account of the person receiving benefit (receiver) is to be debited and the account of the person giving the benefit (given) is to be credited.

Rule: "Debit----The Receiver

Credit---The Giver"

2. Real Accounts: When an asset is coming into the business, account of that asset is to be debited .When an asset is going out of the business, the account of that asset is to be credited.

Rule: "Debit----What comes in

Credit---What goes out"

3. Nominal Accounts: When an expense is incurred or loss encountered, the account representing the expense or loss is to be debited. When any income is earned or gain made, the account representing the income of gain is to be credited.

Rule: "Debit----All expenses and losses

Credit---All incomes and gains"

Journal

The first step in accounting therefore is the record of all the transactions in the books of original entry viz., Journal and then posting into ledges.

Journal: The word Journal is derived from the Latin word 'journ' which means a day. Therefore, journal means a 'day Book' in day-to-day business transactions are recorded in chronological order.

Journal is treated as the book of original entry or first entry or prime entry. All the business transactions are recorded in this book before they are posted in the ledges. The journal is a complete and chronological (in order of dates) record of business transactions. It is recorded in a systematic manner. The process of recording a transaction in the journal is called "JOURNALISING". The entries made in the book are called "Journal Entries".

The proforma of Journal is given below.

Date	Particulars	L.F. no	Debit RS.	Credit RS.
1998 Jan 1	Purchases account to cash account(being goods purchased for cash)		10,000/-	10,000/-

Ledger

All the transactions in a journal are recorded in a chronological order. After a certain period, if we want to know whether a particular account is showing a debit or credit balance it becomes very difficult. So, the ledger is designed to accommodate the various accounts maintained the trader. It contains the final or permanent record of all the transactions in duly classified form. "A ledger is a book which contains various accounts." The process of transferring entries from journal to ledger is called "POSTING".

Posting is the process of entering in the ledger the entries given in the journal. Posting into ledger is done periodically, may be weekly or fortnightly as per the convenience of the business. The following are the guidelines for posting transactions in the ledger.

1. After the completion of Journal entries only posting is to be made in the ledger.
2. For each item in the Journal a separate account is to be opened. Further, for each new item a new account is to be opened.
3. Depending upon the number of transactions space for each account is to be determined in the ledger.
4. For each account there must be a name. This should be written in the top of the table. At the end of the name, the word "Account" is to be added.
5. The debit side of the Journal entry is to be posted on the debit side of the account, by starting with "TO".
6. The credit side of the Journal entry is to be posted on the debit side of the account, by starting with "BY".

Proforma for ledger: **Ledger Book**

Purchases account

Date	Particulars	Lfno	Amount	Date	Particulars	Lfno	amount

Sales account

Date	Particulars	Lfno	Amount	Date	Particulars	Lfno	amount

Cash account

Date	Particulars	Lfno	Amount	Date	Particulars	Lfno	amount

Trail Balance

The first step in the preparation of final accounts is the preparation of trail balance. In the double entry system of book keeping, there will be credit for every debit and there will not be any debit without credit. When this principle is followed in writing journal entries, the total amount of all debits is equal to the total amount all credits.

A trail balance is a statement of debit and credit balances. It is prepared on a particular date with the object of checking the accuracy of the books of accounts. It indicates that all the transactions for a particular period have been duly entered in the book, properly posted and balanced. The trail balance doesn't include stock in hand at the end of the period. All adjustments required to be done at the end of the period including closing stock are generally given under the trail balance.

Definitions: SPICER AND POGLAR: A trail balance is a list of all the balances standing on the ledger accounts and cash book of a concern at any given date.

J.R.BATLIBOI: A trail balance is a statement of debit and credit balances extracted from the ledger with a view to test the arithmetical accuracy of the books.

Thus a trail balance is a list of balances of the ledger accounts' and cash book of a business concern at any given date.

Proforma of Trail Balance:

Trail balance for MR……………………………………. as on ………..

No	Name of account (particulars)	Debit amount(rs.)	Credit amount(rs.)

Proforma of Trial Balance

1	Capital	Credit	Loan
2	Opening stock	Debit	Asset
3	Purchases	Debit	Expense
4	Sales	Credit	Gain
5	Returns inwards	Debit	Loss
6	Returns outwards	Debit	Gain
7	Wages	Debit	Expense
8	Freight	Debit	Expense
9	Transport expenses	Debit	Expense
10	Royalities on production	Debit	Expense
11	Gas, fuel	Debit	Expense
12	Discount received	Credit	Revenue
13	Discount allowed	Debit	Loss
14	Bas debts	Debit	Loss
15	Dab debts reserve	Credit	Gain
16	Commission received	Credit	Revenue
17	Repairs	Debit	Expense
18	Rent	Debit	Expense
19	Salaries	Debit	Expense
20	Loan Taken	Credit	Loan
21	Interest received	Credit	Revenue
22	Interest paid	Debit	Expense
23	Insurance	Debit	Expense
24	Carriage outwards	Debit	Expense
25	Advertisements	Debit	Expense
26	Petty expenses	Debit	Expense
27	Trade expenses	Debit	Expense
28	Petty receipts	Credit	Revenue
29	Income tax	Debit	Drawings
30	Office expenses	Debit	Expense
31	Customs duty	Debit	Expense
32	Sales tax	Debit	Expense
33	Provision for discount on	Debit	Liability

	debtors		
34	Provision for discount on creditors	Debit	Asset
35	Debtors	Debit	Asset
36	Creditors	Credit	Liability
37	Goodwill	Debit	Asset
38	Plant, machinery	Debit	Asset
39	Land, buildings	Debit	Asset
40	Furniture, fittings	Debit	Asset
41	Investments	Debit	Asset
42	Cash in hand	Debit	Asset
43	Cash at bank	Debit	Asset
44	Reserve fund	Credit	Liability
45	Loan advances	Debit	Asset
46	Horse, carts	Debit	Asset
47	Excise duty	Debit	Expense
48	General reserve	Credit	Liability
49	Provision for depreciation	Credit	Liability
50	Bills receivable	Debit	Asset
51	Bills payable	Credit	Liability
52	Depreciation	Debit	Loss
53	Bank overdraft	Credit	Liability
54	Outstanding salaries	Credit	Liability
55	Prepaid insurance	Debit	Asset
56	Bad debt reserve	Credit	Revenue
57	Patents & Trademarks	Debit	Asset
58	Motor vehicle	Debit	Asset
59	Outstanding rent	Credit	Revenue

Final Accounts

In every business, the business man is interested in knowing whether the business has resulted in profit or loss and what the financial position of the business is at a given time. In brief, he wants to know (i) The profitability of the business and (ii) The soundness of the business.

The trader can ascertain this by preparing the final accounts. The final accounts are prepared from the trial balance. Hence the trial balance is said to be the link between the ledger accounts and the final accounts. The final accounts of a firm can be divided into two stages. The first stage is preparing the trading and profit and loss account and the second stage is preparing the balance sheet.

Trading Account

The first step in the preparation of final account is the preparation of trading account. The main purpose of preparing the trading account is to ascertain gross profit or gross loss as a result of buying and selling the goods.

Trading account of MR........................ for the year ended ....

Particulars	Amount	Particulars	Amount
To opening stock	Xxxx	By sales xxxx	
To purchases xxxx		Less: returns xxx	Xxxx
Less: returns xx	Xxxx	By closing stock	Xxxx
To carriage inwards	Xxxx		
To wages	Xxxx		
To freight	Xxxx		
To customs duty, octroi	Xxxx		
To gas, fuel, coal, Water	Xxxx		
To factory expenses			
To other man. Expenses	Xxxx		
To productive expenses	Xxxx		
To gross profit c/d			

	Xxxx Xxxx		Xxxx
	Xxxx		

Finally, a ledger may be defined as a summary statement of all the transactions relating to a person , asset, expense or income which have taken place during a given period of time. The up-to-date state of any account can be easily known by referring to the ledger.

Profit And Loss Account

The business man is always interested in knowing his net income or net profit.Net profit represents the excess of gross profit plus the other revenue incomes over administrative, sales, Financial and other expenses. The debit side of profit and loss account shows the expenses and the credit side the incomes. If the total of the credit side is more, it will be the net profit. And if the debit side is more, it will be net loss.

Profit and Loss A/c of Mr…………………….for the year ended………..

PARTICULARS	AMOUNT	PARTICULARS	AMOUNT
TO office salaries	Xxxxxx	By gross profit b/d	Xxxxx
TO rent,rates,taxes	Xxxxx	Interest received	Xxxxx
TO Printing and stationery	Xxxxx	Discount received	Xxxx
TO Legal charges	Xxxx	Commission received	Xxxxx
Audit fee	Xxxx	Income from investments	Xxxx
TO Insurance	Xxxx	Dividend on shares	Xxxx
TO General expenses	Xxxxx	Miscellaneous investments	xxxx
TO Advertisements	Xxxx	Rent received	
TO Bad debts	Xxxx		
TO Carriage outwards	Xxxx		
TO Repairs	Xxxxx		
TO Depreciation	Xxxxx		
TO interest paid	Xxxxx		
TO Interest on capital	Xxxx		
TO Interest on loans	Xxxxx		
TO Discount allowed	Xxxxx		
TO Commission	Xxxxx		
TO Net profit-------→			
(transferred to capital a/c)	xxxxxx		Xxxxxx

Balance Sheet

The second point of final accounts is the preparation of balance sheet. It is prepared often in the trading and profit, loss accounts have been compiled and closed. A balance sheet may be considered as a statement of the financial position of the concern at a given date.

DEFINITION: A balance sheet is an item wise list of assets, liabilities and proprietorship of a business at a certain state.

J.R.botliboi: A balance sheet is a statement with a view to measure exact financial position of a business at a particular date.

Thus, Balance sheet is defined as a statement which sets out the assets and liabilities of a business firm and which serves to ascertain the financial position of the same on any particular date. On the left-hand side of this statement, the liabilities and the capital are shown. On the right-hand side all the assets are shown. Therefore, the two sides of the balance sheet should be equal. Otherwise, there is an error somewhere.

Balance Sheet of .... as on ....

Liabilities and capital	Amount	Assets	Amount
Creditors	Xxxx	Cash in hand	Xxxx
Bills payable	Xxxx	Cash at bank	Xxxx
Bank overdraft	Xxxx	Bills receivable	Xxxx
Loans	Xxxx	Debtors	Xxxx
Mortgage	Xxxx	Closing stock	Xxxx
Reserve fund	Xxxx	Investments	Xxxx
Capital xxxxxx		Furniture and fittings	Xxxx
Add:			
Net Profit xxxx		Plats&machinery	Xxxx
-------		Land & buildings	Xxxx
xxxxxxx		Patents, tm ,copyrights	Xxxx

		Goodwill	Xxxx
Less:		Prepaid expenses	Xxxx
Drawings xxxx	Xxxx	Outstanding incomes	Xxxx
---------	XXXX		XXXX

Advantages: The following are the advantages of final balance.

1. It helps in checking the arithmetical accuracy of books of accounts.

2. It helps in the preparation of financial statements.
3. It helps in detecting errors.
4. It serves as an instrument for carrying out the job of rectification of entries.
5. It is possible to find out the balances of various accounts at one place.

Final Accounts -- Adjustments

We know that business is a going concern. It has to be carried on indefinitely. At the end of every accounting year. The trader prepares the trading and profit and loss account and balance sheet. While preparing these financial statements, sometimes the trader may come across certain problems .The expenses of the current year may be still payable or the expenses of the next year have been prepaid during the current year. In the same way, the income of the current year still receivable and the income of the next year have been received during the current year. Without these adjustments, the profit figures arrived at or the financial position of the concern may not be correct. As such these adjustments are to be made while preparing the final accounts.

The adjustments to be made to final accounts will be given under the Trial Balance. While making the adjustment in the final accounts, the student should remember that “every adjustment is to be made in the final accounts twice i.e. once in trading, profit and loss account and later in balance sheet generally”. The following are some of the important adjustments to be made at the time of preparing of final accounts:-

1. Closing Stock:-

(i)If closing stock is given in Trail Balance: It should be shown only in the balance sheet “Assets Side”.

(ii)If closing stock is given as adjustment:

1. First, it should be posted at the credit side of "Trading Account".
2. Next, shown at the asset side of the "Balance Sheet".

2. Outstanding Expenses:-

(i)If outstanding expenses given in Trail Balance: It should be only on the liability side of Balance Sheet.

(ii)If outstanding expenses given as adjustment:
1. First, it should be added to the concerned expense at the debit side of profit and loss account or Trading Account.
2. Next, it should be added at the liabilities side of the Balance Sheet.

3. Prepaid Expenses:-

(i)If prepaid expenses given in Trial Balance: It should be shown only in assets side of the Balance Sheet.
(ii)If prepaid expense given as adjustment :

1. First, it should be deducted from the concerned expenses at the debit side of profit and loss account or Trading Account.
2. Next, it should be shown at the assets side of the Balance Sheet.

4. Income Earned But Not Received [or] Outstanding Income [or] Accrued Income:-

(i)If incomes given in Trial Balance: It should be shown only on the assets side of the Balance Sheet.
(ii)If incomes outstanding given as adjustment:

1. First, it should be added to the concerned income at the credit side of profit and loss account.
2. Next, it should be shown at the assets side of the Balance sheet.

5. Income Received In Advance: Unearned Income:-
(i)If unearned incomes given in Trail Balance: It should be shown only on the liabilities side of the Balance Sheet.
(ii)If unearned income given as adjustment :
1. First, it should be deducted from the concerned income in the credit side of the profit and loss account.
2. Secondly, it should be shown in the liabilities side of the Balance Sheet.

6. Depreciation:-

(i)If Depreciation given in Trail Balance: It should be shown only on the debit side of the profit and loss account.
(ii)If Depreciation given as adjustment
1. First, it should be shown on the debit side of the profit and loss account.
2. Secondly, it should be deduced from the concerned asset in the Balance sheet assets side.

7. Interest on Loan [or] Capital:-
(i)If interest on loan (or) capital given in Trail balance : It should be shown only on debit side of the profit and loss account.
(ii)If interest on loan (or) capital given as adjustment:

1. First, it should be shown on debit side of the profit and loss account.
2. Secondly, it should add to the loan or capital in the liabilities side of the Balance Sheet.

8. Bad Debts:-
(i)If bad debts given in Trail balance: It should be shown on the debit side of the profit and loss account.

(ii)If bad debts given as adjustment:

1. First, it should be shown on the debit side of the profit and loss account.
2. Secondly, it should be deducted from debtors in the assets side of the Balance Sheet.

9. Interest on Drawings:-

(i)If interest on drawings given in Trail balance: It should be shown on the credit side of the profit and loss account.

(ii)If interest on drawings given as adjustments:

1. First, it should be shown on the credit side of the profit and loss account.
2. Secondly, it should be deducted from capital on liabilities side of the Balance Sheet.

10. Interest on Investments:-

(i)If interest on the investments given in Trail balance: It should be shown on the credit side of the profit and loss account.

(ii)If interest on investments given as adjustments :

1. First, it should be shown on the credit side of the profit and loss account.
2. Secondly, it should be added to the investments on assets side of the Balance Sheet.

UNIT-V
Assignment-Cum-Tutorial Questions
SECTION-A

Objective Questions

1. How many types of accounts are maintained to record all types of business transactions? [ ]

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

2. Which connects the link between Journal and Trial Balance?

(a) Trading Account (b) Profit & Loss account
(c) Ledger (d) Balance sheet [ ]

3. "Bank overdraft" is a _______. [ ]

(a) Asset (b) Expense
(c) Liability (d) Income

4. _____ is a person who owes money to the firm. [ ]

(a) Creditor (b) Owner
(c) Debtor (d) Share holder

5. ______ is called as 'Book of Original Entry'. [ ]

(a) Ledger (b) Trial Balance
(c) Journal (d) Trading account

6. Debit what comes in; Credit what goes out is ____ account principle?

(a) Nominal (b) Personal [ ]
(c) Real (d) None

7. The process of entering transactions in to Ledge accounts known as _______. [ ]

(a) Journal entry (b) First entry
(c) Posting (d) None

8. Debit Expenses and Losses; Credit Incomes and Gains is ___ account Principle [ ]

(a) Personal (b) Real
(c) Nominal (d) None

9. "Gross Profit" can be found out by preparing _______. [ ]

(a) Profit and Loss account (b) Balance sheet
(c) Trading account (d) Trial balance

10. "Net Profit" can be found out by preparing ______. [ ]

(a) Trading account (b) Trial balance
(c) Profit and Loss account (d) Balance sheet

Question testing the ability of students in applying the concepts.

1. "Outstanding wages" is treated as ________. [ ]
   (a) Asset (b) Expense
   (c) Liability (d) Income
2. Which assets can be converted into cash in short period? [ ]
   (a) Fixed Assets (b) Intangible Assets
   (c) Current Assets (d) Fictitious Assets
3. Profit and Loss account is prepared to find out the business ________.
   (a) Gross result (b) Financial position [ ]
   (c) Net result (d) Liquidity position
4. The statement reveals the financial positions of a business at any given date is called [ ]
   (a) Trading account (b) Profit and loss account
   (c) Balance sheet (d) Trial balance
5. "Prepaid Insurance Premium" is treated as ________. [ ]
   (a) Gain (b) Income
   (c) Asset (d) Liability
6. In which Concept "Business is treated separate from the Proprietor? ________________.
   (a) Cost concept (b) Dual aspect concept [ ]
   (c) Business entity concept (d) Matching concept
7. In which Book-keeping system, business transactions are recorded as two separate accounts at the same time? [ ]
   (a) Single entry (b) Triple entry
   (c) Double entry (d) None
8. kamal bought goods for Rs. 30 lakhs and sold of the goods for Rs.36 lakhs and incurred expenses amounting to Rs.5 lakhs during a given year. he counted a net profit of Rs.16 lakhs. which accounting concept did he follow? [ ]
   (a) business entity concept (b) accounting period concept
   (c) matching concept (d) going concern concept
9. Management accounting starts where ______________ ends.[ ]
   (a) cost accounting (b) standard costing
   (c) financial accounting (d) accounting concepts and conventions

10. Final account comprises_______________ [ ]
(a) Ledger, Trial Balance (b) Trading, Profit Accounts
(c) Profit & Loss Accounts (d) Trading, Profit & Loss Accounts

Section B

1. What do you mean by accounting? Write about the branches of accounting?
2. What do you understand by Journal?
3. Explain the following adjustments & illustrate suitably with assumed data.
   a) Closing stock
   b) Outstanding expenses
   c) Prepaid income
   d) Bad debts
4. Explain about Trading and Profit & Loss A/Cs and Balance Sheet.
5. State how accounting is useful to different types of users.
6. Explain about the Double Entry system of Book Keeping.
7. Explain the Accounting Cycle.
8. How do you classify the accounts? Explain the rule of debit and credit with respect to different types of accounts.
9. Journalize the following transactions in the books of Rama Krishna

1. Commence business with cash rs.10,000
2. paid into bank rs.8,000
3.Bought goods for cash rs.500
4. Bought furniture by cheque rs.500.
5. withdrawn from bank rs.900
6. He sold goods to Gopal Rs.500
7.Bought goods from Ram for rs.510
8. Paid trade expenses rs.200
9.Received cash from Gopal and allowed discount rs.10- 490
10.paid wages rs.70
11.paid Ram in full settelment rs.500
12.paid rent rs.150
13.Interest on capital rs.500

10. Journalize the following transactions & post them to ledger.

1. Ram invites Rs.10, 000 in cash
2. He bought goods worth rs.2, 000 from shyam
3. He bought a machine for rs.5, 000 from lakshmanon account.
4. He paid to Lakshman Rs. 2,000.
5. He sold goods for cash Rs. 3,000.
6. He sold goods to A on account Rs.4, 000.
7. He paid to shyam Rs.1, 000.
8. He received amount from A Rs.2, 000.

11. Journalize the following transactions in the books of Ravi and post them into ledgers:

Particulars	Amount
2008 March 1 Started business with cash March 1 Purchase of goods from ram March10 Paid rent for the month March11 Purchase of Machine March12 Paid salaries March15 Paid to ram March20 Sold goods to shyam March25 Received from shyam March31 Received cash from cash sales March31 Wages paid	4,50,000 3, 20,000 2,000 1, 00,000 12,000 1, 00,000 20,000 30,000 2, 50,000 5,000

12. Prepare Trading, Profit and loss account and Balance sheet for the year ending 31/3/2003 after taking into consideration the following information.

	Rs.		Rs.
Furniture	15000	Insurance	6000
Capital A/C	54000	Rent	22000
Cash in hand	3000	Sundry debtors	60000
Opening stock	50000	Sales	600000
Fixed deposits	134600	Advertisement	10000
Drawings	5000	Postages and telephone	3400
Provision for bad debts	3000	Bad debts	2000

Cash at Bank	10000	Printing and stationary	9000
Purchases	300000	General charges	13000
Salaries	19000	Sundry creditors	40000
Carriage inwards	41000	Deposit from customers	6000

Adjustments:

a) Closing stock as on 31st March was Rs. 10000.

b) Salary of Rs. 2000 is yet to be paid to an employee

13. Trail Balance of Bharat is given below. Prepare the Trading Account and Profit and Loss Account for the year ending 31st December, 2005 and Balance Sheet as on that date

Particulars	**Debit Rs.**	**Credit Rs.**
Drawings and Capital	10,550	1,19,400
Plant & Machinery	38,300	
Sundry Debtors and	62,000	59,360
Creditors	43,750	
Wages	2,56,590	356700
Purchases and Sales	95,300	
Opening Stock	12,880	
Salaries	930	
Insurance	18,970	
Cash at Bank	14,370	
Interest on Loan	4,870	
Discount allowed	12,590	
Furniture		79,630
Loan Payable	43,990	
Land & Buildings		
	6,15,090	6,15,090

Closing Stock was Values at Rs. 90,000

14. Prepare trail balance from the following information

Particulars	**Amount**
Capital	1,00,000
Plant & Machinery	1,60,000
Sales	3,54,000
Purchases	1,20,000
Returns outwards	1,500
Returns inwards	2,000
Opening stock	60,000
Discount allowed	700
Discount Received	1,600
Bank Charges	150
Sundry Debtors	90,000
Sundry Creditors	50,000
Salaries	13,600
Manufacturing Wages	20,000
Carriage inwards	1,500
Carriage outwards	2,400
Provision for bad debts	1,050
Rent, rates and taxes	20,000
Advertisements	4,000
Cash	1,800
Bank	12,000
Closing stock	70,000

15. The following are the particulars of Ledger Account balances taken from the books of Bhaskar for the year ending 31st March 2005. You are required to prepare Trading Account and Profit and Loss Account and Balance Sheet as on that date

Particulars	Debit Rs.	Credit Rs.
Capital		1,00,000
Bills receivables and Bills	4,00,000	7,00,000
Payable	75,000	50,000
Sundry Debtors and Creditors	15,000	
Cash	25,000	
Bank	2,50,000	
Business Premises		25,000
Loan Payable	40,000	
Opening stock	60,000	8,000
Purchase & Returns	37,000	2,75,000
Sales & Returns	35,000	
Wages	65,000	
Salaries	15,000	
Rent, Taxes and rates	5,000	
Depreciation	78,000	
Furniture	58,000	
Advertisement		
	11,58,000	11,58,000

Adjustments:

1. Closing Stock was Values at Rs. 80,000
2. Write off Bad Debts of Rs. 5,000 out of sundry debtors.
3. Prepaid Insurance amounted Rs. 1,000

UNIT – VI

Capital Budgeting

Objective:

- Understand the calculation of various kinds of ratios.
- Calculate the different ratios from the given financial statements.
- Interpret the calculated ratios.
- Understand the nature and importance of investment decisions.
- Explain the methods of calculating NPV and IRR.
- Describe the evaluation criteria of PBP, ARR.

Syllabus:

Capital budgeting: capital & its significance, estimation of fixed & working capital requirements, methods of raising capital, introduction to capital budgeting, traditional methods of capital budgeting & discounted cash flow methods(simple problems)

Learning Outcomes:

- Evaluate how an entity assesses an investment project.
- Explain the various criteria of an investment appraisal.
- Evaluate the use of the various appraisal methods, i.e. Payback period / NPV / IRR / Profitability index.

Learning Material

Capital Budgeting

The word Capital refers to be the total investment of a company of firm in money, tangible and intangible assets. Whereas budgeting defined by the “**Rowland** and **William**” it may be said to be the art of building budgets. Budgets are a blue print of a plan and action expressed in quantities and manners.

The examples of capital expenditure:

1. Purchase of fixed assets such as land and building, plant and machinery, good will, etc.
2. The expenditure relating to addition, expansion, improvement and alteration to the fixed assets.
3. The replacement of fixed assets.
4. Research and development project.

Definitions

According to the definition of **G.C. Philippatos,** “capital budgeting is concerned with the allocation of the firms source financial resources among the available opportunities. The consideration of investment opportunities involves the comparison of the expected future streams of earnings from a project with the immediate and subsequent streams of earning from a project, with the immediate and subsequent streams of expenditure”.

According to **Richard and Green law-** “Capital budgeting is acquiring inputs with long-term return”.

According to **Lyrich,** “Capital budgeting is planning and development of available capital for the purpose of maximising the long-term profitability of the concern”.

It is clearly explained in the above definitions that a firm’s scarce financial resources are utilizing the available opportunities. The overall objectives of the company from are to maximise the profits and minimise the expenditure of cost.

Need and Importance of Capital Budgeting

1. Huge investments: Capital budgeting requires huge investments of funds, but the available funds are limited, therefore the firm before investing projects, plan are control its capital expenditure.

2. Long-term: Capital expenditure is long-term in nature or permanent in nature. Therefore financial risks involved in the investment decision are more. If higher risks are involved, it needs careful planning of capital budgeting.

3. Irreversible: The capital investment decisions are irreversible, are not changed back. Once the decision is taken for purchasing a permanent asset, it is very difficult to dispose of those assets without involving huge losses.

4. Long-term effect: Capital budgeting not only reduces the cost but also increases the revenue in long-term and will bring significant changes in the profit of the company by avoiding over or more investment or under investment. Over investments leads to be unable to utilize assets or over utilization of fixed assets. Therefore before making the investment, it is required carefully planning and analysis of the project thoroughly.

Capital Budgeting Process

Capital budgeting is a difficult process to the investment of available funds. The benefit will attain only in the near future but, the future is uncertain. However, the following steps followed for capital budgeting, then the process may be easier are.

1. Identification of various investments proposals: The capital budgeting may have various investment proposals. The proposal for the investment opportunities may be defined from the top management or may be even from the lower rank. The heads of various departments analyse the various investment decisions, and will select proposals submitted to the planning committee of competent authority.

2. Screening or matching the proposals: The planning committee will analyse the various proposals and screenings. The selected proposals are considered with the available resources of the concern. Here resources referred as the financial part of the proposal. This reduces the gap between the resources and the investment cost.

3. Evaluation: After screening, the proposals are evaluated with the help of various methods, such as payback period proposal, net discovered present value method, accounting rate of return and risk analysis. Each method of evaluation used in detail in the later part of this chapter. The proposals are evaluated by.

(a) Independent proposals
(b) Contingent of dependent proposals
(c) Partially exclusive proposals.

Independent proposals are not compared with other proposals and the same may be accepted or rejected. Whereas higher proposals acceptance depends upon one or the other proposals present. For example, the expansion of plant machinery leads to constructing of new building, additional manpower etc. Mutually exclusive projects are those which competed with other proposals and to implement the proposals after considering the risk and return, market demand etc.

4. Fixing property: After the evolution, the planning committee will predict which proposals will give more profit or economic consideration. If the projects or proposals are not suitable for the concern's financial condition, the projects are rejected without considering other nature of the proposals.

5. Final approval: The planning committee approves the final proposals, with the help of the following:

(a) Profitability
(b) Economic constituents
(c) Financial violability
(d) Market conditions.

The planning committee prepares the cost estimation and submits to the management.

6. Implementing: The competent authority spends the money and implements the proposals. While implementing the proposals, assign responsibilities to the proposals, assign responsibilities for completing it, within the time allotted and reduce the cost for this purpose. The network techniques used such as PERT and CPM. It helps the management for monitoring and containing the implementation of the proposals.

7. Performance review of feedback: The final stage of capital budgeting is actual results compared with the standard results. The adverse or unfavourable results identified and removing the various difficulties of the project. This is helpful for the future of the proposals.

Kinds of Capital Budgeting Decisions

The overall objective of capital budgeting is to maximise the profitability. If a firm concentrates return on investment, this objective can be achieved either by increasing the revenues or reducing the costs. The increasing revenues can be achieved by expansion or the size of operations by adding a new product line. Reducing costs mean representing obsolete return on assets.

Methods of Capital Budgeting of Evaluation

By matching the available resources and projects it can be invested. The funds available are always living funds. There are many considerations taken for investment decision process such as environment and economic conditions.

The methods of evaluations are classified as follows:

(A) Traditional methods (or Non-discount methods)

(i) Pay-back Period Methods

(ii) Post Pay-back Methods

(iii) Accounts Rate of Return

(B) Modern methods (or Discount methods)

(i) Net Present Value Method

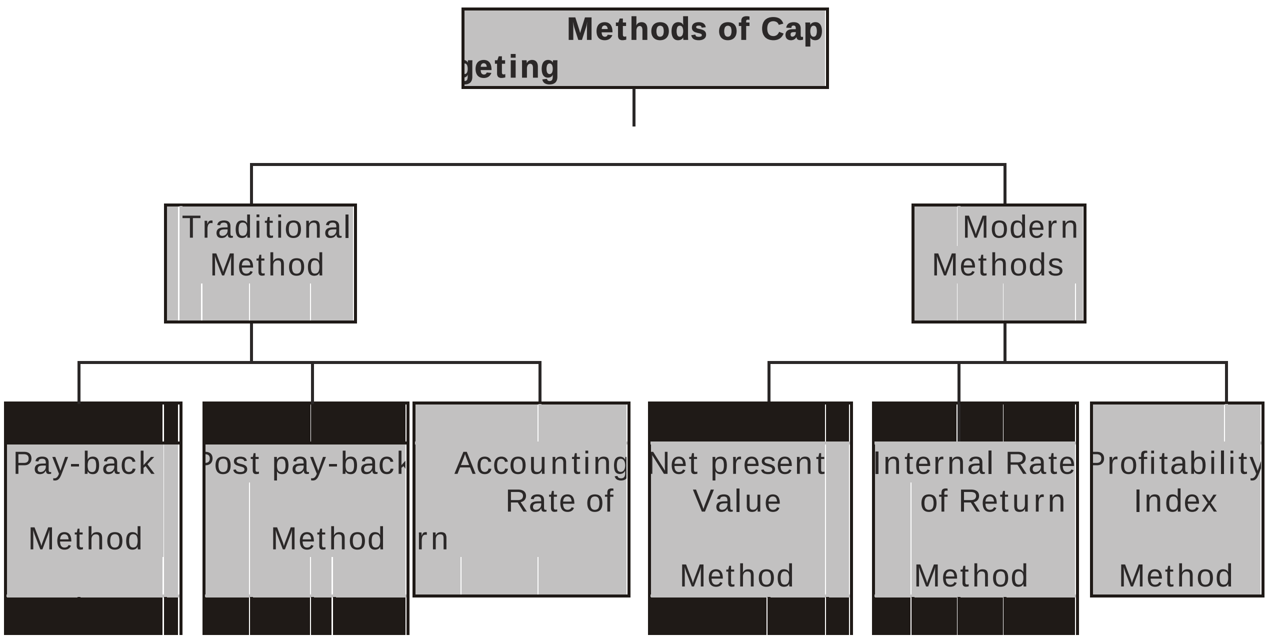
(ii) Internal Rate of Return Method

(iii) Profitability Index Method

Pay-back Period

Pay-back period is the time required to recover the initial investment in a project.

(It is one of the non-discounted cash flow methods of capital budgeting).



Capital Budgeting Methods

Pay-back Period

Pay-back period is the time required to recover the initial investment in a project.

(It is one of the non-discounted cash flow methods of capital budgeting)

$$\text{Pay-back period} = \frac{\text{Initial Investment}}{\text{Annual Cash inflows}}$$

Merits

The following are the important merits of the pay-back method:

1. It is easy to calculate and simple to understand.

2. Pay-back method provides further improvement over the accounting rate return.

3. Pay-back method reduces the possibility of loss on account of obsolescence.

Demerits

1. It ignores the time value of money.

2. It ignores all cash inflows after the pay-back period.

3. It is one of the misleading evaluations of capital budgeting.

Accept /Reject criteria

If the actual pay-back period is less than the predetermined pay-back period, the project would be accepted. If not, it would be rejected.

Accounting Rate of Return/ Average Rate of Return

Average rate of return means the average rate of return or profit taken for considering the project evaluation. This method is one of the traditional methods for evaluating the project proposals:

Merits

1. It is easy to calculate and simple to understand.

2. It is based on the accounting information rather than cash inflow.

3. It is not based on the time value of money.

4. It considers the total benefits associated with the project.

Demerits

1. It ignores the time value of money.

2. It ignores the reinvestment potential of a project.

3. Different methods are used for accounting profit. So, it leads to some difficulties in the calculation of the project.

Accept/Reject criteria

If the actual accounting rate of return is more than the predetermined required rate of return, the project would be accepted. If not it would be rejected.

Net Present Value

Net present value method is one of the modern methods for evaluating the project proposals. In this method cash inflows are considered with the time value of the money. Net present value describes as the summation of the present value of cash inflow and present value of cash outflow. Net present value is the difference between the total present value of future cash inflows and the total present value of future cash outflows.

Merits

1. It recognizes the time value of money.
2. It considers the total benefits arising out of the proposal.
3. It is the best method for the selection of mutually exclusive projects.
4. It helps to achieve the maximisation of shareholders' wealth.

Demerits

1. It is difficult to understand and calculate.
2. It needs the discount factors for calculation of present values.
3. It is not suitable for the projects having different effective lives.

Accept/Reject criteria

If the present value of cash inflows is more than the present value of cash outflows, it would be accepted. If not, it would be rejected.

Internal Rate of Return

Internal rate of return is time adjusted technique and covers the disadvantages of the traditional techniques. In other words it is a rate at which discount cash flows to zero. It is expected by the following ratio:

$$\textbf{IRR} = \frac{\text{Cash inflow}}{\text{Initial Investment}}$$

Steps to be followed:

Step1: Find out factor

Factor is calculated as follows:

$$F = \frac{\text{Cash outlay (or) initial investment}}{\text{Cash inflow}}$$

Step 2: Find out positive net present value
Step 3: Find out negative net present value
Step 4: Find out formula net present value

Formula

$$\text{Base factor} + \frac{\text{Positive net present value}}{\text{Difference in positive and Negative net present value}}$$

Base factor = Positive discount rate

DP = Difference in percentage

Merits

1. It considers the time value of money.
2. It takes into account the total cash inflow and outflow.
3. It does not use the concept of the required rate of return.
4. It gives the approximate/nearest rate of return.

Demerits

1. It involves complicated computational method.
2. It produces multiple rates which may be confusing for taking decisions.
3. It is assume that all intermediate cash flows are reinvested at the internal rate of return.

Accept/Reject criteria

If the present value of the sum total of the compounded reinvested cash flows is greater than the present value of the outflows, the proposed project is accepted. If not it would be rejected.

Risk and Uncertainly in Capital Budgeting

Capital budgeting requires the projection of cash inflow and outflow of the future. The future in always uncertain, estimate of demand, production, selling price, cost etc., cannot be exact. For example: The product at any time it become obsolete therefore, the future in unexpected. The following methods for considering the accounting of risk in capital budgeting.

UNIT-VI
Assignment-Cum-Tutorial Questions
SECTION-A

Objective Questions

1. The capital budgeting process involves _____________. [ ]
   (a) identifying potential investments
   (b) analyzing the set of investment opportunities, and identifying those that will create shareholder value
   (c) implementing and monitoring the selected investment projects
   (d) all of the above
2. The preferred technique for evaluating most capital investments is ________. [ ]
   a. payback period b. discount payback period
   c. internal rate of return d. net present value
3. The accountings rate of return: ___________. [ ]
   a. uses net cash flows.
   b. does not take into account the time value of money.
   c. uses an objectively determined hurdle rate.
   d. all of the above
4. As the discount rate increases, the NPV of a project: [ ]
   a. increases b. decreases. c. is unaffected.
   d. cannot be determined without knowing the discount rate.

5.The IRR method focuses on: [ ]
   a. sales. b. accounting returns.
   c. profits. d. cash flows.

6.Which of the following is necessary for the capital budgeting process?
   a. The amount of overhead allocated to the project [ ]
   b. Interest paid on funds raised to finance the project.
   c. The timing of the project's net cash benefits
   d. The amount of money spent on research and development

7.Which of the following capital budgeting techniques may potentially ignore part of a project's relevant cash flows? [ ]

   a. net present value b. internal rate of return
   c. payback period d. profitability index

8.The time value of money refers to: [ ]

   a. The earning power of an investment or stream of investments over time.
   b. The opportunity cost of capital.
   c. The interest rate earned on an investment.

d. The discount rate used to calculate the present value of an investment.

9In comparing two projects, the __________ is often used to evaluate the relative riskiness of the projects. [ ]

a. payback period b.net present value
c. internal rate of return d. discount rate

Say True or False.

1. The stream of cash flows produced by the project directly influences the value of a capital expansion project.
2. Capital budgeting is the process of identifying, analyzing, and selecting investment projects whose cash flows will all be received beyond one year.
3. The net present value of a project generally increases as the required rate of return decreases.
4. A mutually exclusive project is one whose acceptance precludes the acceptance of alternative projects.
5. Use of the IRR method implicitly assumes that the project's cash inflows are reinvested at the internal rate of return.

Section - B

1. What is capital budgeting. What are the factors to be considered in taking investment decisions?

2. Explain the components of Working Capital
3. Explain the methods of capital budgeting.
4. Define Accounting rate of return & payback period method. Compare & contrast the two.

5. Briefly explain NPV and IRR.

II) Problems:

1. Initial investment for a project is 20 lakhs. The project life is 6 years and the cash inflow for 6 years is as given below.

Year	Cash inflow
1	3,50,000
2	4,00,000
3	5,00,000
4	5,50,000
5	6,00,000
6	5,00,000

The cost of capital is 13%. Compute NPV, IRR and PBP.

2. The Alpha Co Ltd ., is considering the purchase of a new machine. Two alternative machines (A and B) have been suggested, each having an initial cost of Rs. 4,00,000 and requiring Rs. 20,000 as additional working Capital at the end of 1^{st} year. Earnings after taxation are expected to be as follows:

Years	Cash Inflows	
	Machine A	Machine B
1	40,000	1,20,000
2	1,20,000	1,60,000
3	1,60,000	2,00,000
4	2,40,000	1,20,000
5	1,60,000	80,000

The company has a target of return on capital of 10% and on this basis, you are required to compare the profitability of the machines and state which alternative you consider as financially preferable.

3. A firm whose cost of capital is 10% is considering two mutually exclusive projects X and Y, the details of which are:

	Project X	Project Y
Investment	70,000	70,000
Year	Cash Flows	
1	10,000	50,000
2	20,000	40,000
3	30,000	20,000
4	45,000	10,000
5	60,000	10,000
Total Cash Flows	1,65,000	1,30,000

Compute the Net Present Value at 10% Profitability Index and Internal Rate of Return for two projects.