AK20 Regulations

ANNAMACHARYA INSTITUTE OF TECHNOLOGY AND SCIENCES, TIRUPATI
(Autonomous)
Course structure for Four Year Regular B.Tech. Degree Program
(Effective for the batches admitted from 2020-21)
CIVIL ENGINEERING (CE)

Year: II **Semester: I**

Subject Code	Subject Name	L T P	Credits
20AHSMB01	Managerial Economics and Financial Analysis	3 0 0	3

Course Outcomes:

- Understand the fundamentals of Economics and Managerial economics viz., Demand, Production, cost, revenue and markets.
- Apply the Concept of Production cost and revenues for effective Business decision
- Analyze how to invest their capital and maximize returns.
- Evaluate the capital budgeting techniques.
- Define the concepts related to financial accounting and management and able to develop the Accounting statements and evaluate the financial performance of business entity.

UNIT – I Managerial Economics

Introduction – meaning, nature, meaning, significance, functions, and advantages, ME and its role in other fields. Demand **-** Concept, Function, Law of Demand - Demand Elasticity- Types – easurement. Demand Forecasting- Factors governing forecasting, Methods.

UNIT – II Production and Cost Analysis

Introduction – Nature, meaning, significance, functions and advantages. Production Function– Least- cost combination– Short run and Long run Production Function- Isoquants and Isocosts, MRTS - Cobb-Douglas Production Function - Laws of Returns - Internal and External Economies of scale. Cost & Break-Even Analysis - Cost concepts and Cost behavior- Break-Even Analysis (BEA) - Determination of Break-Even Point (Simple Problems)-Managerial significance and limitations of Break-Even Analysis.

UNIT III Business Organizations and Markets

Introduction – Nature, meaning, significance, functions and advantages. Forms of Business Organizations- Sole Proprietary - Partnership - Joint Stock Companies - Public Sector Enterprises. Types of Markets - Perfect and Imperfect Competition - Features of Perfect Competition Monopoly- Monopolistic Competition– Oligopoly-Price-Output Determination - Pricing Methods and Strategies

UNIT IV Capital Budgeting

Introduction to Capital, Sources of Capital. Short-term and Long-term Capital : Working capital, types,Estimating Working capital requirements. Capital Budgeting – Features, Proposals, Time value of money. Methods and Evaluation of Projects – Pay Back Method, Accounting Rate of Return (ARR), Net Present Value (NPV), and Internal Rate Return (IRR) Method (simple problems).

UNIT V Financial Accounting and Analysis

Introduction – Nature, meaning, significance, functions and advantages. Concepts and Conventions-
Double-Entry Book Keeping, Journal, Ledger, Trial Balance- Final Accounts (Trading Account, Profit and Loss Account and Balance Sheet with simple adjustments). ***Financial Analysis*** - Analysis and Interpretation of Liquidity Ratios, Activity Ratios, and Capital structure Ratios and Profitability.

Textbooks:

1. Varshney&Maheswari: Managerial Economics, Sultan Chand, 2013.
2. Aryasri: Business Economics and Financial Analysis, 4/e, MGH, 2019

Reference Books:

1. Ahuja Hl Managerial economics Schand,3/e,2013
2. S.A. Siddiqui and A.S. Siddiqui: Managerial Economics and Financial Analysis, New Age International, 2013.
3. Joseph G. Nellis and David Parker: Principles of Business Economics, Pearson, 2/e, New Delhi.
4. Domnick Salvatore: Managerial Economics in a Global Economy, Cengage, 2013.

UNIT-I

INTRODUCTION TO MANAGERIAL ECONOMICS

Imagine for a while that you have finished your studies and have joined as an engineer in a manufacturing organization. What do you do there? You plan to produce maximum quantity of goods of a given quality at a reasonable cost. On the other hand, if you are a sale manager, you have to sell a maximum amount of goods with minimum advertisement costs. In other words, you want to minimize your costs and maximize your returns and by doing so, you are practicing the principles of managerial economics.

Managers, in their day-to-day activities, are always confronted with several issues such as how much quantity is to be supplied; at what price; should the product be made internally; or whether it should be bought from outside; how much quantity is to be produced to make a given amount of profit and so on. Managerial economics provides us a basic insight into seeking solutions for managerial problems.

Managerial economics, as the name itself implies, is an offshoot of two distinct disciplines: Economics and Management. In other words, it is necessary to understand what these disciplines are, at least in brief, to understand the nature and scope of managerial economics.

Introduction to Economics

Economics is a study of human activity both at individual and national level. The economists of early age treated economics merely as the science of wealth. The reason for this is clear. Every one of us in involved in efforts aimed at earning money and spending this money to satisfy our wants such as food, Clothing, shelter, and others. Such activities of earning and spending money are called
" Economic activities". It was only during the eighteenth century that Adam Smith, the Father of Economics, defined economics as the study of nature and uses of national wealth'.

Dr. Alfred Marshall, one of the greatest economists of the nineteenth century, writes "Economics is a study of man's actions in the ordinary business of life: it enquires how he gets his income and how he uses it". Thus, it is one side, a study of wealth; and on the other, and more important side; it is the study of man. As Marshall observed, the chief aim of economics is to promote 'human welfare', but not wealth. The definition given by AC Pigou endorses the opinion of Marshall. Pigou defines Economics as "the study of economic welfare that can be brought directly and indirectly, into relationship with the measuring rod of money".

Prof. Lionel Robbins defined Economics as “the science, which studies human behaviour as a relationship between ends and scarce means which have alternative uses”. With this, the focus of economics shifted from ‘wealth’ to human behaviour’.

Lord Keynes defined economics as ‘the study of the administration of scarce means and the determinants of employments and income”.

Microeconomics

The study of an individual consumer or a firm is called microeconomics (also called the *Theory of Firm*). Micro means ‘one millionth’. Microeconomics deals with behavior and problems of single individual and of micro organization. Managerial economics has its roots in microeconomics and it deals with the micro or individual enterprises. It is concerned with the application of the concepts such as price theory, Law of Demand and theories of market structure and so on.

Macroeconomics

The study of ‘aggregate’ or total level of economics activity in a country is called *macroeconomics*. It studies the flow of economics resources or factors of production (such as land, labour, capital, organisation and technology) from the resource owner to the business firms and then from the business firms to the households. It deals with total aggregates, for instance, total national income total employment, output and total investment. It studies the interrelations among various aggregates and examines their nature and behaviour, their determination and causes of fluctuations in the. It deals with the price level in general, instead of studying the prices of individual commodities. It is concerned with the level of employment in the economy. It discusses aggregate consumption, aggregate investment, price level, and payment, theories of employment, and so on.

Though macroeconomics provides the necessary framework in term of government policies etc., for the firm to act upon dealing with analysis of business conditions, it has less direct relevance in the study of theory of firm.

Management

Management is the science and art of getting things done through people in formally organized groups. It is necessary that every organisation be well managed to enable it to achieve its desired goals. Management includes a number of functions: *Planning, organizing, staffing, directing, and controlling*. The manager while directing the efforts of his staff *communicates* to them the goals, objectives, policies, and procedures; *coordinates* their efforts; *motivates* them to sustain their enthusiasm; and *leads* them to achieve the corporate goals.

Welfare Economics

Welfare economics is that branch of economics, which primarily deals with taking of poverty, famine and distribution of wealth in an economy. This is also called *Development Economics*. The central focus of welfare economics is to assess how well things are going for the members of the society. If certain things have gone terribly bad in some situation, it is necessary to explain why things have gone wrong. Prof. Amartya Sen was awarded the Nobel Prize in Economics in 1998 in recognition of his contributions to welfare economics. Prof. Sen gained recognition for his studies of the 1974 famine in Bangladesh. His work has challenged the common view that food shortage is the major cause of famine.

In the words of Prof. Sen, famines can occur even when the food supply is high but people cannot buy the food because they don’t have money. There has never been a famine in a democratic country because leaders of those nations are spurred into action by politics and free media. In undemocratic countries, the rulers are unaffected by famine and there is no one to hold them accountable, even when millions die.

Welfare economics takes care of what managerial economics tends to ignore. In other words, the growth for an economic growth with societal upliftment is countered productive. In times of crisis, what comes to the rescue of people is their won literacy, public health facilities, a system of food distribution, stable democracy, social safety, (that is, systems or policies that take care of people when things go wrong for one reason or other).

Managerial Economics

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.

C. I. Savage & T. R. Small therefore believes that managerial economics "is concerned with business efficiency".

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

It is clear, therefore, that managerial economics deals with economic aspects of managerial decisions of with those managerial decisions, which have an economics contest. Managerial economics may therefore, be defined as a body of knowledge, techniques and practices which give substance to those economic concepts which are useful in deciding the business strategy of a unit of management.

Managerial economics is designed to provide a rigorous treatment of those aspects of economic theory and analysis that are most use for managerial decision analysis says J. L. Pappas and E. F. Brigham.

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

Nature of Managerial Economics

Managerial economics is, perhaps, the youngest of all the social sciences. Since it originates from Economics, it has the basis features of economics, such as assuming that other things remaining the same (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.

Further, it is assumed that the firm or the buyer acts in a rational manner (which normally does not happen). The buyer is carried away by the advertisements, brand loyalties, incentives and so on, and, therefore, the innate behaviour of the consumer will be rational is not a realistic assumption. Unfortunately, there are no other alternatives to understand the subject other than by making such assumptions. This is because the behaviour of a firm or a consumer is a complex phenomenon.

The other features of managerial economics are explained as below:

(a) Close to microeconomics: Managerial economics is concerned with finding the solutions for different managerial problems of a particular firm. Thus, it is more close to microeconomics.

(b) Operates against the backdrop of macroeconomics: The macroeconomics conditions of the economy are also seen as limiting factors for the firm to operate. In other words, the managerial economist has to be aware of the limits set by the macroeconomics conditions such as government industrial policy, inflation and so on.

(c) Normative statements: A normative statement usually includes or implies the words 'ought' or 'should'. They reflect people's moral attitudes and are expressions of what a team of people ought to do. For instance, it deals with statements such as 'Government of India should open up the economy. Such statement are based on value judgments and express views of what is 'good' or 'bad', 'right' or ' wrong'. One problem with normative statements is that they cannot to verify by looking at the facts, because they mostly deal with the future. Disagreements about such statements are usually settled by voting on them.

(d) Prescriptive actions: Prescriptive action is goal oriented. Given a problem and the objectives of the firm, it suggests the course of action from the available alternatives for optimal solution. If does not merely mention the concept, it also explains whether the concept can be applied in a given context on not. For instance, the fact that variable costs are marginal costs can be used to judge the feasibility of an export order.

(e) Applied in nature: 'Models' are built to reflect the real life complex business situations and these models are of immense help to managers for decision-making. The different areas where models are extensively used include inventory control, optimization, project management etc. In managerial economics, we also employ case study methods to conceptualize the problem, identify that alternative and determine the best course of action.

(f) Offers scope to evaluate each alternative: Managerial economics provides an opportunity to evaluate each alternative in terms of its costs and revenue. The managerial economist can decide which is the better alternative to maximize the profits for the firm.

(g) Interdisciplinary: The contents, tools and techniques of managerial economics are drawn from different subjects such as economics, management, mathematics, statistics, accountancy, psychology, organizational behavior, sociology and etc.
(h) Assumptions and limitations: Every concept and theory of managerial economics is based on certain assumption and as such their validity is not universal. Where there is change in assumptions, the theory may not hold good at all.

<u>Scope of Managerial Economics:</u>

The scope of managerial economics refers to its area of study. Managerial economics refers to its area of study. Managerial economics, Provides management with a strategic planning tool that can be used to get a clear perspective of the way the business world works and what can be done to maintain profitability in an ever-changing environment. Managerial economics is primarily concerned with the application of economic principles and theories to five types of resource decisions made by all types of business organizations.

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

The production department, marketing and sales department and the finance department usually handle these five types of decisions.
The scope of managerial economics covers two areas of decision making

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

a. Operational issues:
Operational issues refer to those, which wise within the business organization and they are under the control of the management. Those are:
1. Theory of demand and Demand Forecasting
2. Pricing and Competitive strategy
3. Production cost analysis
4. Resource allocation
5. Profit analysis
6. Capital or Investment analysis
7. Strategic planning

1. Demand Analyses and Forecasting:

A firm can survive only if it is able to the demand for its product at the right time, within the right quantity. Understanding the basic concepts of demand is essential for demand forecasting. Demand analysis should be a basic activity of the firm because many of the other activities of thefirms depend upon the outcome of the demand fore cost. Demand analysis provides:

1. The basis for analyzing market influences on the firms; products and thus helps in the adaptation to those influences.
2. Demand analysis also highlights for factors, which influence the demand for a product. This helps to manipulate demand. Thus demand analysis studies not only the price elasticity but also income elasticity, cross elasticity as well as the influence of advertising expenditure with the advent of computers, demand forecasting has become an increasingly important function of managerial economics.

2. Pricing and competitive strategy:

Pricing decisions have been always within the preview of managerial economics. Pricing policies are merely a subset of broader class of managerial economic problems. Price theory helps to explain how prices are determined under different types of market conditions. Competitions analysis includes the anticipation of the response of competitions the firm’s pricing, advertising and marketing strategies. Product line pricing and price forecasting occupy an important place here.

3. Production and cost analysis:

Production analysis is in physical terms. While the cost analysis is in monetary terms cost concepts and classifications, cost-out-put relationships, economies and diseconomies of scale and production functions are some of the points constituting cost and production analysis.

4. Resource Allocation:

Managerial Economics is the traditional economic theory that is concerned with the problem of optimum allocation of scarce resources. Marginal analysis is applied to the problem of determining the level of output, which maximizes profit. In this respect linear programming techniques has been used to solve optimization problems. In fact lines programming is one of the most practical and powerful managerial decision making tools currently available.

5. Profit analysis:

Profit making is the major goal of firms. There are several constraints here an account of competition from other products, changing input prices and changing business environment hence in spite of careful planning, there is always certain risk involved. Managerial economics deals with techniques of averting of minimizing risks. Profit theory guides in the measurement and management of profit, in calculating the pure return on capital, besides future profit planning.

6. Capital or investment analyses:

Capital is the foundation of business. Lack of capital may result in small size of operations. Availability of capital from various sources like equity capital, institutional finance etc. may help to undertake large-scale operations. Hence efficient allocation and management of capital is one of the most important tasks of the managers. The major issues related to capital analysis are:

1. The choice of investment project
2. Evaluation of the efficiency of capital
3. Most efficient allocation of capital

Knowledge of capital theory can help very much in taking investment decisions. This involves, capital budgeting, feasibility studies, analysis of cost of capital etc.

7. Strategic planning:

Strategic planning provides management with a framework on which long-term decisions can be made which has an impact on the behavior of the firm. The firm sets certain long-term goals and objectives and selects the strategies to achieve the same. Strategic planning is now a new addition to the scope of managerial economics with the emergence of multinational corporations. The perspective of strategic planning is global.

It is in contrast to project planning which focuses on a specific project or activity. In fact the integration of managerial economics and strategic planning has given rise to be new area of study called corporate economics.

B. Environmental or External Issues:

An environmental issue in managerial economics refers to the general business environment in which the firm operates. They refer to general economic, social and political atmosphere within which the firm operates. A study of economic environment should include:

a. The type of economic system in the country.
b. The general trends in production, employment, income, prices, saving and investment.
c. Trends in the working of financial institutions like banks, financial corporations, insurance companies
d. Magnitude and trends in foreign trade;
e. Trends in labour and capital markets;
f. Government's economic policies viz. industrial policy monetary policy, fiscal policy, price policy etc.

The social environment refers to social structure as well as social organization like trade unions, consumer's co-operative etc. The Political environment refers to the nature of state activity, chiefly states' attitude towards private business, political stability etc.

The environmental issues highlight the social objective of a firm i.e.; the firm owes a responsibility to the society. Private gains of the firm alone cannot be the goal.

The environmental or external issues relate managerial economics to macro economic theory while operational issues relate the scope to micro economic theory. The scope of managerial economics is ever widening with the dynamic role of big firms in a society.

Importance of Managerial Economics

In the modern era, the business decision is increasing. So, the Role And Importance Of Managerial Economics also increase. because it is helpful and helpful for many types of business decisions. And the salient features and significance of managerial economics are also good.

1. Useful in Business Organization

In any institution or firm. How should any production be done, and for whom should be produced? The answer to all these questions remains only with the managerial economy. Because he plays the most important role in these tasks.

So we can say that managerial economics plays a very big role and significance in the important decisions of the business. So this is a very good Role And Importance Of Managerial Economics In Choosing Right Decisions of any business.

2. Helpful in Chalking Out Business Policies

The art is only in business economics to maximize the profit of any institution and minimize cost. And whatever policies are made from this. It is very useful for any business or firm so that every firm and business can get the maximum benefit.

Then we can say that there is a huge contribution of managerial economics to profit maximization and determining policies. It also helps in doing it.

3. Help in Business Planning

Business economics is very useful in planning a complete prospect among the successful operation and production of any business or firm.

Which acts as a balance bridge between the production tools and operating systems and where to go. So this is the biggest and important role of business economics in any business or firm.

4. Helpful in Cost Control

Managerial economics decides the business is going towards profit or loss. managerial economics decides which way is good for the business. And it is only possible when managerial economics plays a very big and important role in cost control decisions.

5. Useful in Coordination of Business Activities

The managerial economics is useful in coordinating the various activities of a business.

6. Useful In Demand for Casting

The managerial economics provides useful tools for economics managers in demand forecasts and is useful in demanding production planning. The managerial economy deals with future losses easily. So that any business can be protected against future losses.

7. Helpful in Profit Planning and Control

Managerial economics helps managers to decide on the planning and control of the benefits.

Managerial Economics is synchronized between the planning and control of any institution or firm and hence its importance increases.

Thus, It plays a huge role in business decisions. So its Role And Importance Of Managerial Economics In taking Right Decisions.

8. Helpful for Business Prediction

It is not known to anyone about what is going on in business. therefore, business economics tells us that the business can see what is troubling in the future.

So Then the managerial economics gives its solutions. So that they can be avoided and the benefits can be increased.

9. Helpful in Price Determination

Managerial Economics provides the necessary guidance in managing the pricing of its business.
This proves this in order to raise the required data in pricing and get the maximum benefit.

So That is the major role of managerial economics in the business decision critical. Without this, no business can progress.

10. Helpful in Solutions of Business Taxation Problems

Managerial Economics provides useful guidance in solving problems caused by various types of tax done in business. And contracting of business helps reduce problems. To maximize profit at low cost and minimize business costs.

11. Useful in Understanding the Mechanism of Economic System

Managerial Economics/Business economics is useful in understanding the complex cause of the entire economy. From which business decisions get help.

The entire economy is very complex but business economics solves it with ease. it is helpful to understand that in this way. so we can say that business economics has a very important role and role in business decisions.

12. Helpful in Analysis of Effects of Government Policies

Business economics/Managerial Economics helps in analyzing the effect of the various policies of the Government in the operation of the business sector. reducing their bad influence and giving benefit to the good effect.

Role And Importance Of Managerial Economics very good. When The government changes the day-to-day policy which has a bad effect on different types of businessmen. But Managerial Economics exploits this easily and benefits the business.

13. Attempt to put out the friendly business

Managerial Economics guides managers to adjust to suit the external conditions of the business. It may be the type of external environment. such as government policies or business cycles, and many other conditions which affect the business. and give security business economics.

14. Supporting the Manufacture and use of Models

Managerial Economics creates an economic model for managers to inspire their use in business. In order to maximize production and maximum profit, at least cost can be paved.

Thus, Business economics only tells how to manage everything in a way that everything should be corrected in order to maximize profits. Business economics has a very important role and role in doing all this work in business decisions. thus, Role And Importance Of Managerial Economics are very helpful.

15. Useful in showing the path of Economic well-being

Managerial Economics inspires managers to operate the business in such a way that the path of maximum economic welfare is paved.

16. Gives the Right Direction

Inside the business, managerial economics has a very big role because it handles that business. Shows the right path to every member of the business, and also gives the right direction of what his duty and job.

17. Maintains of Costs

It is the job of managerial economics to say how much to spend in business and how to spend those expenses so that it can get more profit at lower costs and increase business growth. 19 Factors Influencing Entrepreneurship Development.

18. Distribute Profit

Inside any business, managerial economics tells us how to distribute the profits and invest in where to make the business more profitable in the coming time and more growth in the business field.

19. Measurement of the Efficiency of the Firm

Managerial Economics provides useful tools for managers in measuring the efficiency of the business firm. Managerial Economics plays big salient features and significance of managerial economics In Choosing Right Decisions in helping business in many ways.

Managerial economics relationship with other disciplines:

Many new subjects have evolved in recent years due to the interaction among basic disciplines. While there are many such new subjects in natural and social sciences, managerial economics can be taken as the best example of such a phenomenon among social sciences. Hence it is necessary to trace its roots and relation ship with other disciplines.

1. Relationship with economics:

The relationship between managerial economics and economics theory may be viewed form the point of view of the two approaches to the subject Viz. Micro Economics and Marco Economics. Microeconomics is the study of the economic behavior of individuals, firms and other such micro organizations. Managerial economics is rooted in Micro Economic theory. Managerial Economics makes use to several Micro Economic concepts such as marginal cost, marginal revenue, elasticity of demand as well as price theory and theories of market structure to name only a few. Macro theory on the other hand is the study of the economy as a whole. It deals with the analysis of national income, the level of employment, general price level, consumption and investment in the economy and even matters related to international trade, Money, public finance, etc.

The relationship between managerial economics and economics theory is like that of engineering science to physics or of medicine to biology. Managerial economics has an applied bias and its wider scope lies in applying economic theory to solve real life problems of enterprises. Both managerial economics and economics deal with problems of scarcity and resource allocation.

2. Management theory and accounting:

Managerial economics has been influenced by the developments in management theory and accounting techniques. Accounting refers to the recording of pecuniary transactions of the firm in certain books. A proper knowledge of accounting techniques is very essential for the success of the firm because profit maximization is the major objective of the firm.

Managerial Economics requires a proper knowledge of cost and revenue information and their classification. A student of managerial economics should be familiar with the generation, interpretation and use of accounting data. The focus of accounting within the firm is fast changing from the concepts of store keeping to that if managerial decision making, this has resulted in a new specialized area of study called "Managerial Accounting".

3. Managerial Economics and mathematics:

The use of mathematics is significant for managerial economics in view of its profit maximization goal long with optional use of resources. The major problem of the firm is how to minimize cost, hoe to maximize profit or how to optimize sales. Mathematical concepts and techniques are widely used in economic logic to solve these problems. Also mathematical methods help to estimate and predict the economic factors for decision making and forward planning.

Mathematical symbols are more convenient to handle and understand various concepts like incremental cost, elasticity of demand etc., Geometry, Algebra and calculus are the major branches of mathematics which are of use in managerial economics. The main concepts of mathematics like logarithms, and exponentials, vectors and determinants, input-output models etc., are widely used. Besides these usual tools, more advanced techniques designed in the recent years viz. linear programming, inventory models and game theory fine wide application in managerial economics.

4. Managerial Economics and Statistics:

Managerial Economics needs the tools of statistics in more than one way. A successful businessman must correctly estimate the demand for his product. He should be able to analyses the impact of variations in tastes. Fashion and changes in income on demand only then he can adjust his output. Statistical methods provide and sure base for decision-making. Thus statistical tools are used in collecting data and analyzing them to help in the decision making process.

Statistical tools like the theory of probability and forecasting techniques help the firm to predict the future course of events. Managerial Economics also make use of correlation and multiple regressions in related variables like price and demand to estimate the extent of dependence of one variable on the other. The theory of probability is very useful in problems involving uncertainty.

5. Managerial Economics and Operations Research:

Taking effectives decisions is the major concern of both managerial economics and operations research. The development of techniques and concepts such as linear programming, inventory models and game theory is due to the development of this new subject of operations research in the postwar years. Operations research is concerned with the complex problems arising out of the management of men, machines, materials and money.

Operation research provides a scientific model of the system and it helps managerial economists in the field of product development, material management, and inventory control, quality control, marketing and demand analysis. The varied tools of operations Research are helpful to managerial economists in decision-making.

6. Managerial Economics and the theory of Decision- making:

The Theory of decision-making is a new field of knowledge grown in the second half of this century. Most of the economic theories explain a single goal for the consumer i.e., Profit maximization for the firm. But the theory of decision-making is developed to explain multiplicity of goals and lot of uncertainty.

As such this new branch of knowledge is useful to business firms, which have to take quick decision in the case of multiple goals. Viewed this way the theory of decision making is more practical and application oriented than the economic theories.

7. Managerial Economics and Computer Science:

Computers have changes the way of the world functions and economic or business activity is no exception. Computers are used in data and accounts maintenance, inventory and stock controls and supply and demand predictions. What used to take days and months is done in a few minutes or hours by the computers. In fact computerization of business activities on a large scale has reduced the workload of managerial personnel. In most countries a basic knowledge of computer science, is a compulsory programme for managerial trainees.

To conclude, managerial economics, which is an offshoot traditional economics, has gained strength to be a separate branch of knowledge. It strength lies in its ability to integrate ideas from various specialized subjects to gain a proper perspective for decision-making.

A successful managerial economist must be a mathematician, a statistician and an economist. He must be also able to combine philosophic methods with historical methods to get the right perspective only then; he will be good at predictions. In short managerial practices with the help of other allied sciences.

THE ROLE OF MANAGERIAL ECONOMIST

Making decisions and processing information are the two primary tasks of the managers. Managerial economists have gained importance in recent years with the emergence of an organizational culture in production and sales activities.

A management economist with sound knowledge of theory and analytical tools for information system occupies a prestigious place among the personnel. A managerial economist is nearer to the policy-making. Equipped with specialized skills and modern techniques he analyses the internal and external operations of the firm. He evaluates and helps in decision making regarding sales, Pricing financial issues, labour relations and profitability. He helps in decision-making keeping in view the different goals of the firm.

His role in decision-making applies to routine affairs such as price fixation, improvement in quality, Location of plant, expansion or contraction of output etc. The role of managerial economist in internal management covers wide areas of production, sales and inventory schedules of the firm.

The most important role of the managerial economist relates to demand forecasting because an analysis of general business conditions is most vital for the success of the firm. He prepares a short-term forecast of general business activity and relates general economic forecasts to specific market trends. Most firms require two forecasts one covering the short term (for nest three months to one year) and the other covering the long term, which represents any period exceeding one-year. He has to be ever alert to gauge the changes in tastes and preferences of the consumers. He should evaluate the market potential. The need to know forecasting techniques on the part of the managerial economics means, he should be adept at market research. The purpose of market research is to provide a firm with information about current market position as well as present and possible future trends in the industry. A managerial economist who is well equipped with this knowledge can help the firm to plan product improvement, new product policy, pricing, and sales promotion strategy.

The fourth function of the managerial economist is to undertake an economic analysis of the industry. This is concerned with project evaluation and feasibility study at the firm level i.e., he should be able to judge on the basis of cost benefit analysis, whether it is advisable and profitable to go ahead with the project. The managerial economist should be adept at investment appraisal methods. At the external level, economic analysis involves the knowledge of competition involved, possibility of internal and foreign sales, the general business climate etc.

Another function is security management analysis. This is very important in the case of defense-oriented industries, power projects, and nuclear plants where security is very essential. Security management means, also that the production and trade secrets concerning technology, quality and other such related facts should not be leaked out to others. This security is more necessary in strategic and defense-oriented projects of national importance; a managerial economist should be able to manage these issues of security management analysis.

The sixth function is an advisory function. Here his advice is required on all matters of production and trade. In the hierarchy of management, a managerial economist ranks next to the top executives or the policy maker who may be doyens of several projects. It is the managerial economist of each firm who has to advise them on all matters of trade since they are in the know of actual functioning of the unit in all aspects, both technical and financial.

Another function of importance for the managerial economist is a concerned with pricing and related problems. The success of the firm depends upon a proper pricing strategy. The pricing decision is one of the most difficult decisions to be made in business because the information required is never fully available. Pricing of established products is different from new products. He may have to operate in an atmosphere constrained by government regulation. He may have to anticipate the reactions of competitors in pricing. The managerial economist has to be very alert and dynamic to take correct pricing decision in changing environment.

Finally the specific function of a managerial economist includes an analysis of environment issues. Modern theory of managerial economics recognizes the social responsibility of the firm. It refers to the impact of a firm on environmental factors. It should not have adverse impact on pollution and if possible try to contribute to environmental preservation and protection in a positive way.

The role of management economist lies not in taking decision but in analyzing, concluding and recommending to the policy maker. He should have the freedom to operate and analyze and must possess full knowledge of facts. He has to collect and provide the quantitative data from within the firm. He has to get information on external business environment such as general market conditions, trade cycles, and behavior pattern of the consumers. The managerial economist helps to co-ordinate policies relating to production, investment, inventories and price.

He should have equanimity to meet crisis. He should act only after analysis and discussion with relevant departments. He should have diplomacy to act in advisory capacity to the top executive as well as getting co-operation from different departments for his economic analysis. He should do well to have intuitive ability to know what is good or bad for the firm.

He should have sound theoretical knowledge to take up the challenges he has to face in actual day to day affairs. “BANMOL” referring to the role of managerial economist points out. “A managerial economist can become a for more helpful member of a management group by virtue of studies of economic analysis, primarily because there he learns to become an effective model builder and because there he acquires a very rich body of tools and techniques which can help to deal with the problems of the firm in a far more rigorous, a far more probing and a far deeper manner”.

QUESTIONS

1. What is managerial economics? Explain its focus are as
2. Point out the importance of managerial economics in decision making
3. What are the contributions and limitations of economic analysis in business decision making
4. Managerial Economics is the discipline which deals with the applications of economic theory to business management discuss.
5. Explain the fundamental concepts of managerial economics
6. Discuss the nature & Scope of Managerial economics
7. Managerial Economics is the study of allocation of resources available to a firm or other unit of management among the activities of that unit explains.
8. Explain the nature of problems studies in managerial economics. What is the importance of the study of such problems in business management?
9. Explain the role and responsibilities of a managerial economics?
10. “Managerial Economics is an integration of economic theory and with business practice for the purpose of facilitating decision making and forward planning” explain.

QUIZ

1. Managerial Economics as a subject gained popularity first in______. ( )
(a) India (b) Germany (c) U.S.A (d) England

2. When the subject Managerial Economics gained popularity? ( )
(a) 1950 (b) 1949 (c) 1951 (d) 1952

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

4. Which subject bridges gap between Economic Theory and Management Practice? ( )
   (a) Welfare Economics (b) Micro Economics
   (c) Managerial Economics (d) Macro Economics

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

6. Which areas covered by the subject "Managerial Economics". ( )
   (a) Operational issues (b) Environmental issues
   (c) Operational & Environmental issues (d) None

7. The relationship between Managerial Economics and Economic Theory is like that of Engineering Science to Physics (or) Medicine to____________. ( )
   (a) Mathematics (b) Economics
   (c) Biology (d) Accountancy

8. Making decisions and processing information are the two Primary tasks of the Managers . It was explained by the subject______________________. ( )
   (a) Physics (b) Engineering Science
   (c) Managerial Economics (d) Chemistry

9. Managerial Economics is close to_________Economics ( )
(a) National (b) Business (c) Micro (d) Industrial

10. The theory of firm also called as_____________. ( )
    (a) Welfare Economics (b) Industrial Economics
    (c) Micro Economics (d) None

11. "Any activity aimed at earning or spending money is called_____activity". ( )
    (a) Service activity (b) Accounting activity
    (c) Economic activity (d) None

<u>**Note:**</u> **Answer is <u>"C"</u> for all the above questions.**

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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.

Thus demand in economics means the desire backed by the willingness to buy a commodity and the purchasing power to pay. In the words of "Benham" "The demand for anything at a given price is the amount of it which will be bought per unit of time at that Price". (Thus demand is always at a price for a definite quantity at a specified time.) Thus demand has three essentials – price, quantity demanded and time. Without these, demand has to significance in economics.

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.

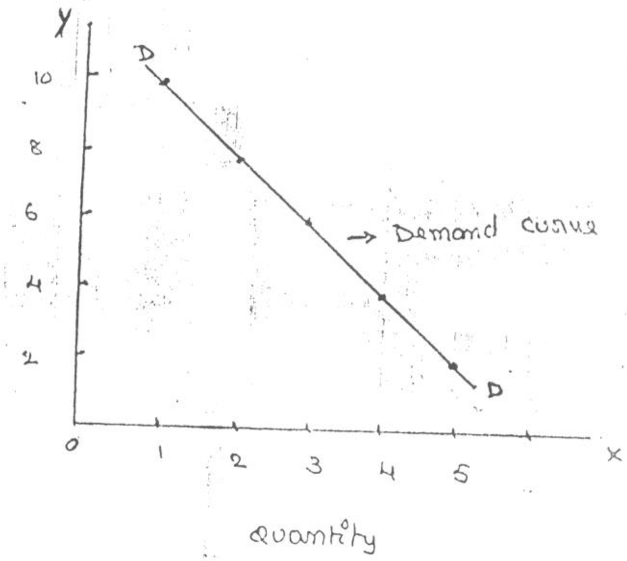
The law of demand may be explained with the help of the following demand schedule.

Demand Schedule.

Price of Appel (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.

Price



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

Assumptions:

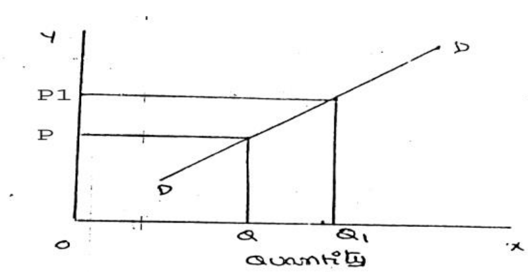
Law is demand is based on certain assumptions:

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:

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

Price



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:

The Giffen good or inferior good is an exception to the law of demand. When the price of an inferior good falls, the poor will buy less and vice versa. For example, when the price of maize falls, the poor are willing to spend more on superior goods than on maize if the price of maize increases, he has to increase the quantity of money spent on it. Otherwise he will have to face starvation. Thus a fall in price is followed by reduction in quantity demanded and vice versa. “Giffen” first explained this and therefore it is called as Giffen’s paradox.

2. Veblen or Demonstration effect:

‘Veblan’ has explained the exceptional demand curve through his doctrine of conspicuous consumption. Rich people buy certain good because it gives social distinction or prestige for example diamonds are bought by the richer class for the prestige it possess. It the price of diamonds falls poor also will buy is hence they will not give prestige. Therefore, rich people may stop buying this commodity.

3. Ignorance:

Sometimes, the quality of the commodity is Judge by its price. Consumers think that the product is superior if the price is high. As such they buy more at a higher price.

4. Speculative effect:

If the price of the commodity is increasing the consumers will buy more of it because of the fear that it increase still further, Thus, an increase in price may not be accomplished by a decrease in demand.

5. Fear of shortage:

During the times of emergency of war People may expect shortage of a commodity. At that time, they may buy more at a higher price to keep stocks for the future.

5. Necessaries:

In the case of necessaries like rice, vegetables etc. people buy more even at a higher price.

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:***

The most important factor-affecting amount demanded is the price of the commodity. The amount of a commodity demanded at a particular price is more properly called price demand. The relation between price and demand is called the Law of Demand. It is not only the existing price but also the expected changes in price, which affect demand.

2. ***Income of the Consumer:***

The second most important factor influencing demand is consumer income. In fact, we can establish a relation between the consumer income and the demand at different levels of income, price and other things remaining the same. The demand for a normal commodity goes up when income rises and falls down when income falls. But in case of Giffen goods the relationship is the opposite.

3. ***Prices of related goods***:

The demand for a commodity is also affected by the changes in prices of the related goods also. Related goods can be of two types:

(i). Substitutes which can replace each other in use; for example, tea and coffee are substitutes. The change in price of a substitute has effect on a commodity's demand in the same direction in which price changes. The rise in price of coffee shall raise the demand for tea;

(ii). Complementary foods are those which are jointly demanded, such as pen and ink. In such cases complementary goods have opposite relationship between price of one commodity and the amount demanded for the other. If the price of pens goes up, their demand is less as a result of which the demand for ink is also less. The price and demand go in opposite direction. The effect of changes in price of a commodity on amounts demanded of related commodities is called Cross Demand.

4. Tastes of the Consumers:

The amount demanded also depends on consumer's taste. Tastes include fashion, habit, customs, etc. A consumer's taste is also affected by advertisement. If the taste for a commodity goes up, its amount demanded is more even at the same price. This is called increase in demand. The opposite is called decrease in demand.

5. Wealth:

The amount demanded of commodity is also affected by the amount of wealth as well as its distribution. The wealthier are the people; higher is the demand for normal commodities. If wealth is more equally distributed, the demand for necessaries and comforts is more. On the other hand, if some people are rich, while the majorities are poor, the demand for luxuries is generally higher.

6. Population:

Increase in population increases demand for necessaries of life. The composition of population also affects demand. Composition of population means the proportion of young and old and children as well as the ratio of men to women. A change in composition of population has an effect on the nature of demand for different commodities.

7. Government Policy:

Government policy affects the demands for commodities through taxation. Taxing a commodity increases its price and the demand goes down. Similarly, financial help from the government increases the demand for a commodity while lowering its price.

8. Expectations regarding the future:

If consumers expect changes in price of commodity in future, they will change the demand at present even when the present price remains the same. Similarly, if consumers expect their incomes to rise in the near future they may increase the demand for a commodity just now.

9. Climate and weather:

The climate of an area and the weather prevailing there has a decisive effect on consumer's demand. In cold areas woolen cloth is demanded. During hot summer days, ice is very much in demand. On a rainy day, ice cream is not so much demanded.

10. State of business:

The level of demand for different commodities also depends upon the business conditions in the country. If the country is passing through boom conditions, there will be a marked increase in demand. On the other hand, the level of demand goes down during depression.

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.

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

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

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

Types of Elasticity of Demand:

There are three types of elasticity of demand:

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

1. Price elasticity of demand:

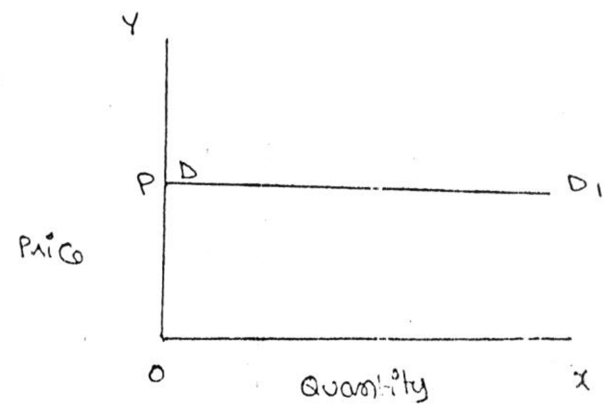
Marshall was the first economist to define price elasticity of demand. Price elasticity of demand measures changes in quantity demand to a change in Price. It is the ratio of percentage change in quantity demanded to a percentage change in price.

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

There are five cases of price elasticity of demand

A. Perfectly elastic demand:

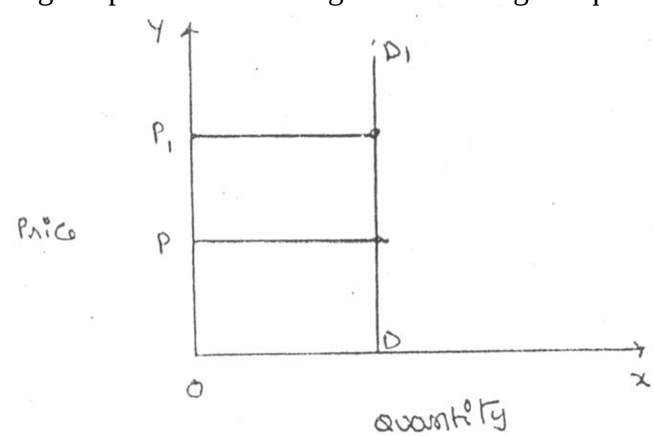
When small change in price leads to an infinitely large change is quantity demand, it is called perfectly or infinitely elastic demand. In this case $E=\infty$



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

B. Perfectly Inelastic Demand

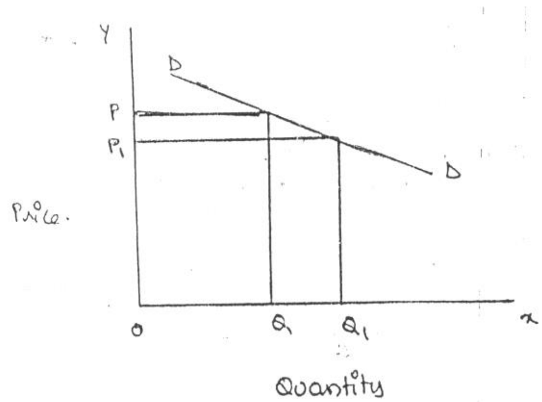
In this case, even a large change in price fails to bring about a change in quantity demanded.



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

C. Relatively elastic demand:

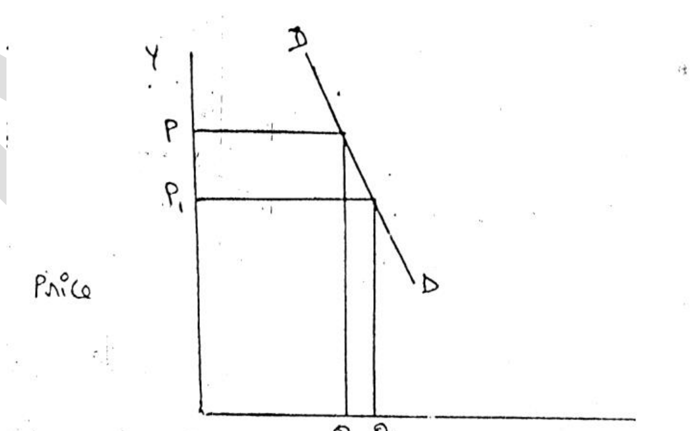
Demand changes more than proportionately to a change in price. i.e. a small change in price loads to a very big change in the quantity demanded. In this case
E > 1. This demand curve will be flatter.



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

D. Relatively in-elastic demand.

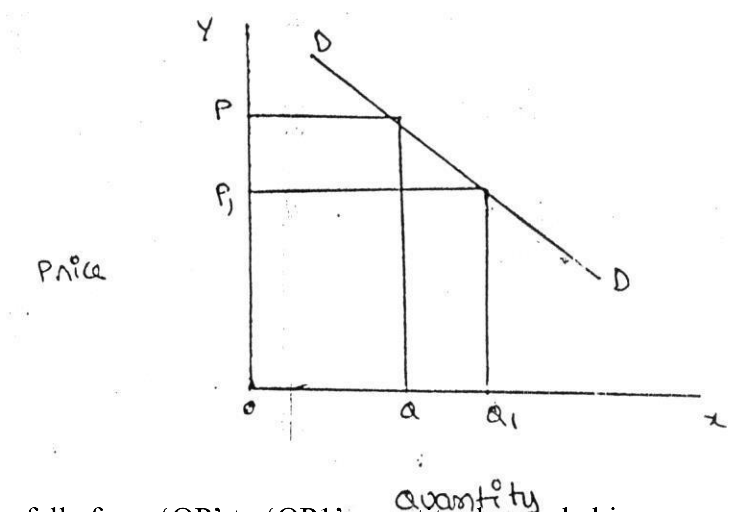
Quantity demanded changes less than proportional to a change in price. A large change in price leads to small change in amount demanded. Here E < 1. Demanded carve will be steeper.



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

E. Unit elasticity of demand:

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



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

2. Income elasticity of demand:

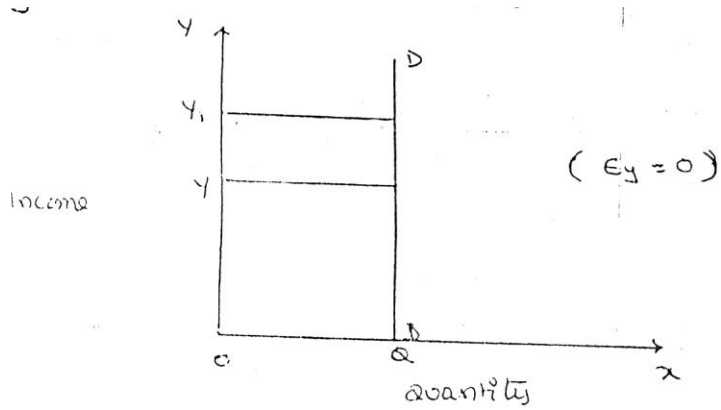
Income elasticity of demand shows the change in quantity demanded as a result of a change in income. Income elasticity of demand may be slated in the form of a formula.

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

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

A. Zero income elasticity:

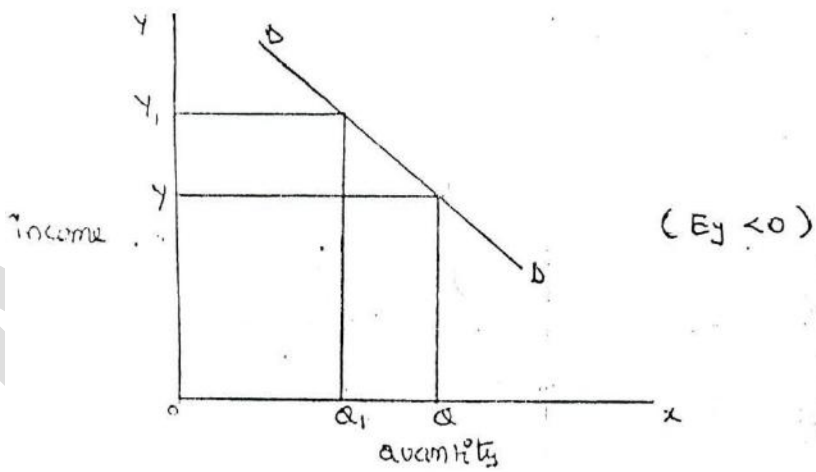
Quantity demanded remains the same, even though money income increases. Symbolically, it can be expressed as Ey=0. It can be depicted in the following way:



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

B. Negative Income elasticity:

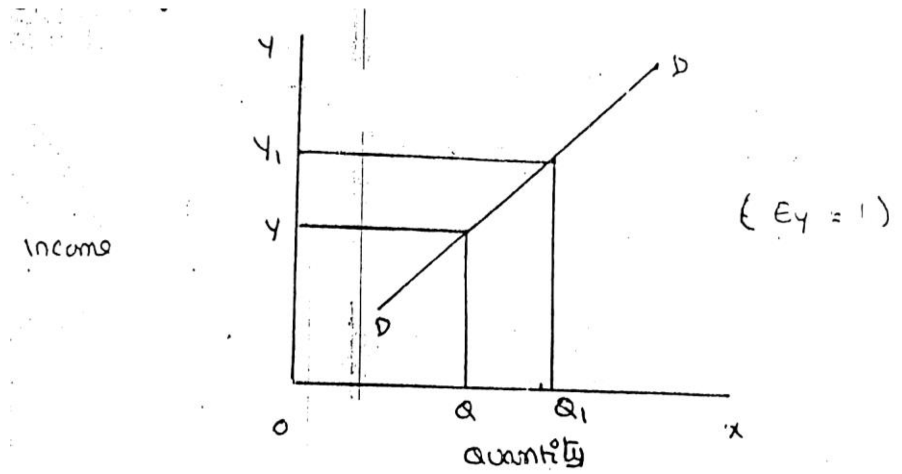
When income increases, quantity demanded falls. In this case, income elasticity of demand is negative. i.e., Ey < 0.



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

c. Unit income elasticity:

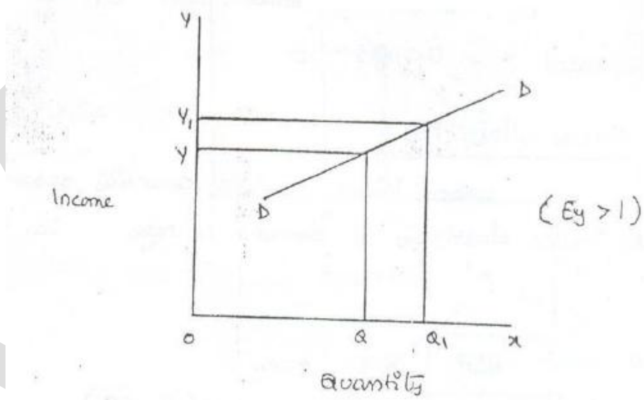
When an increase in income brings about a proportionate increase in quantity demanded, and then income elasticity of demand is equal to one. Ey = 1



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

d. Income elasticity greater than unity:

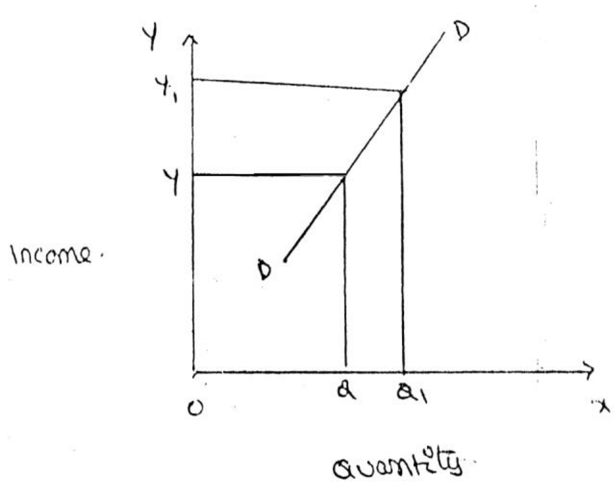
In this case, an increase in come brings about a more than proportionate increase in quantity demanded. Symbolically it can be written as Ey > 1.



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

E. Income elasticity leas than unity:

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



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

<u>3.</u> <u>Cross elasticity of Demand:</u>

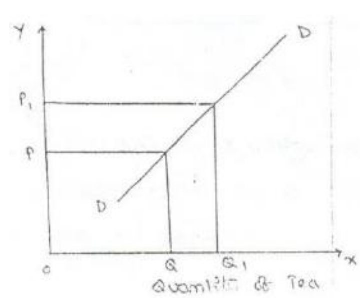
A change in the price of one commodity leads to a change in the quantity demanded of another commodity. This is called a cross elasticity of demand. The formula for cross elasticity of demand is:

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

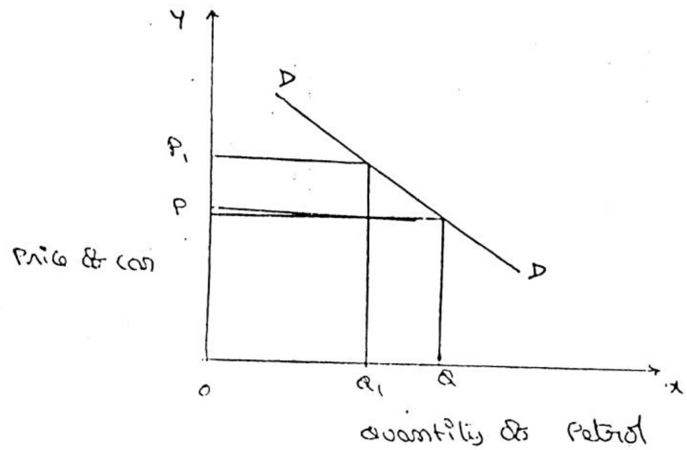
a. In case of substitutes, cross elasticity of demand is positive. Eg: Coffee and Tea

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

Price of Coffee



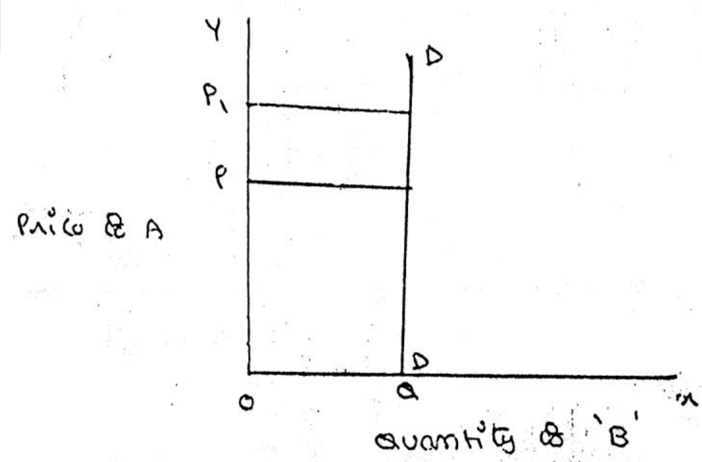
b. Incase of compliments, cross elasticity is negative. If increase in the price of one commodity leads to a decrease in the quantity demanded of another and vice versa.



$$E_c = \frac{\% \; QQ_1}{\% \; PP_1} \text{ (negative)}$$

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

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



Quantity demanded of commodity “b” remains unchanged due to a change in the price of ‘A’, as both are unrelated goods.

Factors influencing the elasticity of demand

Elasticity of demand depends on many factors.

1. Nature of commodity:

Elasticity or in-elasticity of demand depends on the nature of the commodity i.e. whether a commodity is a necessity, comfort or luxury, normally; the demand for Necessaries like salt, rice etc is inelastic. On the other band, the demand for comforts and luxuries is elastic.

2. Availability of substitutes:

Elasticity of demand depends on availability or non-availability of substitutes. In case of commodities, which have substitutes, demand is elastic, but in case of commodities, which have no substitutes, demand is in elastic.

3. Variety of uses:

If a commodity can be used for several purposes, than it will have elastic demand. i.e. electricity. On the other hand, demanded is inelastic for commodities, which can be put to only one use.

4. Postponement of demand:

If the consumption of a commodity can be postponed, than it will have elastic demand. On the contrary, if the demand for a commodity cannot be postpones, than demand is in elastic. The demand for rice or medicine cannot be postponed, while the demand for Cycle or umbrella can be postponed.

5. Amount of money spent:

Elasticity of demand depends on the amount of money spent on the commodity. If the consumer spends a smaller for example a consumer spends a little amount on salt and matchboxes. Even when price of salt or matchbox goes up, demanded will not fall. Therefore, demand is in case of clothing a consumer spends a large proportion of his income and an increase in price will reduce his demand for clothing. So the demand is elastic.

6. Time:

Elasticity of demand varies with time. Generally, demand is inelastic during short period and elastic during the long period. Demand is inelastic during short period because the consumers do not have enough time to know about the change is price. Even if they are aware of the price change, they may not immediately switch over to a new commodity, as they are accustomed to the old commodity.

7. Range of Prices:

Range of prices exerts an important influence on elasticity of demand. At a very high price, demand is inelastic because a slight fall in price will not induce the people buy more. Similarly at a low price also demand is inelastic. This is because at a low price all those who want to buy the commodity would have bought it and a further fall in price will not increase the demand. Therefore, elasticity is low at very him and very low prices.

Importance of Elasticity of Demand:

The concept of elasticity of demand is of much practical importance.

1. Price fixation:

Each seller under monopoly and imperfect competition has to take into account elasticity of demand while fixing the price for his product. If the demand for the product is inelastic, he can fix a higher price.

2. Production:

Producers generally decide their production level on the basis of demand for the product. Hence elasticity of demand helps the producers to take correct decision regarding the level of cut put to be produced.

3. Distribution:

Elasticity of demand also helps in the determination of rewards for factors of production. For example, if the demand for labour is inelastic, trade unions will be successful in raising wages. It is applicable to other factors of production.

4. International Trade:

Elasticity of demand helps in finding out the terms of trade between two countries. Terms of trade refers to the rate at which domestic commodity is exchanged for foreign commodities. Terms of trade depends upon the elasticity of demand of the two countries for each other goods.

5. Public Finance:

Elasticity of demand helps the government in formulating tax policies. For example, for imposing tax on a commodity, the Finance Minister has to take into account the elasticity of demand.

6. Nationalization:

The concept of elasticity of demand enables the government to decide about nationalization of industries.

Demand Forecasting

Introduction:

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

It is an ‘objective assessment of the future course of demand”. In recent times, forecasting plays an important role in business decision-making. Demand forecasting has an important influence on production planning. It is essential for a firm to produce the required quantities at the right time.

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

Types of demand Forecasting:

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

1. Short-term demand forecasting:

Short-term demand forecasting is limited to short periods, usually for one year. It relates to policies regarding sales, purchase, price and finances. It refers to existing production capacity of the firm. Short-term forecasting is essential for formulating is essential for formulating a suitable price policy. If the business people expect of rise in the prices of raw materials of shortages, they may buy early. This price forecasting helps in sale policy formulation. Production may be undertaken based on expected sales and not on actual sales. Further, demand forecasting assists in financial forecasting also. Prior information about production and sales is essential to provide additional funds on reasonable terms.

2. Long – term forecasting:

In long-term forecasting, the businessmen should now about the long-term demand for the product. Planning of a new plant or expansion of an existing unit depends on long-term demand. Similarly a multi product firm must take into account the demand for different items. When forecast are mode covering long periods, the probability of error is high. It is vary difficult to forecast the production, the trend of prices and the nature of competition. Hence quality and competent forecasts are essential.

Prof. C. I. Savage and T.R. Small classify demand forecasting into time types. They are 1. Economic forecasting, 2. Industry forecasting, 3. Firm level forecasting. Economics forecasting is concerned with the economics, while industrial level forecasting is used for inter-industry comparisons and is being supplied by trade association or chamber of commerce. Firm level forecasting relates to individual firm.

Methods of forecasting:

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

1. Survey Method:

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

a. Opinion survey method:

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

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

B. Expert opinion method:

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

C. Delphi Method:

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

D. Consumers interview method:

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

2. Statistical Methods:

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

a. Time series analysis or trend projection methods:

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

b. Barometric Technique:

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

c. Regression and correlation method:

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

QUESTIONS

1. What is meant by elasticity of demand? How do you measure it? What are determinates of elasticity of demand?
2. What is the utility of demand forecasting? What are the criteria for a good forecasting method? Forecasting of demand for a new product? ‘ Economic indicators’
3. What is promotional elasticity of demand? How does if differ from cross elasticity of demand.
4. Explain in law of demand. What do you mean by shifts in demand curve?
5. What is cross elasticity of demand? Is it positive for substitute or complements? Show in a diagram relating to the demand for coffee to the price of tea?
6. Income elasticity of demand and distinguish its, various tapes. How does it differ from pure elasticity of demand?
7. What is meant by demand? Everyone desires a Maruti 800 Car – Does this mean that the demand for Maruti Car is large?
8. Calculate price elasticity of demand:

Q1= 4000	P1= 20
Q2= 5000	P2= 19

9. What is demand analysis? Explain the factor influencing the demand for a product? What are the various factors that influence the demand for a computer.

QUIZ

1. Who explained the “Law of Demand”? ( )
   (a) Joel Dean (b) Cobb-Douglas
   (c) Marshall (d) C.I.Savage & T.R.Small

2. Demand Curve always_________sloping. ( )
   (a) Positive (b) Straight line (c) Negative (d) Vertical

3. Geffen goods, Veblan goods and speculations are exceptions to___. ( )
   (a) Cost function (b) Production function
   (c) Law of Demand (d) Finance function

4. Who explained the “Law of Demand”? ( )
   (a) Cobb-Douglas (b) Adam smith
   (c) Marshall (d) Joel Dean

5. When PE = □ (Price Elasticity of Demand is infinite), we call it____. ( )
   (a) Relatively Elastic (b) Perfectly Inelastic
   (c) Perfectly Elastic (d) Unit Elastic

6. Income Elasticity of demand when less than ‘O’ (IE = □ O), it is termed as________. ( )

(a) Income Elasticity less than unity (b) Zero income Elasticity
(c) Negative Income Elasticity (d) Unit Income Elasticity

7. The other name of inferior goods is________. ( )
(a) Veblan goods (b) Necessaries
(c) Geffen goods (d) Diamonds

8. Estimation of future possible demand is called_______. ( )
(a) Sales Forecasting (b) Production Forecasting
(c) Income Forecasting (d) Demand Forecasting

9. How many methods are employed to forecast the demand ( )
(a) Three (b) Four
(c) Two (d) Five

10. What is the formula for Price Elasticity of Demand? ( )
(a) $\frac{\text{\% of change in the Price}}{\text{\% of change in the Demand}}$ (b) $\frac{\text{\% of change in the Demand}}{\text{\% of change in the Income}}$
(c) $\frac{\text{\% of change in the Demand}}{\text{\% of change in the Price}}$ (d) $\frac{\text{\% of change in the Demand of 'X'}}{\text{\% of change in the Price of 'Y'}}$

11. When a small change in price leads great change in the quantity demand,
We call it_________. ( )
(a) Inelastic Demand (b) Negative Demand
(c) Elastic Demand (d) None

12. 12. When a great change in price leads small change in the quantity demand,
We call it_________. ( )
(a) Elastic Demand (b) Positive Demand
(c) Inelastic Demand (d) None

13. "Coffee and Tea are the_________goods". ( )
(a) Relative (b) Complementary
(c) Substitute (d) None

14. Consumers Survey method is one of the Survey Methods to forecast the__. ( )
(a) Sales (b) Income
(c) Demand (d) Production

15. What is the formula for Income Elasticity of Demand? ( )
(a) $\frac{\text{\% of change in the Income}}{\text{\% of change in the Demand}}$ (b) $\frac{\text{\% of change in the Demand}}{\text{\% of change in the Price}}$
(c) $\frac{\text{\% of change in the Demand}}{\text{\% of change in the Income}}$ (d) $\frac{\text{\% of change in the Demand of 'X'}}{\text{\% of change in the Price of 'Y'}}$

16. What is the formula for Cross Elasticity of Demand? ( )

(a) $\frac{\text{\% of change in the Price of 'X'}}{\text{\% of change in the Demand of 'Y''}}$ (b) $\frac{\text{\% of change in the Demand}}{\text{\% of change in the Price}}$

(c) $\frac{\text{\% of change in the Demand of 'X'}}{\text{\% of change in the Price of 'Y'}}$ (d) $\frac{\text{\% of change in the Demand}}{\text{\% of change in the Income}}$

17. When PE = 0 (Price Elasticity of Demand is Zero), we call it____. ( )

(a) Relatively Elastic demand (b) Perfectly Elastic demand

(c) Perfectly Inelastic demand (d) Unit Elastic demand

18. When PE =>1 (Price Elasticity of Demand is greater than one),
We call it____. ( )

(a) Perfectly Elastic demand (b) Perfectly inelastic demand

(c) Relatively Elastic demand (d) relatively inelastic demand

19. 19. When PE =<1 (Price Elasticity of Demand is less than one),
We call it____. ( )

(a) Perfectly inelastic demand (b) Relatively Elastic demand

(c) Relatively inelastic demand (d) perfectly Elastic demand

20. When PE =1 (Price Elasticity of Demand is one), we call it____. ( )

(a) Perfectly Elastic demand (b) Perfectly inelastic demand

(c) Unit elastic demand (d) Relatively Elastic demand

21. When Income Elasticity of demand is Zero (IE = 0), It is termed as____. ( )

(a) Negative Income Elasticity (b) Unit Income Elasticity

(c) Zero Income Elasticity (d) Infinite Income Elasticity

UNIT – II
THEORY OF PRODUCTION AND COST ANALYSIS

Meaning of Production:
Since the primary purpose of economic activity is to produce utility for individuals, we count as production during a time period all activity which either creates utility during the period or which increases ability of the society to create utility in the future.

Definition of Production:

According to Bates and Parkinson:
"Production is the organised activity of transforming resources into finished products in the form of goods and services; the objective of production is to satisfy the demand for such transformed resources".

According to J. R. Hicks:
"Production is any activity directed to the satisfaction of other peoples' wants through exchange". This definition makes it clear that, in economics, we do not treat the mere making of things as production. What is made must be designed to satisfy wants.

Production in Economics

Production in Economics is sometimes defined as the creation of utility or the creation of wants – satisfying goods' and services. It is said that just as a man cannot destroy matter, he also cannot create matter.

"If consuming means extracting utilities from,**"** says Fraser, **"**producing means putting utility into.**"**

Production, therefore, should be defined, not as a creation of utility, but the creation (or addition) of value. Utilities are created in three forms:

- Form utility
- Time utility
- Place utility.

Production in Economics is a very important economic activity. As we are aware, the survival of any firm in a competitive market depends upon its ability to produce goods and services at a competitive cost.

One of the principal concerns of business managers is the achievement of optimum efficiency in production by minimizing the cost of production.

What is Production?

In economics, Production is a process of transforming tangible and intangible inputs into goods or services.

Raw materials, land, labour and capital are the tangible inputs, whereas ideas, information and knowledge are the intangible inputs. These inputs are also known as factors of production.

Production Definition

Production in Economics can be defined as an organised activity of transforming physical inputs (resources) into outputs (finished products), which will satisfy the products' needs of the society.

--James Bates and J.R. Parkinson

Production in Economics is an activity whether physical or mental, which is directed to the satisfaction of other people's wants through exchange. ----*J.R. Hicks*

Concept of Production

Production in Economics can be defined as the process of converting the inputs into outputs. Inputs include land, labour and capital, whereas output includes finished goods and services.

In other words, Production in Economics is an act of creating value that satisfies the wants of the individuals.

Organisations engage in production for earning maximum profit, which is the difference between the cost and revenue. Therefore, their production decisions depend on the cost and revenue. The main aim of production is to produce maximum output with given inputs.

Importance of Production

Production in Economics is considered very important by organisations. **Importance of Production** are as follow:

- Helps in creating value by applying labour on land and capital
- Improves welfare as more commodities mean more utility
- Generates employment and income, which develops the economy.
- Helps in understanding the relation between cost and output

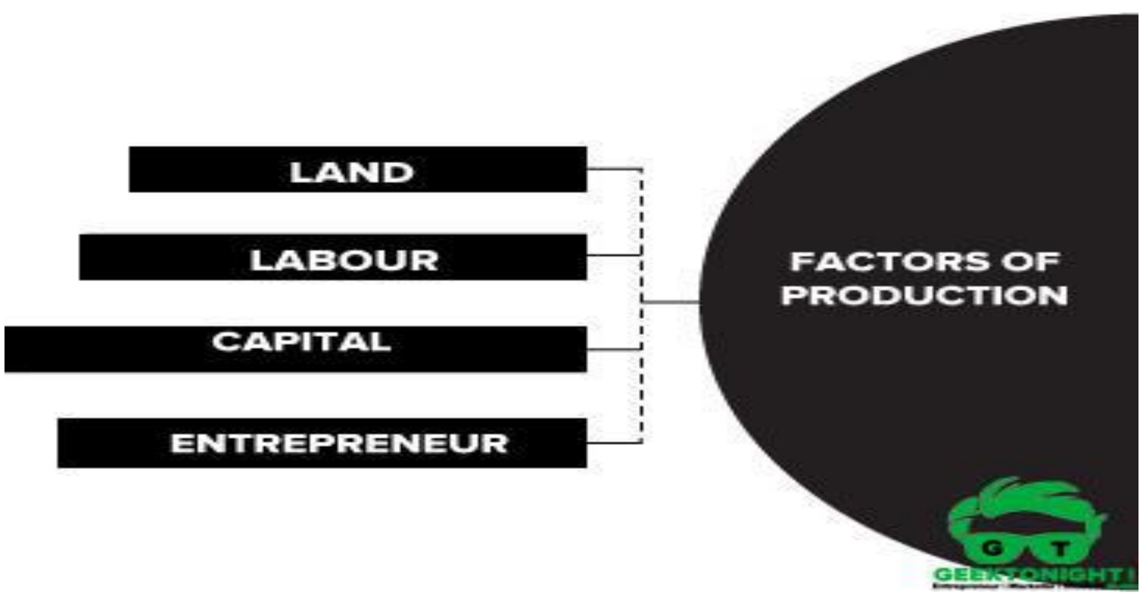
Factors of Production

Factors of Production in Economics are the inputs that are used for producing the final output with the main aim of earning an economic profit.

Land, labour, capital and entrepreneur are the main factors of production. Each and every factor is important and plays a distinctive role in the organisation.

Factors of Production are:

1. Land
2. Labour
3. Capital
4. Entrepreneur/ organization.



Production

Land

Land is the gift of nature and includes the dry surface of the earth and the natural resources on or under the earth's surface, such as forests, rivers, sunlight, etc.
Land is utilised to produce income called rent. Land is available in fixed quantity; thus, does not have a supply price. This implies that the change in price of land does not affect its supply. The return for land is called rent.

Characteristics which would qualify a given factor to be called land

- Land is a free gift of nature
- Land is a free gift of nature
- Land is permanent and has indestructible powers
- Land is a passive factor
- Land is immobile
- Land has multiple uses
- Land is heterogeneous

Labour

Labour is the physical and mental efforts of human beings that undertake the production process. It includes unskilled, semi-skilled and highly skilled labour. The supply of labour is affected by the change in its prices. It increases with an increase in wages. The return for labour is called wages and salary.

Characteristics of labour:

- Human Effort
- Labour is perishable
- Labour is an active factor
- Labour is inseparable from the labourer
- Labour power differs from labourer to labourer
- All labour may not be productive
- Labour has poor bargaining power
- Labour is mobile
- There is no rapid adjustment of supply of labour to the demand for it
- Choice between hours of labour and hours of leisure

Capital

Capital is the wealth created by human beings. It is one of the important factor of production of any kind of goods and services, as production cannot take place without the involvement of capital.
Capital is an output of a production process that goes into another production process as an input. Capital as a factor of production is divided into two parts, namely, physical capital and human capital.
Physical capital includes tangible resources, such as buildings, machines, tools and equipment, etc.
Human capital includes knowledge and skills of human resource, which is gained by education, training and experience. Return for capital is termed as interest.

Types of Capital

- Fixed capital
- Circulating capital
- Real capital
- Human capital
- Tangible capital
- Individual capital
- Social Capital

Entrepreneur

Entrepreneurship consists of three major functions, viz., coordination, management and supervision. An entrepreneur is a person who creates an enterprise. The success or failure depends on the efficiency of the entrepreneur.

An enterprise is an organisation that undertakes commercial purposes or business ventures and focuses on providing goods and services. An enterprise is composed of individuals and physical assets with a common goal of generating profits.

Functions of an entrepreneur

- Initiating business enterprise and resource co-ordination
- Risk bearing or uncertainty bearing
- Innovations

Factors of Production:

Production of a commodity or service requires the use of certain resources or factors of production. Since most of the resources necessary to carry on production are scarce relative to demand for them they are called economic resources.

Resources, which we shall call factors of production, are combined in various ways, by firms or enterprises, to produce an annual flow of goods and services.

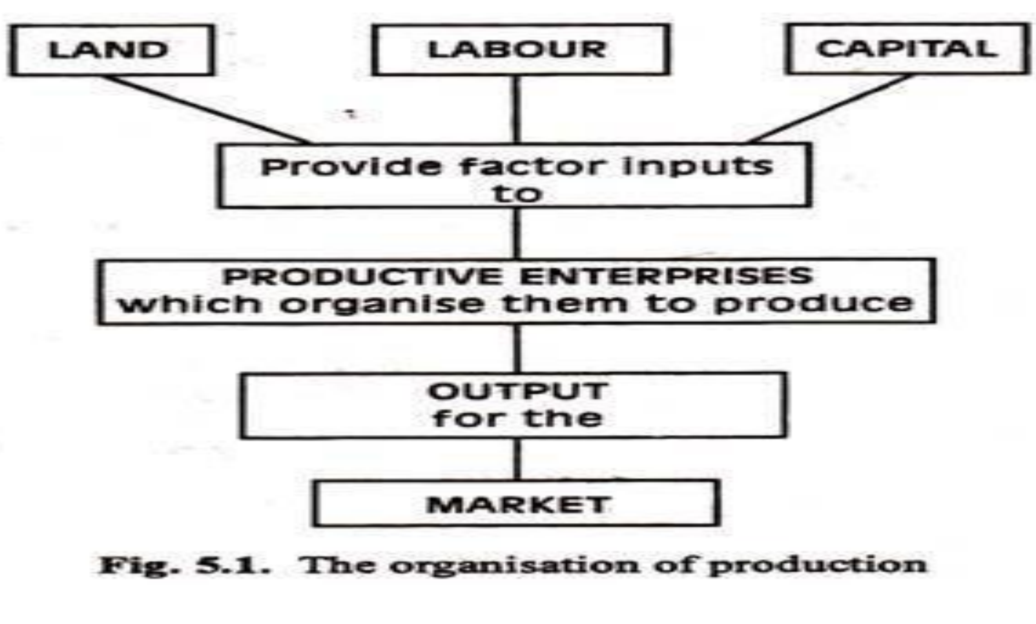
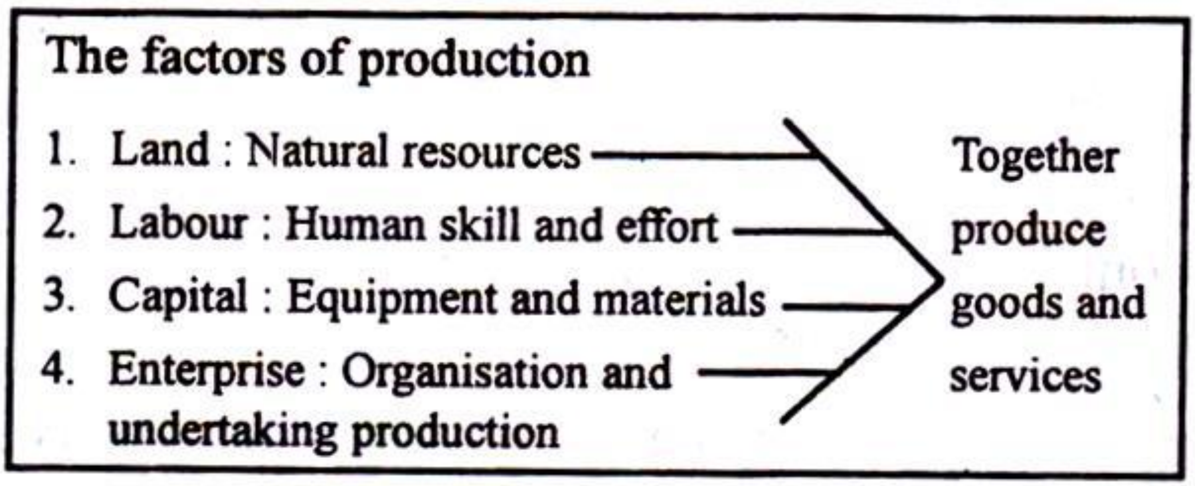


Fig. 5.1. The organisation of production

Name	Nature	Reward
Land	Any natural resources	Rent
Labour	Toil and/or skills	Wage
Capital	Man-made resource	Interest
Enterprise	Risk taking and organising	Profit



Advantages of Production

1. Advantages to consumers:

A well planned production function will lead to good quality products, higher rate of production and lower cost per unit. The consumers will be benefitted from prices of goods and will get good quality products. The availability of goods will also be satisfactory and the consumers will be saved from a lot of botheration which may otherwise be caused by scarcity of products.

2. Advantages to Investors:

An enhancement in productivity will increase profitability of the business. The investors will get higher returns on investment if profitability is better. This will also result in appreciation of assets values and ultimately the prices of shares will go up which will also benefit investors.

3. Advantages to employees:

Higher productivity will benefit employees in the form of better remuneration, stability in employment, good working conditions, etc. Better productivity to a worker will give him job satisfaction and improve his morale.

4. Advantages to suppliers:

Every enterprise depends upon supplies of raw materials, finished goods, spare parts etc. The suppliers will always like to deal with a concern having sound financial position. The company and its suppliers will have an enduring relationship only if both are satisfied with each other's dealings.

5. Advantages to the community:

The economic and social stability of a- community is linked with growth and development of its industrial structure. An overall improvement in productivity will improve economic welfare of the society.

6. Advantages to the nation:

The advantages of various segments of society improve welfare of a nation. Better production management will result in proper and economical use of natural resources and elimination of wastages. An improved industrial climate will bring all round development and prosperity.

Introduction to Production Function:

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

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

The production function expresses a functional relationship between physical inputs and physical outputs of a firm at any particular time period. The output is thus a function of inputs. Mathematically production function can be written as
Q = F(L1,L2,C,O,T)

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

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

In case of an agricultural product, increasing the other factors of production can increase the production, but beyond a point, increase output can be had only with increased use of agricultural land, investment in land forms a significant portion of the total cost of production for output, whereas, in the case of the software industry, other factor such as technology , capital management and others become significant. With change in industry and the requirements the production function also needs to be modified to suit to the situation.

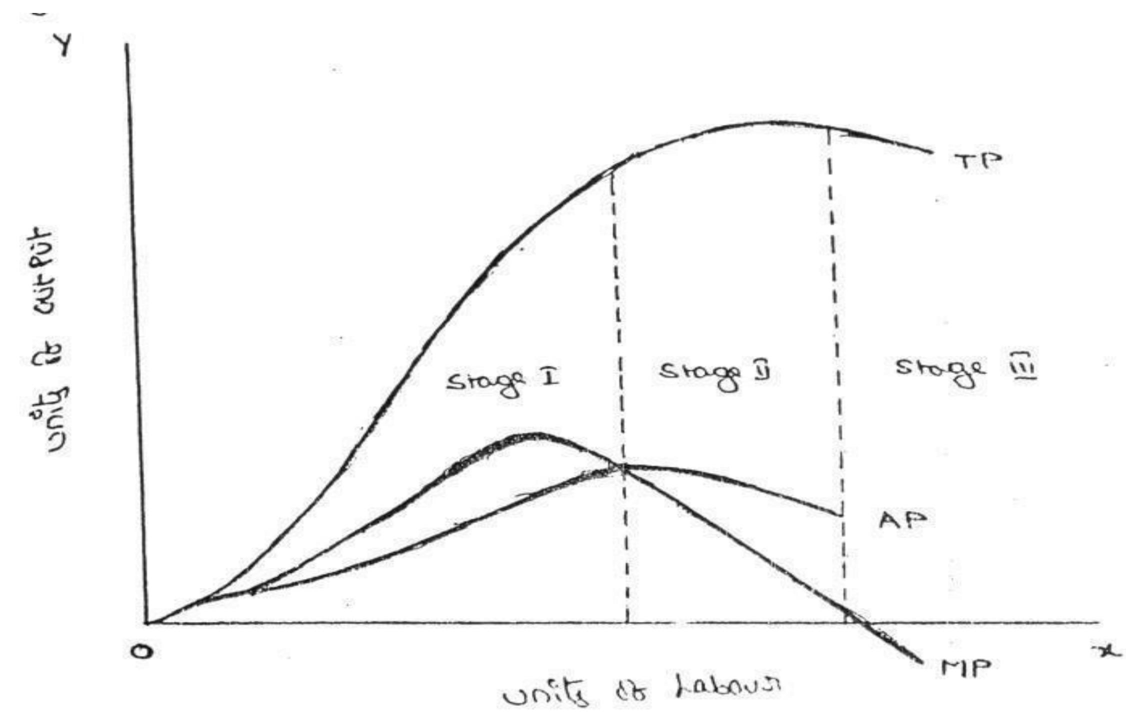
Production Function with One Variable Input or short run production function

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

Definition According to **G. Stigler**
"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. themarginal product will diminish".

According to **F. Benham**
"As the proportion of one factor in a combination of factors is increased, after a point, first themarginal and then the average product of that factor will diminish".

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



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

Production Function With Two Variable Inputs And Laws Returns

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

Q = f(C,L)
Where c= capital , L = labour,

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

ISO - QUANTS

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

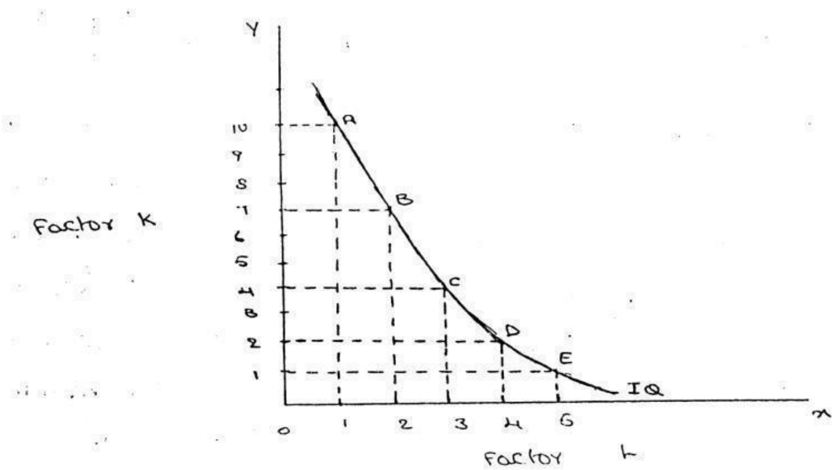
As an isoquant curve represents all such combinations which yield equal quantity of output, any or every combination is a good combination for the manufacturer. Since he prefers all these combinations equally, an isoquant curve is also called product indifferent curve.

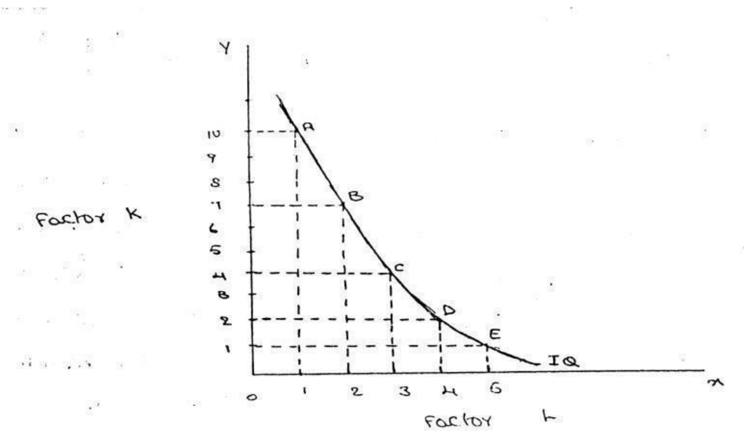
An isoquant may be explained with the help of an arithmetical example

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

Combination „A‟ represent 1 unit of labour and 10 units of capital and produces „50‟ quintals of a product all other combinations in the table are assumed to yield the same given output of a product say

„50‟ quintals by employing any one of the alternative combinations of the two factors labour and capital. If we plot all these combinations on a paper and join them, we will get continues and smooth curvecalled Iso-product curve as shown below.





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

Features of isoquant

1. Downward sloping: isoquant are downward sloping curves because , if one input increase, the other one reduces. There is no question of increase in both the inputs to yield a given output. A degree ofsubstitution is assumed between the factors of production. In other words, an isoquant cannot beincreasing, as increase in both the inputs does not yield same level of output. If it is constant, it means that the output remains constant through the use of one of the factor is increasing, which is not true, isoquant slope from left to right.

2. Convex to origin: isoquant are convex to the origin. It is because the input factors are not perfect substitutes. One input factor can be substituted by other input factor in a diminishing marginal rate. If theinput factors were perfect substitutes , the isoqunt would be a falling straight line. When the inputs are used infixed proportion, and substitution of one input for the other cannot trake place, the isoquant willbe L shaped

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

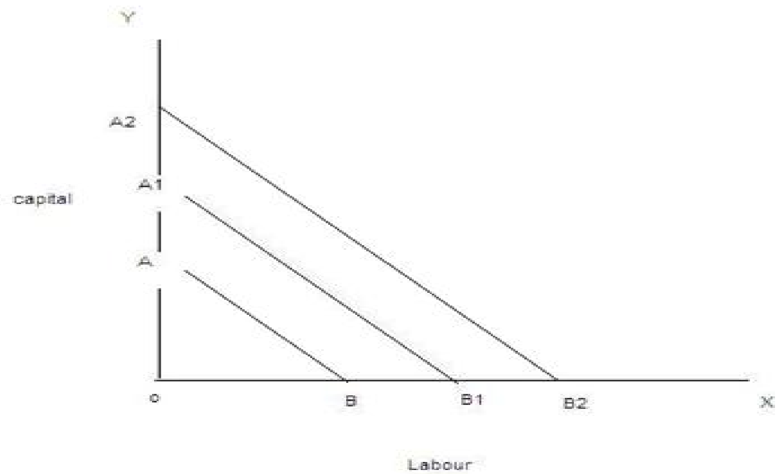
4. do not axes: the isoquant touches neither X-axis nor Y- axis, as both inputs are required to produce a given product.

ISO COST

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

Isocost curve is the locus traced out by various combinations of L and K, each of which costs the producer the same amount of money (C) Differentiating equation with respect to L, we have $dK/dL = - w/r$ This gives the slope of the producer‟s budget line (isocost curve). Iso cost line shows various combinations of labour and capital that the firm can buy for a given factor prices. The slope of iso cost line = PL/Pk. In this equation , PL is the price of labour and Pk is the price of capital. The slope of iso cost line indicates the ratio of the factor prices. A set of isocost lines can be drawn for different levels of factor prices, or different sums of money. The iso cost line will shift to the right when money spent on factors increases or firm could buy more as the factor prices are given.

With the change in the factor prices the slope of iso cost lien will change. If the price of labour falls the firm could buy more of labour and the line will shift away from the origin. The slope depends on the prices of factors of production and the amount of money which the firm spends on the factors. When the amount of money spent by the firm changes, the isocost line may shift but its slope remains the same. A change in factor price makes changes in the slope of isocost lines as shown in the figure.

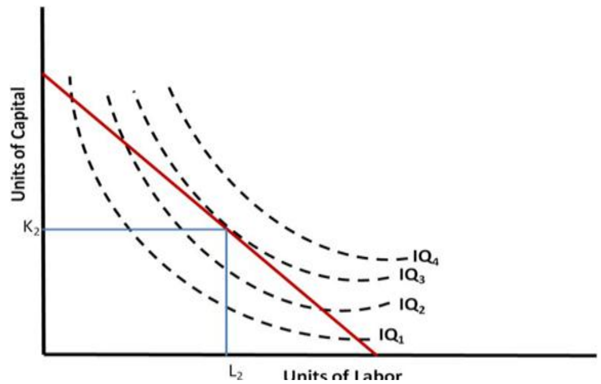


Least Cost Combination Of Inputs

The manufacturer has to produce at lower costs to attain higher profits. The isocost and isoquants can be used to determined the input usage that minimizes the cost of production. Where the slope of isoquant is equal to that of isocost, there lies the lowest point of cost of production. This can be observed by superimposing the isocosts on isoproduct curves. It is evident that the producer can, with a total outlay.

The firm can achieve maximum profits by choosing that combination of factors which will cost it the least. The choice is based on the prices of factors of production at a particular time. The firm can maximize its profits either by maximizing the level of output for a given cost or by minimizing the cost of producing a given output. In both cases the factors will have to be employed in optimal combination at which the cost of production will be minimum. The least cost factor combination can be determined by imposing the isoquant map on isocost line. The point of tangency between the isocost and an isoquant is an important but not a necessary condition for producer‟s equilibrium. The essential condition is that the slope of the isocost line must equal the slope of the isoquant.

Thus at a point of equilibrium marginal physical productivities of the two factors must be equal the ratio of their prices. The marginal physical product per rupee of one factor must be equal to tht of the other factor. And isoquant must be convex to the origin. The marginal rate of technical substitution of labour for capital must be diminishing at the point of equilibrium.



Marginal Rate Of Technical Substitution (MRTS)

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

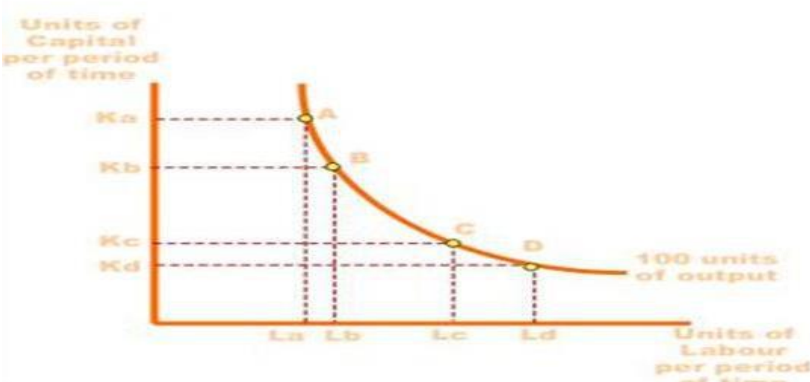
Isoquants are typically convex to the origin reflecting the fact that the two factors are substitutable for each other at varying rates. This rate of substitutability is called the "marginal rate of technical substitution" (MRTS) or occasionally the "marginal rate of substitution in production". It measures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

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

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

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

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



The Cobb–Douglas Production Function

1 Introduction

In general, a *production function* is a specification of how the quantity of output behaves as a func- tion of the inputs used in production. This concept can be applied at the level of individual firms, industries, or entire economies. Since we're doing macroeconomics we will be considering an *ag-gregate* production function, applying at the economy-wide level.

Various specific mathematical forms have been put forward for the production function, but the most commonly used is that developed by Charles Cobb and Paul Douglas in the second quarter of the 20th century. Here's their specification:

$$Y = AK^{\alpha}N^{1-\alpha} \qquad 0 < \alpha < 1$$

Here Y represents aggregate output, K the capital input, and N the labor input (capital and labor being the two "factors of production" in this function). The A term represents Total Factor Produc-tivity (TFP for short); you can think of this as a "quality" factor—as opposed to K and N which arejust quantitative. The value of A reflects the state of technology as well as the skill and education level of the workforce. All being well, we'd expect A to be gradually increasing over time.

LAW OF RETURNS TO SCALE

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

1. Law of increasing returns to scale
   This law states that the volume of output keeps on increasing with every increase in the inputs,. Where a given increase in inputs leads to a more than proportionate increase in the output, the law of increasing returns to scale is said to operate. We can introduce division of labour and other technological means to increase production. Hence, the total product increases at an increasing rate.

2. Law of constant returns to scale
   When the scope for division of labour gets restricted, the rate of increase in the total output remains constant, the law of constant returns to scale is said to operate, this law states that the rate of increase/decrease in volume of output is same to that of rate of increase/decrease in inputs.

3. Law of decreasing returns to scale
   Where the proportionate increase in the inputs does not lead to equivalent increase in output, the output increases at a decreasing rate, the law of decreasing returns to scale is said to operate. This results in higher average cost per unit.

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

Capital (in units)	Labor(in units)	% of increase in both inputs	Output(in units)	% of increase in output	Law applicable
1	3	---	---	---	---
2	6	100	120	140	Law of increase returns to scale
4	12	100	240	100	Law of constant returns to scale
8	24	100	360	50	Law of decrease returns to scale

INTERNAL AND EXTERNAL ECONOMIES OF SCALE

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

a. **Managerial Economics**: as the firm expands, the firm needs qualified managerial personnel to handle each of its functions marketing, finance, production, human resources and others in a professional way. Functional specialization ensure minimum wastage and lowers the cost of production in the long –run.

b. **Commercial Economics**: the transaction of buying and selling raw material and other operating supplies such as spares and so on will be rapid and the volume of each transaction also grows as the firm grows, there could be cheaper savings in the procurement, transportation and storage cost, this will lead to lower costs and increased profits.

c. **Financial Economics**: The large firm is able to secure the necessary finances either for block capital purposes or for working capital needs more easily and cheaply. It can barrow from the public, banks and other financial institutions at relatively cheaper rates. It is in this way that a large firm reaps financial economies.

d. **Technical Economies**: Technical economies arise to a firm from the use of better machines and superior techniques of production. As a result, production increases and per unit cost of production falls. A large firm, which employs costly and superior plant and equipment, enjoys a technical superiority over a small firm. Another technical economy lies in the mechanical advantage of using large machines. The cost of operating large machines is less than that of operating mall machine. More over a larger firm is able to reduce it"s per unit cost of production by linking the various processes of production. Technical economies may also be associated when the large firm is able to utilize all its waste materials for the development of by-products industry. Scope for specialization is also available in a large firm. This increases the productive capacity of the firm and reduces the unit cost of production.

e. **Marketing Economies:** The large firm reaps marketing or commercial economies in buying its requirements and in selling its final products. The large firm generally has a separate marketing department. It can buy and sell on behalf of the firm, when the market trends are more favorable. In the matter of buying they could enjoy advantages like preferential treatment, transport concessions, cheap credit, prompt delivery and fine relation with dealers. Similarly it sells its products more effectively for a higher margin of profit.

f. **Risk Bearing Economies**: The large firm produces many commodities and serves wider areas. Itis, therefore, able to absorb any shock for its existence. For example, during business depression,the prices fall for every firm. There is also a possibility for market fluctuations in a particular product of the firm. Under such circumstances the risk-bearing economies or survival economies help the bigger firm to survive business crisis.

g. **Economics Of Larger Dimension**: large – scale production is required to take advantage of bigger size plant and equipment. For example, the cost of a 1.00.000 units capacity plant will not be double that of 50.000 units capacity plant. Likewise the cost of a 10.000 ton oil tanker willnot be double that of a 5000 ton oil tanker. Engineers go by what is called two by three rule wherein when the volume is increase by 100%, the material required will increase only by two – thirds. Technical economies are available only from large size, improved methods of production processes and when the products are standardized.

h. **Economics Of Research And Development**: large organizations such as Dr.Reddy"s labs, Hindustan Lever spend heavily on research and development and bring out several innovative products. Only such firms with a strong research and development base can cope with competition globally.

EXTERNAL ECONOMICS:

External economics refer to all the firms in the industry, because of growth of the industry as a whole or because of growth of ancillary industries, external economics benefit al the firms in the industry as the industry expands. This will lead to lowering the cost of production and thereby increasing the profitability. The external economics can be grouped under three types:

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

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

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

COST ; the institute of cost and management accountants (ICMA) has define cost as “ the amount expenditure, actual or notional, incurred on or attributable to a specified thing or activity”. It is the amount of resources sacrificed to achieve a specific objective. A cost must be with reference to the purpose for which it is used and the conditions under which it is computed. To take decision, managers wish to know the cost of something.

Cost refers to the expenditure incurred to produce a particular product or services. All costs involve a sacrifice of some kind or other to acquire some benefit. For example, if I want to eat food, I should be prepared to sacrifice money.

Cost refers to the amount of expenditure incurred in acquiring something. In business firm, it refers to the expenditure incurred to produce an output or provide service. Thus the cost incurred in connection with raw material , labour, other heads constitute the overall cost of production.

COST CONCEPTS:

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

Out lay cost also known as actual costs obsolete costs are those expends which are actually incurred by the firm these are the payments made for labour, material, plant, building, machinery traveling, transporting etc., These are all those expense item appearing in the books of account, hence based on accounting cost concept.

On the other hand opportunity cost implies the earnings foregone on the next best alternative, has the present option is undertaken. This cost is often measured by assessing the alternative, which has to be scarified if the particular line is followed.

The opportunity cost concept is made use for long-run decisions. This concept is very important in capital expenditure budgeting. This concept is very important in capital expenditure budgeting. The concept is also useful for taking short-run decisions opportunity cost is the cost concept to use when the supply of inputs is strictly limited and when there is an alternative. If there is no alternative, Opportunity cost is zero. The opportunity cost of any action is therefore measured by the value of the most favorable alternative course, which had to be foregoing if that action is taken.

2. Explicit and implicit costs:

Explicit costs are those expenses that involve cash payments. These are the actual or business costs that appear in the books of accounts. These costs include payment of wages and salaries, payment for raw-materials, interest on borrowed capital funds, rent on hired land, Taxes paid etc.

Implicit costs are the costs of the factor units that are owned by the employer himself. These costs are not actually incurred but would have been incurred in the absence of employment of self – owned factors. The two normal implicit costs are depreciation, interest on capital etc. A decision maker must consider implicit costs too to find out appropriate profitability of alternatives.

3. Historical and Replacement costs:

Historical cost is the original cost of an asset. Historical cost valuation shows the cost of an asset as the original price paid for the asset acquired in the past. Historical valuation is the basis for financial accounts.

A replacement cost is the price that would have to be paid currently to replace the same asset. During periods of substantial change in the price level, historical valuation gives a poor projection of the future cost intended for managerial decision. A replacement cost is a relevant cost concept when financial statements have to be adjusted for inflation.

4. Short – run and long – run costs:

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

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

5. Out-of pocket and books costs:

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

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

6. Fixed and variable costs:

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

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

7. Post and Future costs:

Post costs also called historical costs are the actual cost incurred and recorded in the book of account these costs are useful only for valuation and not for decision making.

Future costs are costs that are expected to be incurred in the futures. They are not actual costs. They are the costs forecasted or estimated with rational methods. Future cost estimate is useful for decision making because decision are meant for future.

8. Traceable and common costs:

Traceable costs otherwise called direct cost, is one, which can be identified with a products process or product. Raw material, labour involved in production is examples of traceable cost.

Common costs are the ones that common are attributed to a particular process or product. They are incurred collectively for different processes or different types of products. It cannot be directly identified with any particular process or type of product.

9. Avoidable and unavoidable costs:

Avoidable costs are the costs, which can be reduced if the business activities of a concern are curtailed. For example, if some workers can be retrenched with a drop in a product – line, or volume or production the wages of the retrenched workers are escapable costs.

The unavoidable costs are otherwise called sunk costs. There will not be any reduction in this cost even if reduction in business activity is made. For example cost of the ideal machine capacity is unavoidable cost.

10. Controllable and uncontrollable costs:

Controllable costs are ones, which can be regulated by the executive who is in change of it. The concept of controllability of cost varies with levels of management. Direct expenses like material, labour etc. are controllable costs.

Some costs are not directly identifiable with a process of product. They are appointed to various processes or products in some proportion. This cost varies with the variation in the basis of allocation and is independent of the actions of the executive of that department. These apportioned costs are called uncontrollable costs.

11. Incremental and sunk costs:

Incremental cost also known as different cost is the additional cost due to a change in the level or nature of business activity. The change may be caused by adding a new product, adding new machinery, replacing a machine by a better one etc.

Sunk costs are those which are not altered by any change – They are the costs incurred in the past. This cost is the result of past decision, and cannot be changed by future decisions. Investments in fixed assets are examples of sunk costs.

12. Total, average and marginal costs:

Total cost is the total cash payment made for the input needed for production. It may be explicit or implicit. It is the sum total of the fixed and variable costs. Average cost is the cost per unit of output. If is obtained by dividing the total cost (TC) by the total quantity produced (Q)

$$\text{Average cost} = \frac{TC}{Q}$$

Marginal cost is the additional cost incurred to produce and additional unit of output or it is the cost of the marginal unit produced.

13. Accounting and Economics 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.

COST-OUTPUT RELATIONSHIP

A proper understanding of the nature and behavior of costs is a must for regulation and control of cost of production. The cost of production depends on money forces and an understanding of the functional relationship of cost to various forces will help us to take various decisions. Output is an important factor, which influences the cost.

The cost-output relationship plays an important role in determining the optimum level of production. Knowledge of the cost-output relation helps the manager in cost control, profit prediction, pricing, promotion etc. The relation between cost and its determinants is technically described as the cost function.

$$C = f(S, O, P, T \ldots.)$$

Where;

C= Cost (Unit or total cost)
S= Size of plant/scale of production
O= Output level
P= Prices of inputs
T= Technology

Considering the period the cost function can be classified as (a) short-run cost function and (b) long-run cost function. In economics theory, the short-run is defined as that period during which the physical capacity of the firm is fixed and the output can be increased only by using the existing capacity allows to bring changes in output by physical capacity of the firm.

<u>(a) Cost-Output Relation in the short-run:</u>

The cost concepts made use of in the cost behavior are total cost, Average cost, and marginal cost.

Total cost is the actual money spent to produce a particular quantity of output. Total cost is the summation of fixed and variable costs.

TC=TFC+TVC

Up to a certain level of production total fixed cost i.e., the cost of plant, building, equipment etc, remains fixed. But the total variable cost i.e., the cost of labour, raw materials etc., Vary with the variation in output. Average cost is the total cost per unit. It can be found out as follows.

$$AC = \frac{TC}{Q}$$

Q

The total of average fixed cost (TFC/Q) keep coming down as the production is increased and average variable cost (TVC/Q) will remain constant at any level of output.

Marginal cost is the addition to the total cost due to the production of an additional unit of product. It can be arrived at by dividing the change in total cost by the change in total output.

In the short-run there will not be any change in total fixed cost. Hence change in total cost implies change in total variable cost only.

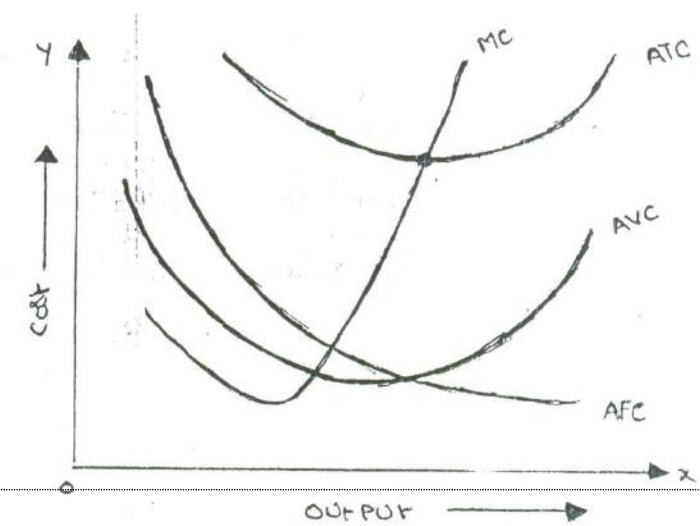
Cost – output relations

Units of Output Q	Total fixed cost TFC	Total variable cost TVC	Total cost (TFC + TVC) TC	Average variable cost (TVC / Q) AVC	Average fixed cost (TFC / Q) AFC	Average cost (TC/Q) AC	Marginal cost MC
0	-	-	60	-	-	-	-
1	60	20	80	20	60	80	20
2	60	36	96	18	30	48	16
3	60	48	108	16	20	36	12
4	60	64	124	16	15	31	16
5	60	90	150	18	12	30	26
6	60	132	192	22	10	32	42

The above table represents the cost-output relation. The table is prepared on the basis of the law of diminishing marginal returns. The fixed cost Rs. 60 May include rent of factory building, interest on capital, salaries of permanently employed staff, insurance etc. The table shows that fixed cost is same at all levels of output but the average fixed cost, i.e., the fixed cost per unit, falls continuously as the output increases. The expenditure on the variable factors (TVC) is at different rate. If more and more units are produced with a given physical capacity the AVC will fall initially, as per the table declining up to 3^{rd} unit, and being constant up to 4^{th} unit and then rising. It implies that variable factors produce more efficiently near a firm's optimum capacity than at any other levels of output.

And later rises. But the rise in AC is felt only after the start rising. In the table 'AVC' starts rising from the 5^{th} unit onwards whereas the 'AC' starts rising from the 6^{th} unit only so long as 'AVC' declines 'AC' also will decline. 'AFC' continues to fall with an increase in Output. When the rise in 'AVC' is more than the decline in 'AFC', the total cost again begin to rise. Thus there will be a stage where the 'AVC', the total cost again begin to rise thus there will be a stage where the 'AVC' may have started rising, yet the 'AC' is still declining because the rise in 'AVC' is less than the droop in 'AFC'.
Thus the table shows an increasing returns or diminishing cost in the first stage and diminishing returns or diminishing cost in the second stage and followed by diminishing returns or increasing cost in the third stage.

The short-run relationship graphically as cost-output can be shown follows.



In the above graph the "AFC' curve continues to fall as output rises an account of its spread over more and more units Output. But AVC curve (i.e. variable cost per unit) first falls and than rises due to the operation of the law of variable proportions. The behavior of "ATC' curve depends upon the behavior of 'AVC' curve and 'AFC' curve. In the initial stage of production both 'AVC' and 'AFC' decline and hence 'ATC' also decline. But after a certain point 'AVC' starts rising. If the rise in variable cost is less than the decline in fixed cost, ATC will still continue to decline otherwise AC begins to rise. Thus the lower end of 'ATC' curve thus turns up and gives it a U-shape. That is why 'ATC' curve are U-shaped. The lowest point in 'ATC' curve indicates the least-cost combination of inputs. Where the total average cost is the minimum and where the "MC' curve intersects 'AC' curve, It is not be the maximum output level rather it is the point where per unit cost of production will be at its lowest.
The relationship between 'AVC', 'AFC' and 'ATC' can be summarized up as follows:

1. If both AFC and 'AVC' fall, 'ATC' will also fall.
2. When 'AFC' falls and 'AVC' rises

a. 'ATC' will fall where the drop in 'AFC' is more than the raise in 'AVC'.
b. 'ATC' remains constant is the drop in 'AFC' = rise in 'AVC'
c. 'ATC' will rise where the drop in 'AFC' is less than the rise in 'AVC'

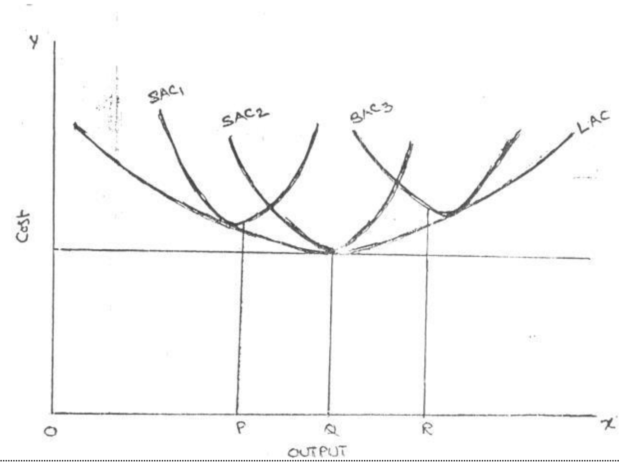
<u>b. Cost-output Relationship in the long-run:</u>

Long run is a period, during which all inputs are variable including the one, which are fixes in the short-run. In the long run a firm can change its output according to its demand. Over a long period, the size of the plant can be changed, unwanted buildings can be sold staff can be increased or reduced. The long run enables the firms to expand and scale of their operation by bringing or purchasing larger quantities of all the inputs. Thus in the long run all factors become variable.

The long-run cost-output relations therefore imply the relationship between the total cost and the total output. In the long-run cost-output relationship is influenced by the law of returns to scale.

In the long run a firm has a number of alternatives in regards to the scale of operations. For each scale of production or plant size, the firm has an appropriate short-run average cost curves. The short-run average cost (SAC) curve applies to only one plant whereas the long-run average cost (LAC) curve takes in to consideration many plants.

The long-run cost-output relationship is shown graphically with the help of "LCA' curve.



To draw on ‘LAC’ curve we have to start with a number of ‘SAC’ curves. In the above figure it is assumed that technologically there are only three sizes of plants – small, medium and large, ‘SAC’, for the small size, ‘SAC2’ for the medium size plant and ‘SAC3’ for the large size plant. If the firm wants to produce ‘OP’ units of output, it will choose the smallest plant. For an output beyond ‘OQ’ the firm wills optimum for medium size plant. It does not mean that the OQ production is not possible with small plant. Rather it implies that cost of production will be more with small plant compared to the medium plant.

For an output ‘OR’ the firm will choose the largest plant as the cost of production will be more with medium plant. Thus the firm has a series of ‘SAC’ curves. The ‘LCA’ curve drawn will be tangential to the entire family of ‘SAC’ curves i.e. the ‘LAC’ curve touches each ‘SAC’ curve at one point, and thus it is known as envelope curve. It is also known as planning curve as it serves as guide to the entrepreneur in his planning to expand the production in future. With the help of ‘LAC’ the firm determines the size of plant which yields the lowest average cost of producing a given volume of output it anticipates.

BREAKEVEN ANALYSIS

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

Assumptions:

1. All costs are classified into two – fixed and variable.
2. Fixed costs remain constant at all levels of output.
3. Variable costs vary proportionally with the volume of output.
4. Selling price per unit remains constant in spite of competition or change in the volume ofproduction.
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 remainsconstant.
10. All the goods produced are sold. There is no closing stock.

Significance of BEA

a. To ascertain the profit on a particular level of sales volume or a given capacity of production To calculate sales required to earn a particular desired level of profit.

b. To compare the product lines, sales area, methods of sales for individual company To compare the efficiency of the different firms
c. To decide whether to add a particular product to the existing product line or drop one from it To decide to “make or buy” a given component or spare part
d. To decide what promotion mix will yield optimum sales
e. To assess the impact of changes in fixed cost, variable cost or selling price on BEP and profitsduring a given period.

Limitations of BEA

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

Merits:

1. Information provided by the Break Even Chart can be understood more easily then thosecontained in the profit and Loss Account and the cost statement.
2. Break Even Chart discloses the relationship between cost, volume and profit. It reveals howchanges 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, directlabour, 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 mayincrease the profit without increasing its output.

4. A major drawback of BEC is its inability to handle production and sale of multipleproducts.
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 onaccount of bulk buying etc.
11. The assumption of static nature of business and economic activities is a well-known defect ofBEC.

Determination of break even point

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

Fixed cost: Expenses that do not vary with the volume of production are known as fixed expenses. Eg. Manager‟s salary, rent and taxes, insurance etc. It should be noted that fixed changes are fixed only within a certain range of plant capacity. The concept of fixed overhead is most useful in formulating a price fixing policy. Fixed cost per unit is not fixed

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

Contribution: Contribution is the difference between sales and variable costs and it contributed towards fixed costs and profit. It helps in sales and pricing policies and measuring the profitability of different proposals. Contribution is a sure test to decide whether a product is worthwhile to be continued among different products.

Contribution = Sales – Variable cost Contribution = Fixed Cost + Profit.

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

Profit

Present sales – Break even sales **or**
P. V. ratio

Margin of safety can be improved by taking the following steps.

1. Increasing production
2. Increasing selling price
3. Reducing the fixed or the variable costs or both
4. Substituting unprofitable product with profitable one.

Angle of incidence: This is the angle between sales line and total cost line at the Break-even point. It indicates the profit earning capacity of the concern. Large angle of incidence indicates a high rate of profit; a small angle indicates a low rate of earnings. To improve this angle, contribution should be increased either by raising the selling price and/or by reducing variable cost. It also indicates as to what extent the output and sales price can be changed to attain a desired amount of profit.

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

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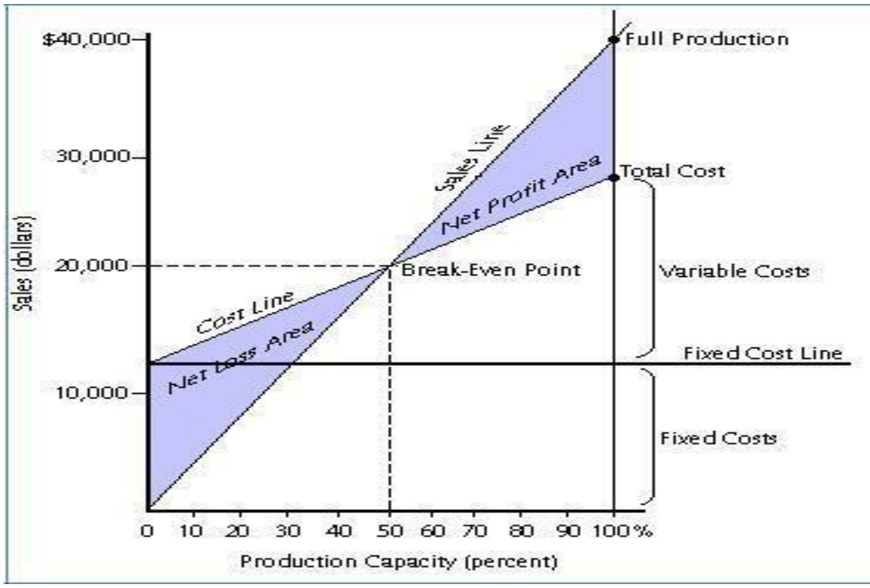


Figure 1
A Break-Even Graph

Determinants of breakeven point

1. ***Fixed cost:*** Expenses that do not vary with the volume of production are known as fixed expenses.
Eg. Manager's salary, rent and taxes, insurance etc. It should be noted that fixed changes are fixed only within a certain range of plant capacity. The concept of fixed overhead is most useful in formulating a price fixing policy. Fixed cost per unit is not fixed.

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

3. ***Contribution:*** Contribution is the difference between sales and variable costs and it contributed towards fixed costs and profit.
Contribution = Sales – Variable cost
Contribution = Fixed Cost + Profit.

4. ***Margin of safety:*** Margin of safety is the excess of sales over the break even sales. It can be expressed in absolute sales amount or in percentage.
The formula for the margin of safety is:

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

Margin of safety can be improved by taking the following steps.
1. Increasing production
2. Increasing selling price
3. Reducing the fixed or the variable costs or both
4. Substituting unprofitable product with profitable one.

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

6. ***Profit Volume Ratio*** is usually called P. V. ratio. It is one of the most useful ratios for studying the profitability of business

The formula is, $\dfrac{\text{Contribution}}{\textit{Sales}}$ X 100

7. ***Break – Even- Point:***

Break Even Point refers to the point where total cost is equal to total revenue. It is a point of no profit, no loss.

1. **B**reak Even point (Units) = $\dfrac{\text{Fixed Expenses}}{\text{Contribution per unit}}$
2. Break Even point (In Rupees) = $\dfrac{\text{Fixed expenses}}{\text{Contribution}}$ X sales

MC=MR- NO PROFIT AND NO LOSS- BEP
MC>MR-LOSS, MC<MR-PROFITS

Benefits:
Price
Cover fixed cost
Missing expenses
Revenue targets
Managerial decisions
Financial strains

Simple problems:
1. Calculate the BEP in units and sales
2. Calculate the margin of safety using BEP

SIMPLE PROBLEMS IN BEP

Problem 1:
A firm has a fixed cost of Rs 10,000; selling price per unit is Rs 5 and variable cost per unit is Rs 3.

(i) Determine break-even point in terms of volume and also sales value

SOL:

BEP in (Units)= $\frac{\text{Fixed Expenses}}{\text{Contributi on per unit}}$

Contribution = Sales – Variable cost

=5-3=2

BEP(UNITS)=10000/2
=5000 units

BEP in (SALES)= $\frac{\text{Fixed Expenses}}{\text{Contributi on per unit}}$

CONTRIBUTION=SELLING PRICE-VARIABLE COST/SELLING PRICE

=5-3/5
=2/5

BEP in (SALES)= 10,000/2/5
=Rs.25000/-

BEP= TOTAL REVENUE=TOTAL COST
= 5000 units*Rs. 5
=Rs.25000/-

Problem 2:

A high-tech rail can carry a maximum of 36,000 passengers per annum at a fare of Rs 400. The variable cost per passenger is Rs 150 while the fixed costs are 25,00,000 per year. Find the break-even point in terms of number of passengers and also in terms of fare collections.

BEP IN UNITS= FIXED COST/CONTRIBUTION P.V RATIO & MOS

=400-150=250

BEP number of passengers= 2500000/250
=10,000 PASSENGERS

$$\text{BEP in (SALES)} = \frac{\text{Fixed Expenses}}{\text{Contribution margin ratio}}$$

=selling price-variable cost/selling price
=400-150=250 250/400=0.625
=2500000/0.625 = Rs.40,00,000/-

Problem 3:

From the following particulars, calculate:
- (i) Break-even point in terms of sales value and in units.
- (ii) Number of units that must be sold to earn a profit of Rs. 90,000.

	₹
Fixed Factory Overheads Cost	60,000
Fixed Selling Overheads Cost	12,000
Variable Manufacturing Cost per unit	12
Variable Selling Cost per unit	3
Selling Price per unit	24

1. BEP=fixed cost/contribution(s.p-v.c)
   Contribution=selling price-variable cost
   Variable cost=12+3=15
   Total fixed cost=60000+12000=72000
   BEP in units =72000/24-15
   =72000/9= 8000 units
   BEP in sales=8000*24= Rs.1,92000/-
2. Number of units that must be sold to earn a profit of Rs. 90,000

Fixed cost+profit/s.p-v.c

=72000+90000/24-15
=162000/9
=18000 units

Problem4:

From the following data, you are required to calculate:

(a) P/V ratio
(b) Break-even sales with the help of P/V ratio.
(c) Sales required to earn a profit of Rs. 4,50,000

Fixed Expenses = Rs. 90,000
Variable Cost per unit:
Direct Material = Rs. 5
Direct Labour = Rs. 2
Direct Overheads = 100% of Direct Labour
Selling Price per unit = Rs. 12.

Sol:
Selling price= 12

Direct Material = Rs. 5
Direct Labour = Rs. 2
Direct Overheads = 2
=5+2+2=9
Contribution=12-9=3 is contribution

(a) P/V ratio =contribution/sales*100
=3/12*100
=25%

(b) Break-even sales with the help of P/V ratio

= Fixed cost/pvratio
=90000/25*100
=360000

(c) Sales required to earn a profit of Rs. 4,50,000

=fixedcost+desired profit/PV ratio
= 90000+450000/25*100
=540000\25*100
=21,60,000

Problem 5:

Srikanth Enterprises deals in the supply of hardware parts of computer. The following cost data is available for two successive periods:

	Year I (Rs)	*Year II (Rs)*
Sales	50,000	1,20,000
Fixed costs	10,000	20,000
Variable cost	30,000	60,000

Determine (a) Break-even point (b) Margin of safety.

Sol:

PV ratio= contribution/sales *100

=20000/50000*100 = 40% -1st year
=60000/120000*100 = 50% - 2nd year

BEP= fixed cost/PV ratio
= 10000/40% = 25000 - 1st year
=20000/50% =40000 - 2nd year

Margin of safety = net profit/PV ratio

= 10000/40% = 25000
=40000/50% = 80000

MOS= sales= BEP SALES+MOS= 25000+25000=50000

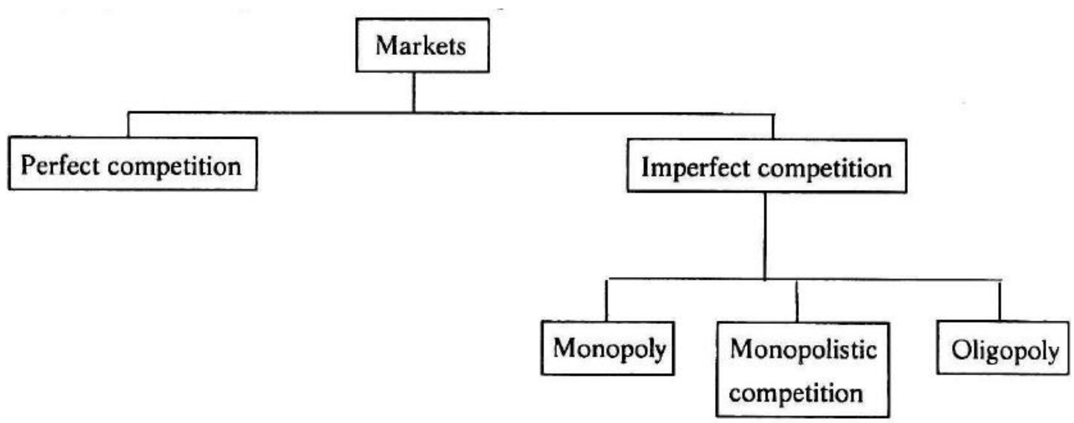
UNIT- III
BUSINESS ORGANIZATIONS AND MARKETS

Market is a place where buyer and seller meet, goods and services are offered for the sale and transfer of ownership occurs.

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 marking 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.

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

Features of perfectly competition

1. **A large number of buyers and sellers:** The number of buyers and sellers is large and the share of each one of them in the market is so small that none has any influence on the market price.

   There should be significantly large number of buyers and sellers in the market. The number should be so large that it should not make any difference in terms of price of quantity supplied even if one enters the market or one leaves the market.

2. **Homogenous products or services**: the products and services of each seller should be homogeneous. They cannot be differentiated from that of one another. It makes no difference to the buyer whether he buys from firm X or firm Z. in other words, the buyer does not have any particular preference to buy the goods from a particular trader or supplier. The price is one and the same in every firm. There are no concessions or discounts.

3. **Freedom to enter or exit the market**: there should not be restrictions on the part of the buyers and sellers to enter the market or leave the market. There should not be any barriers. The buyers can enter the market or leave the market whenever they want.

4. **Prefect information available to the buyers and sellers**: each buyer and seller has total knowledge of the prices prevailing in the market at every given point of time, quantity supplied, costs, demand, nature of product, and other relevant information. There is no need for any advertisement expenditure as the buyers and sellers are fully informed.

5. **Perfect mobility of factors of production**: there should not be any restrictions on the utilization of factors of production such as land , labour, capital and so on. In words, the firm or buyer should have free access to the factors of production. Whenever capital or labor is required, it should instantly be made available.

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

Monopoly

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

Features of monopoly

1. **Single person or a firm:** A single person or a firm controls the total supply of the commodity. There will be no competition for monopoly firm. The monopolist firm is the only firm in the whole industry.

2. **No close substitute:** The goods sold by the monopolist shall not have closely competition substitutes. Even if price of monopoly product increase people will not go in far substitute. For example: If the price of electric bulb increase slightly, consumer will not go in for kerosenelamp.
3. **Large number of Buyers:** Under monopoly, there may be a large number of buyers in the market who compete among themselves.

4. **Price Maker:** Since the monopolist controls the whole supply of a commodity, he is a price- maker, and then he can alter the price.

5. **Supply and Price:** The monopolist can fix either the supply or the price. He cannot fix both. If he charges a very high price, he can sell a small amount. If he wants to sell more, he has to charge a low price. He cannot sell as much as he wishes for any price he pleases.

6. **Downward Sloping Demand Curve:** The demand curve (average revenue curve) of monopolist slopes downward from left to right. It means that he can sell more only by lowering price.

Monopolistic competition

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

Features of Monopolistic

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. The product of each firm is different from that of its rivals in one or more respects. Different toothpastes like Colgate, Close-up, Forehans, Cibaca, etc., provide an example of monopolistic competition. These products are relatively close substitute for each other but not perfect substitutes. Consumers have definite preferences for the particular verities or brands of products offered for sale by various sellers. Advertisement, packing, trademarks, brand names etc. help differentiation of products even if they are physicallyidentical.

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.

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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 subset

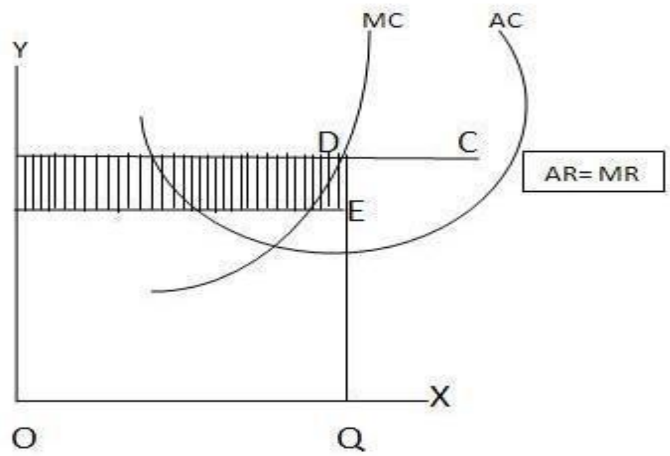
1. PRICE OUTPUT DETERMINATION INCASE OF PERFECT COMPETITION

2. SHORT RUN:

3. The price and output of the firm are determined, under perfect competition, based

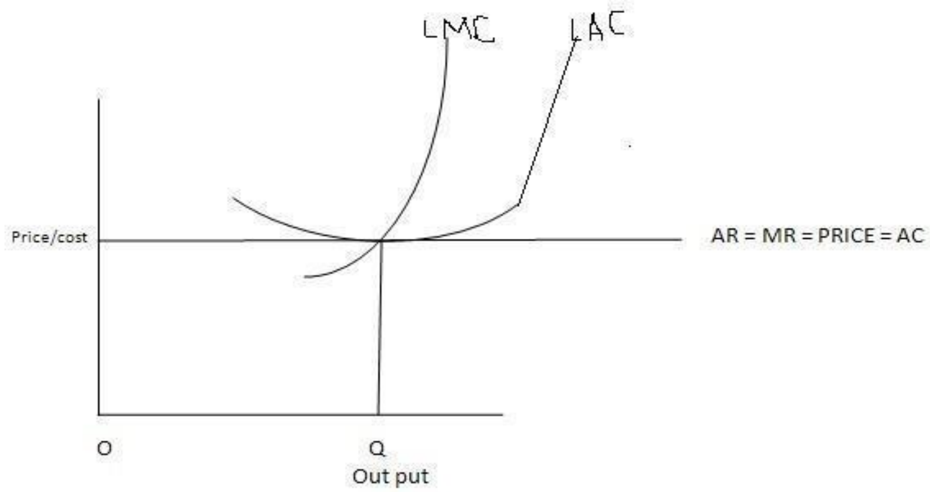
   on the industry price and its own costs. The industry price has greater say in this process because the firm own sales are very small and insignificant. The process of price output determination in case of perfect competition.

4. The firm demand curve is horizontal at the price determined in the industry (MR = AR = price). This demand curve is also known as average revenue curve. This is because if all the units are sold at the same price, on an average , the revenue to the firm equal its price.



LONG RUN UNDER PERFECT COMPETITION

Having been attracted by supernormal profits, more and more firms enter the industry. With the result, there will be a scramble for scarce inputs among the competing firms pushing the input prices. Hence, the average cost increases. The entry of more and more firms will expand the supply pulling
down the market price. The entry of the firms into the industry continues till the supernormal profit is completely eroded. In the long run, the firms will be in the position to enjoy only normal profits but not supernormal profit. Normal profits are the profit that is just sufficient for the firms to stay in the business.



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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.

Types of Monopoly

Monopoly may be classified into various types. The different types of monopolies are explained below:

1. **Legal Monopoly:** If monopoly arises on account of legal support or as a matter of legal privilege, it is called Legal Monopoly. Ex. Patent rights, special brands, trade means, copyright etc.
2. **Voluntary Monopoly:** To get the advantages of monopoly some private firms come together voluntarily to control the supply of a commodity. These are called voluntary monopolies. Generally, these monopolies arise with industrial combinations. These voluntary monopolies are of three kinds (a) cartel (b) trust (c) holding company. It may be called artificial monopoly.
3. **Government Monopoly:** Sometimes the government will take the responsibility of supplying a commodity and avoid private interference. Ex. Water, electricity. These monopolies, created to satisfy social wants, are formed on social considerations. These are also called Social Monopolies.
4. **Private Monopoly:** If the total supply of a good is produced by a single private person or firm, it is called private monopoly. Hindustan Lever Ltd. Is having the monopoly power to produce Lux Soap.
5. **Limited Monopoly:** if the monopolist is having limited power in fixing the price of his product, it is called as 'Limited Monopoly'. It may be due to the fear of distant substitutes or government intervention or the entry of rivals firms.
6. **Unlimited Monopoly:** If the monopolist is having unlimited power in fixing the price of his good or service, it is called unlimited monopoly. Ex. A doctor in a village.
7. **Single Price Monopoly:** When the monopolist charges same price for all units of his product, it is called single price monopoly. Ex. Tata Company charges the same price to all the Tata Indiaca Cars of the same model.
8. **Discriminating Monopoly:** When a Monopolist charges different prices to different consumers for the same product, it is called discriminating monopoly. A doctor may take Rs.20 from a rich man and only Rs.2 from a poor man for the same treatment.
9. **Natural Monopoly:** Sometimes monopoly may arise due to scarcity of natural resources. Nature provides raw materials only in some places. The owner of the place will become monopolist. For Ex. Diamond mine in South Africa.

Pricing under Monopoly

Monopoly refers to a market situation where there is only one seller. He has complete control over the supply of a commodity. He is therefore in a position to fix any price. Under monopoly there is no distinction between a firm and an industry. This is because the entire industry consists of a single firm.

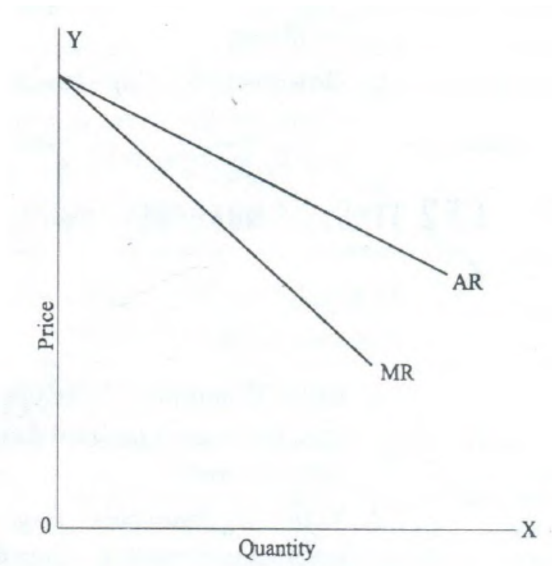

Fig. 6.11

Being the sole producer, the monopolist has complete control over the supply of the commodity. He has also the power to influence the market price. He can raise the price by reducing his output and lower the price by increasing his output. Thus he is a price-maker. He can fix the price to his maximum advantages. But he cannot fix both the supply and the price, simultaneously. He can do one thing at a time. If the fixes the price, his output will be determined by the market demand for his commodity. On the other hand, if he fixes the output to be sold, its market will determine the price for the commodity. Thus his decision to fix either the price or the output is determined by the market demand.

The market demand curve of the monopolist (the average revenue curve) is downward sloping. Its corresponding marginal revenue curve is also downward sloping. But the marginal revenue curve lies below the average revenue curve as shown in the figure. The monopolist faces the down-sloping demand curve because to sell more output, he must reduce the price of his product. The firm's demand curve and industry's demand curve are one and the same. The average cost and marginal cost curve are U shaped curve. Marginal cost falls and rises steeply when compared to average cost.

Price output determination (Equilibrium Point)

The monopolistic firm attains equilibrium when its marginal cost becomes equal to the marginal revenue. The monopolist always desires to make maximum profits. He makes maximum profits when MC=MR. He does not increasing his output if his revenue exceeds his costs. But when the costs exceed the revenue, the monopolist firm incur loses. Hence the monopolist curtails his production. He produces up to that point where additional cost is equal to the additional revenue (MR=MC). Thus point is called equilibrium point. The price output determination under monopoly may be explained with the help of a diagram.

In the diagram 6.12 the quantity supplied or demanded is shown along X-axis. The cost or revenue is shown along Y-axis. AC and MC are the average cost and marginal cost curves respectively. AR and MR curves slope downwards from left to right. AC and MC and U shaped curves. The monopolistic firm attains equilibrium when its marginal cost is equal to marginal revenue (MC=MR). Under monopoly, the MC curve may cut the MR curve from below or from a side. In the diagram, the above condition is satisfied at point E. At point E, MC=MR. The firm is in equilibrium. The equilibrium output is OM.

The above diagram (Average revenue) = MQ or OP
Average cost = MR
Profit per unit = Average Revenue-Average cost=MQ-MR=QR
Total Profit = QRXSR=PQRS

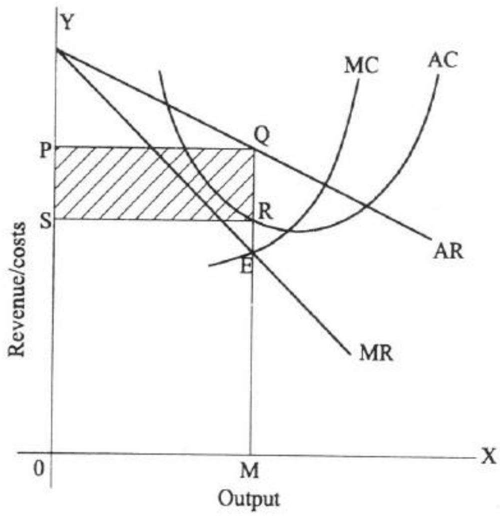

Fig. 6.12

The area PQRS resents the maximum profit earned by the monopoly firm.

But it is not always possible for a monopolist to earn super-normal profits. If the demand and cost situations are not favorable, the monopolist may realize short run losses.

Through the monopolist is a price marker, due to weak demand and high costs; he suffers a loss equal to PABC.

If AR > AC -> Abnormal or super normal profits.
If AR = AC -> Normal Profit
If AR < AC -> Loss

In the long run the firm has time to adjust his plant size or to use existing plant so as to maximize profits.

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.

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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.

Price – Output Determination under Monopolistic Competition

Since under monopolistic competition different firms produce different varieties of products, different prices for them will be determined in the market depending upon the demand and cost conditions. Each firm will set the price and output of its own product. Here also the profit will be maximized when marginal revenue is equal to marginal cost.

Short-run equilibrium of the firm:

In the short-run the firm is in equilibrium when marginal Revenue = Marginal Cost. In Fig 6.15 AR is the average revenue curve. NMR marginal revenue curve, SMC short-run marginal cost curve, SAC short-run average cost curve, MR and SMC interest at point E where output in OM and price MQ (i.e. OP). Thus the equilibrium output or the maximum profit output is OM and the price MQ or OP. When the price (average revenue) is above average cost a firm will be making supernormal profit. From the figure it can be seen that AR is above AC in the equilibrium point. As AR is above AC, this firm is making abnormal profits in the short-run. The abnormal profit per unit is QR, i.e., the difference between AR and AC at equilibrium point and the total supernormal profit is OR X OM. This total abnormal profits is represented by the rectangle PQRS. As the demand curve here is highly elastic, the excess price over marginal cost is rather low. But in monopoly the demand curve is inelastic. So the gap between price and marginal cost will be rather large.

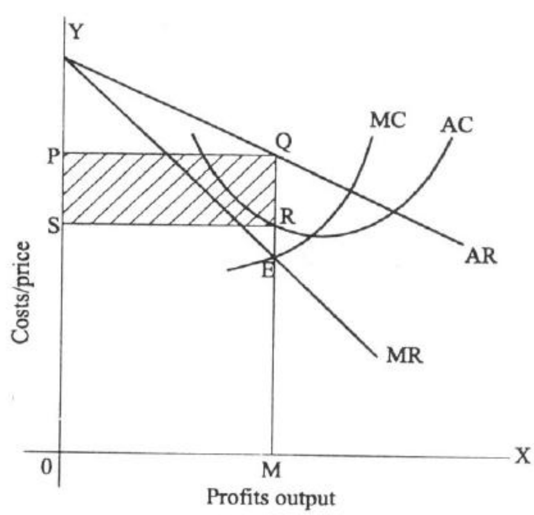
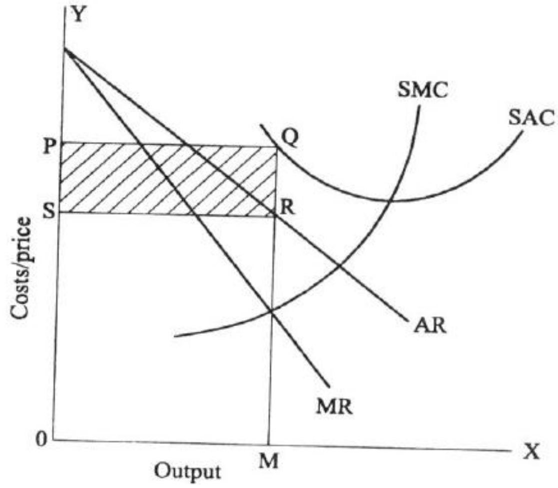


Fig. 6.15

If the demand and cost conditions are less favorable the monopolistically competitive firm may incur loss in the short-run fig 6.16 Illustrates this. A firm incurs loss when the price is less than the average cost of production. MQ is the average cost and OS (i.e. MR) is the price per unit at equilibrium output OM. QR is the loss per unit. The total loss at an output OM is OR X OM. The rectangle PQRS represents the total loses in the short run.



Long – Run Equilibrium of the Firm:

A monopolistically competitive firm will be long – run equilibrium at the output level where marginal cost equal to marginal revenue. Monopolistically competitive firm in the long run attains equilibrium where MC=MR and AC=AR Fig 6.17 shows this trend.

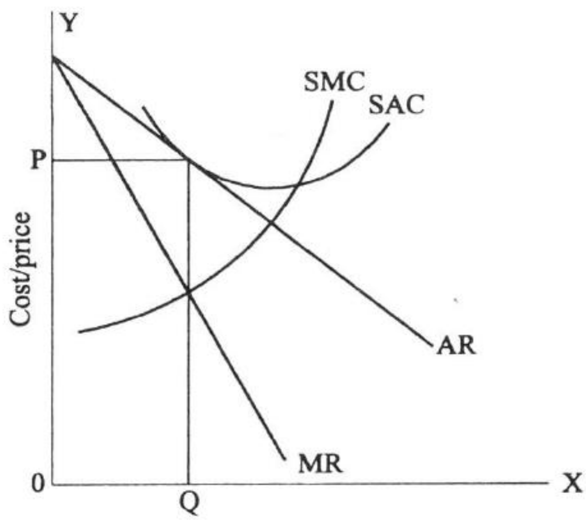


Fig. 6.17

Oligopoly

The term oligopoly is derived from two Greek words, oligos meaning a few, and pollen meaning to sell. Oligopoly is the form of imperfect competition where there are a few firms in the market, producing either a homogeneous product or producing products, which are close but not perfect substitute of each other.

Characteristics of Oligopoly

The main features of oligopoly are:

1. **Few Firms:** There are only a few firms in the industry. Each firm contributes a sizeable share of the total market. Any decision taken by one firm influence the actions of other firms in the industry. The various firms in the industry compete with each other.
2. **Interdependence:** As there are only very few firms, any steps taken by one firm to increase sales, by reducing price or by changing product design or by increasing advertisement expenditure will naturally affect the sales of other firms in the industry. An immediate retaliatory action can be anticipated from the other firms in the industry every time when one firm takes such a decision. He has to take this into account when he takes decisions. So the decisions of all the firms in the industry are interdependent.
3. **Indeterminate Demand Curve:** The interdependence of the firms makes their demand curve indeterminate. When one firm reduces price other firms also will make a cut in their prices. So he firm cannot be certain about the demand for its product. Thus the demand curve facing an oligopolistic firm loses its definiteness and thus is indeterminate as it constantly changes due to the reactions of the rival firms.
4. **Advertising and selling costs:** Advertising plays a greater role in the oligopoly market when compared to other market systems. According to Prof. William J. Banumol "it is only oligopoly that advertising comes fully into its own". A huge expenditure on advertising and sales promotion techniques is needed both to retain the present market share and to increase it. So Banumol concludes "under oligopoly, advertising can become a life-and-death matter where a firm which fails to keep up with the advertising budget of its competitors may find its customers drifting off to rival products."
5. **Price Rigidity:** In the oligopoly market price remain rigid. If one firm reduced price it is with the intention of attracting the customers of other firms in the industry. In order to retain their consumers they will also reduce price. Thus the pricing decision of one firm results in a loss to all the firms in the industry. If one firm increases price. Other firms will remain silent there by allowing that firm to lost its customers. Hence, no firm will be ready to change the prevailing price. It causes price rigidity in the oligopoly market.

Oligopoly

Oligopoly Origin

The word Oligopoly is derived from two Greek words – 'Oligi' meaning 'few' and 'Polein' meaning 'to sell'.

Oligopoly Definition and Meaning

Oligopoly is defined as a market structure with a small number of firms, none of which can keep the others from having significant influence.

Meaning of Oligopoly Market

An Oligopoly market situation is also called ‘competition among the few’. In this article, we will look at Oligopoly definition and some important characteristics of this market structure.

An oligopoly is an industry which is dominated by a few firms. In this market, there are a few firms which sell homogeneous or differentiated products.

Also, as there are few sellers in the market, every seller influences the behavior of the other firms and other firms influence it.

Oligopoly is either perfect or imperfect/differentiated. In India, some examples of an oligopolistic market are automobiles, cement, steel, aluminum, etc.

Characteristics of Oligopoly

Now that the Oligopoly definition is clear, it’s time to look at the characteristics of Oligopoly:

Few firms

Under Oligopoly, there are a few large firms although the exact number of firms is undefined. Also, there is severe competition since each firm produces a significant portion of the total output.

Barriers to Entry

Under Oligopoly, a firm can earn super-normal profits in the long run as there are barriers to entry like patents, licenses, control over crucial raw materials, etc. These barriers prevent the entry of new firms into the industry.

Non-Price Competition

Firms try to avoid price competition due to the fear of price wars in Oligopoly and hence depend on non-price methods like advertising, after sales services, warranties, etc. This ensures that firms can influence demand and build brand recognition.

Interdependence

Under Oligopoly, since a few firms hold a significant share in the total output of the industry, each firm is affected by the price and output decisions of rival firms. Therefore, there is a lot of interdependence among firms in an oligopoly. Hence, a firm takes into account the action and reaction of its competing firms while determining its price and output levels.

Nature of the Product

Under oligopoly, the products of the firms are either homogeneous or differentiated.

Selling Costs

Since firms try to avoid price competition and there is a huge interdependence among firms, selling costs are highly important for competing against rival firms for a larger market share.

No unique pattern of pricing behavior

Under Oligopoly, firms want to act independently and earn maximum profits on one hand and cooperate with rivals to remove uncertainty on the other hand.

Depending on their motives, situations in real-life can vary making predicting the pattern of pricing behavior among firms impossible. The firms can compete or collude with other firms which can lead to different pricing situations.

Indeterminateness of the Demand Curve

Unlike other market structures, under Oligopoly, it is not possible to determine the demand curve of a firm. This is because on one hand, there is a huge interdependence among rivals. And on the other hand there is uncertainty regarding the reaction of the rivals. The rivals can react in different ways when a firm changes its price and that makes the demand curve indeterminate.

Firms behaviour under Oligopoly

Based on the objectives of the firms, the magnitude of barriers to entry and the nature of government regulation, there are different possible outcomes in relation to a firm's behavior under Oligopoly. These are:

1. Stable prices
2. Price wars
3. Collusion for higher prices

Further, Oligopoly can either be collusive or non-collusive. Collusive oligopoly is a market situation wherein the firms cooperate with each other in determining price or output or both. A non-collusive oligopoly refers to a market situation where the firms compete with each other rather than cooperating.

Non-Collusive Oligopoly-Sweezy's Kinked Demand Curve Model (Price-Rigidity)

Usually, in Oligopolistic markets, there are many price rigidities. In 1939, Paul Sweezy used an unconventional demand curve – the kinked demand curve to explain these rigidities.

Reason for the kink in the demand curve

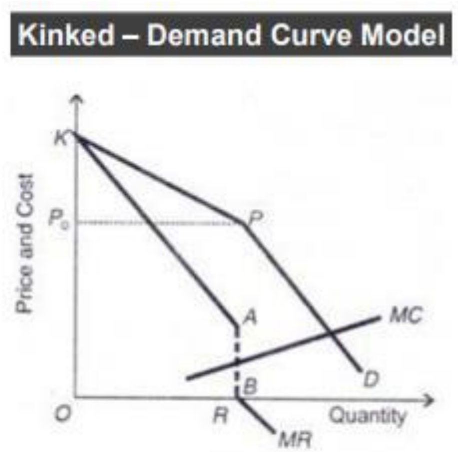
It is assumed that firms behave in a two-fold manner in reaction to a price change by a rival firm. In simple words, firms follow price cuts by a rival company but not price increases. So, if a seller increases the price of his product, his rivals do not follow the price increase.

Therefore, the market share of the firm reduces significantly as a result of the price rise. On the other hand, if a seller reduces the price of his product, then the rivals also reduce their price to bring it at par with the price reduction of the firm.

This ensures that they prevent their market share from falling. Once the rivals react, the firm lowering the price first cannot gain from the price cut.

Why the price rigidity?
As can be seen above, a firm cannot gain or lose by changing its price from the prevailing price in the market. In both cases, there is no increase in demand for the firm which changes its price. Hence, firms stick to the same price over time leading to price rigidity under oligopoly.

Explanation of the Kinked-Demand Curve Model



In the figure above, KPD is the is the kinked-demand curve and OP_0 is the prevailing price in the oligopoly market for the OR product of one seller. Starting from point P, corresponding to the point OP_1, any increase in price above it will considerably reduce his sales as his rivals will not follow his price increase.

This is because the KP portion of the curve is elastic and the corresponding portion of the MR curve (KA) is positive. Therefore, any price increase will not just reduce the total sales but also his total revenue and profit. On the other hand, if the seller reduces the price of the product below OPQ (or P), his rivals will also reduce their prices.

However, even if his sales increase, his profits would be less than before. This is because the PD portion of the curve below P is less elastic and the corresponding part of the marginal revenue curve below R is negative. Therefore, in both price-raising and price-reducing situations, the seller is the loser. He will stick to the prevailing market price OP_0 which remains rigid.

Pricing Methods and Strategies

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

This method is suitable where the cost keep fluctuating from time to time. It is commonly followedin departmental stores and other retail shops. This method is simple to be administered but it does not consider the competition factor. The competitor may produce the same product at lower cost and thus offer it at a lower price.

2. Marginal cost pricing : in marginal cost pricing, selling price is fixed in such a way that it coversfully the variable or marginal cost and contributes towards recovery of fixed costs fully or partly, depending upon the market situations. In times of stiff competition, marginal cost offers a guideline as to how far the selling price can be lowered. This is also called break – even pricing or target profit pricing. How break – even analysis helps intaking pricing decisions.

COMPETITION – ORIENTED PRICING:

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

a. **Sealed bid pricing:** this method is more popular in tenders and contracts. Each contracting firm quotes its price in a sealed cover called tender. All the tenders are opened on a scheduled date and the person who quotes the lowest prices, other things remaining the same, is awarded the contract.

b. **Going rate pricing:** here the price charged by the firm is in tune with the price charged in the industry as a whole. In other words, the prevailing market price at a given point of time is the guiding factor. When one wants to buy or sell gold, the prevailing market rate at a given point oftime is taken as the basis to determine the price, normally the market leaders keep announcing the prevailing prices at a given point of time based on demand and supply positions.

DEMAND – ORIENTED PRICING

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

a. Price discrimination: price discrimination refer to the practice of charging different prices to customers for the same good. The firm uses its discretion to charge differently the different customer. It is also called differential pricing. Customers of different profile can be separated in various ways, such as by different consumer requirement by nature of product itself , by geographical areas, by income group and so on.

b. Perceived value pricing: perceived value pricing refers to where the price is fixed on the basis ofthe perception of the buyer of the value of the product.

STRATEGY – BASED PRICING:

1. **Market skimming**: when the product is introduced for the first time in the market, the company follows this method. Under this method, the company fixes a very high price for the product. The main idea is to charge the customer maximum possible. For example Sony introduces a particular TV model , it fixed a very high price and other company.
2. **Market penetration**: this is exactly opposite to the market skimming method. Here the price of the product is fixed so low that the company can increase its market share. the company attains profits with increasing volumes and increase in the market share. More often , the companies believe that it is necessary to dominate the market in the long –run making profit in the short- run.

3. **Two – part pricing** : the firms with market power can enhance profits by the strategy of two – part pricing. Under this strategy, a firm charges a fixed fee for the right to purchase its goods, plus a per unit charge for each unit purchased. Entertainment houses such as country clubs, athletic clubs, golf courses, health clubs usually adopt this strategy. They charge a fixed initiation fee plus a charge, per month or per visit, to use the facilities.

4. **Block pricing**: block pricing is another way a firm with market power can enhance its profits. We see block pricing in out day – to – day life very frequently. Six lux soaps in a single pack or five magi noodles in a single pack.

5. **Commodity bundling**: commodity bundling refers to the practice of bundling two or more different products together and selling them at a single bundle price, the package deals offered by the tourist companies, airlines hold testimony to this practice. The package includes the airfare, hotel, meals, sight seeing and so on.

6. **Peak load pricing:** during seasonal period when demand is likely to be higher, a firm may enhance profits by peak load pricing. The firm philosophy is to charge a higher price during peak times than is charged during off – peak times. Apsrtc, air india, jet air etc,.

7. **Cross subsidization**: in case where demand for two products produced by a firm

is interrelated through demand or costs, the firm may enhance the profitability of its operation through cross subsidization .

8. **Transfer pricing**: transfer pricing is an internal pricing technique. It refers to a price at which inputs of one department are transferred to another, in order to maximize the overall profits of the company. For example kinetic Honda, hero Honda,

PRICING STRATEGIES IN TIMES OF STIFF PRICE COMPETITION

5. **Pricing matching**: price matching is a strategy in which a firm promise to match a lower price offered by any competitor, while announcing its own price. It is necessary that one should be confident, before this strategy is adopted, that the price cannot be lower in the market than one offered.

6. **Promoting brand loyalty**: this is an advertising strategy where the customers are frequently reminded by the brand value of given product or services. The conviction here is that the customers, once they are loyal to the given branded product or services, will not slip away when the competitors come out with products at lower prices.

7. **Time – to – time**: this is also called randomized pricing strategy where the firm varies its prices form time- to – time, say hour – to – time, say hour – to – hour or day – to –day. This methods offers two advantages , the rival firms can no more play with price cuts. Also customers cannot learn form experience which firm charges the lowers price in the market.

8. **Promotional pricing**: to promote a particular product, at time, the firm may offer the product at the most competitive price. Some time, the price of a particular product is kept intentionally lower to attract the attention f the customer to other products of the firm.

9. **Target pricing**: the company operates with a particular targeted profit in mind. Normally the cost of capital will be one of the yardsticks to guide the targeted rate of return. How much is the rate of return the other companies are achieving also could be another yardstick to determine the price. The higher the risk and investment, the higher is the targeted profit and so is the price.

BUSINESS ORGANISATIONS

CHARACTERISTIC &FEATURES OF BUSINESS

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 PROPRIETORSHIP:

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 of sole proprietorship

1. 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
2. He enjoys all the profits and in case of loss, he lone suffers.
3. He has unlimited liability which implies that his liability extends to his personal properties in case of loss.
4. He has a high degree of flexibility to shift from one business to the other.
5. Business secretes can be guarded well
6. 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.
7. He has total operational freedom. He is the owner, manager and controller.
8. He can be directly in touch with the customers.
9. He can take decisions very fast and implement them promptly.
10. Rates of tax, for example, income tax and so on are comparatively very low

Advantages of sole proprietorship

1. **Easy to start and easy to close**: Formation of a sole trader from of organization is relativelyeasy even closing the business is easy.

2. **Personal contact with customers directly:** Based on the tastes and preferences of thecustomers 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 of the sole proprietor

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 morepersons who agree to share the profits of the business carried on by all or any one of them acting for all.

FEATURES OF PARTNERSHIP

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.

6. **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.

7. **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
8. **Division of labour:** Because there are more than two persons, the work can be divided among the partners based on their aptitude.

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

10. **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 andconditions 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

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 thefirm. 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.

Advantages Of Partnership

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 changescan 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 partnerson 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 firmby making good use of all his contacts.

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.

Features of Joint Stock 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. Sothey 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.

Advantages of 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 continuesforever 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 of joint stock company

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.

1. Higher production
2.Greater employment
3.Economic equality,
4Dispersal 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

1. The Industrial Policy Resolution 1956 states the need for promoting public enterprises as follows:
2. To accelerate the rate of economic growth by planned development
3. To speed up industrialization, particularly development of heavy industries and to expand public sector and to build up a large and growing cooperative sector.

4. To increase infrastructure facilities
5. To disperse the industries over different geographical areas for balanced regional development
6. To increase the opportunities of gainful employment
7. To help in raising the standards of living
8. 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)

Features of Public Enterprises

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 of Public Enterprises

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 of Public Enterprises

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 governmentfunds only. To make up these, there may be a need for fresh taxes, which is undesirable.

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 itsenterprises 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 thesame 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 of Public Corporation

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 capitalmarket.

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 asfar as possible on sound business principles.

Advantages of Public Corporation

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 of Public Corporation

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

1. industrial undertakings (such as Hindustan Machine Tools, Indian Telephone

Industries, and so on)

2. 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 uppublic or private companies.

3. Agency to promote trade or commerce. For example, state trading corporation, Export Credit Guarantee Corporation and so such like.

4. A company to take over the existing sick companies under private management (E.g. Hindustan Shipyard)

5. A company established as a totally state enterprise to safeguard national interests such as Hindustan Aeronautics Ltd. And so on.

6. Mixed ownership company in collaboration with a private consult to obtain technical know how and guidance for the management of its enterprises, e.g. Hindustan Cables)

Features of Government Company

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 specializationand 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 of Government Company

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 thatit 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 of Government Company

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. **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.

2. **Evades constitutional responsibility**: A government company is creating by executive action of the government without the specific approval of the parliament or Legislature.

3. **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 ina competitive environment.

4. **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.

5. 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

CAPITAL BUDGETING

Capital is defined as wealth, which is created over a period of time through abstinence to spend. There are different forms of capital property, cash or titles to wealth. It is the aggregate of funds used in the short run and long run. An economist views capital as the value total assets available with the business. An accountant sees the capital as the different between the assets and liabilities.

Significance of capital

1. **To promote a business**: Capital is required at the promotion stage. A large variety of expenses have to be incurred on project reports, feasibility studies and reports, preparation and filing of various documents, and for meeting various other expenses in connection with the raising of capital from the public.

2. **To conduct business operations smoothly**: Business firms also need capital for the purpose of conducting their business operations such as research and development, advertising, sales promotion, distribution and operation expenses.

3. **To expand and diversify:** The firm requires a lot of capital for expansion and diversification purposes. This includes development expense such as purchase of sophistical machinery and equipment and also payment towards sophisticated technology.

4. **To meet contingencies**: A firm needs funds to meet contingencies such as sudden fall in sales, major litigation, nature calamities like fire, and so on.
5. **To pay taxes**: The firm has to meet its statutory commitments such as income tax and sales tax, excise duty and so on.

6. **To pay dividends and interests:** The business has to make payment towards dividends and its interest to shareholders and financial institutions respectively.

7. **To replace the assets:** The business needs to replace its assets like plant and machinery after a certain period of use. For this purpose the firm needs funds to make suitable replacement of assets in place of old and worn out assets.

8. **To support welfare programmes**: The company may also have to take up social welfare programmes such as literacy drive, and health camps, It may have to donate to charitable trusts, educational institutions or public services organizations.

9. **To wind up**: At the time of winding up, the company may need funds to meet liquidation expenses

Types of capital

A) Fixed capital

B) Working capital

FIXED CAPITAL

Fixed capital is that portion of capital which invested in acquiring long term assets such as land and buildings, plant and machinery, furniture and fixtures, and so on, fixed capital forms the skeleton of the business. It provides the basic assets as per the business needs.

Features of fixed assets:

1. **Permanent in nature**: fixed capital is more or less permanent in nature, it is generally not withdrawn as long as the business carries on its business.

2. **Profit generation**: fixed asset are the sources of profits but they can never generate profits by themselves. They use stocks, cash and debtors to generate profits.

3. **Low liquidity**: the fixed assets cannot be converted into cash quickly. Liquidity refers to conversion of assets into cash.

4. **Amount of fixed capital** : the amount of fixed capital of a company depends on a number of factors such as size of the company, nature of business, method of production and so on. A manufacturing company such as steel factory may require relatively large finance when compared to a service organization such as a software company.

5. **Utilized for promotional and expansion**: the fixed capital is mostly needed at the time of promoting the company to purchase the fixed assets or at the time of expansion. In other words, the need for fixed capital arises less frequently.

Types of fixed assets

1. **Tangible fixed assets** : these are physical items which can be seen and touched. Most of the common fixed assets are land, buildings, machinery, motor vehicles, furniture and so on.

2. **Intangible fixed assets** : these do not have physical form. They cannot be seen or touched. But these are very valuable to business. Examples are goodwill, brand names, trademarks, patents, copy rights and so on.

3. **Financial fixed assets** : these are investments in shares, foreign currency deposits, government bonds , shares held by the business in other companies and so on.

WORKING CAPITAL

Working capital is the flesh and blood of the business. It is that portion of capital that makes a company work. It is not just possible to carry on the business with only fixed assets. Working capitalis a must, working capital is also called circulating capital. It is used to meet regular or recurring needs of the business. The regular needs refer to the purchase of materials, payment of wages and salaries, expenses like rent, advertising, power and so on. In short , working capital is the amounts needed to cover the cost of operating the business.

Definition of working capital

Working capital define as a current assets excess of current liabilities

Its also define in mathematically formula as

Working capital = current assets – current liabilitiesfeatures of working capital

1. Short life span: working capital changes in its form cash to stock, stock to debtors, debtors to cash, the cash balances may be kept idle for a week or so, debtors have a life span of a few months , raw materials are held for a short – time until they go into production, finished goods asheld for a short – time until they are sold.

2. Smoothly flow of operations: adequate amount of working capital enables the business to conduct its operations smoothly. It is there fore, called the flesh and blood of the business.

3. Liquidity: the assets represented by the working capital can be converted into cash quicklywithin a short period of time unlike fixed assets.

4. Amount of working capital: the amount of working capital of a business depends on many factors such as size and nature of the business, production and marketing policies, business cycles and so on.
5. Utilized for payment of current expenses: the working capital is used to pay for current expenses such as suppliers of raw materials, payment of wages and salaries, rent and other expenses andso on.

Components of working capital:

Current assets: current assets are those assets which are converted into cash with in accounting period or within the year. For example, cash in hand, cash at bank, sundry debtor, bill receivable, prepaid expenses etc.

Current liabilities: current liabilities are those liabilities to pay outside with in the year. For example sundry creditor, bill payable, bank overdraft, outstanding expenses.

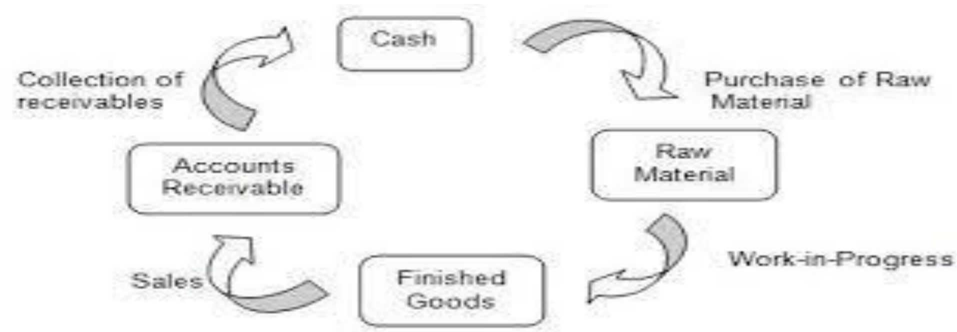
Gross working capital:

In the broader sense, the term working capital refers to the gross working capital. The notion of the gross working capital refers to the capital invested in total current assets of the enterprise. Current assets are those assets, which in the ordinary course of business, can be converted into cash within ashort period, normally one accounting year.

Net working capital:

In a narrow sense, the term working capital refers to the net working capital. Networking capital represents the excess of current assets over current liabilities.

WORKING CAPITAL CYCLE



Factors determining the working capital requirements

1. **<u>Nature or character of business</u>**: The working capital requirements of a firm basically depend upon the nature of its business. Public utility undertakings like electricity, water supply and railways need very limited working capital as their sales are on cash and are engaged in
provision of services only. On the other hand, trading firms require more investment in inventories, receivables and cash and such they need large amount of working capital. The manufacturing undertakings also require sizable working capital.

2. **<u>Size of business or scale of operations</u>**: The working capital requirements of a concern are directly influenced by the size of its business, which may be measured in terms of scale of operations. Greater the size of a business unit, generally, larger will be the requirements of working capital. However, in some cases, even a smaller concern may need more working capital due to high overhead charges, inefficient use of available resources and other economic disadvantages of small size.

3. **<u>Production policy</u>**: If the demand for a given product is subject to wide fluctuations due to seasonal variations, the requirements of working capital, in such cases, depend upon the production policy. The production could be kept either steady by accumulating inventories during stack periods with a view to meet high demand during the peck season or the production could be curtailed during the slack season and increased during the peak season. If the policy is to keep the production steady by accumulating inventories it will require higher working capital.

4. **<u>Manufacturing process/Length of production cycle</u>**: In manufacturing business, the requirements of working capital will be in direct proportion to the length of manufacturing process. Longer the process period of manufacture, larger is the amount of working capital required, as the raw materials and other supplies have to be carried for a longer period.

5. **<u>Seasonal variations:</u>** If the raw material availability is seasonal, they have to be bought in bulk during the season to ensure an uninterrupted material for the production. A huge amount is, thus, blocked in the form of material, inventories during such season, which give rise to more working capital requirements. Generally, during the busy season, a firm

requires larger working capital then in the slack season.

6. **Working capital cycle**: In a manufacturing concern, the working capital cycle starts with the purchase of raw material and ends with the realization of cash from the sale of finished products. This cycle involves purchase of raw materials and stores, its conversion into stocks of finished goods through work–in progress with progressive increment of labour and service costs, conversion of finished stock into sales, debtors and receivables and ultimately realization ofcash. This cycle continues again from cash to purchase of raw materials and so on. In general the longer the operating cycle, the larger the requirement of working capital.

7. **Credit policy**: The credit policy of a concern in its dealings with debtors and creditors influences considerably the requirements of working capital. A concern that purchases its requirements on credit requires lesser amount of working capital compared to the firm, which buys on cash. On the other hand, a concern allowing credit to its customers shall need larger amount of working capital compared to a firm selling only on cash.

8. **Business cycles**: Business cycle refers to alternate expansion and contraction in general business activity. In a period of boom, i.e., when the business is prosperous, there is a need for larger amount of working capital due to increase in sales. On the contrary, in the times of depression, i.e., when there is a down swing of the cycle, the business contracts, sales decline, difficulties are faced in collection from debtors and firms may have to hold large amount of working capital.

9. **Rate of growth of business**: The working capital requirements of a concern increase with the growth and expansion of its business activities. The retained profits may provide for a part of working capital but the fast growing concerns need larger amount of working capital than the amount of undistributed profits.

METHODS AND SOURCES OF FINANCE/ CAPITAL

Methods of finance

1. Long term finance

2. Medium term finance

3. Short term finance

SOURCES OF FINANCE

1. **Long term finance**: long term finance available for a long period say five years and above. The long term methods outlined below are used to purchase fixed assets such as

   land and buildings, plant and so on.

a) **Own capital** : irrespective of the form of organization such as soletrader, partnership or a company, the owners of the business have to invest their own finances to start with. Money invested by the owners, partners or promoters is permanent and will stay with the business throughout the life of business.

b) **Share capital** : normally in the case of a company, the capital is raised by issue of shares. The capital so raised is called share capital. The share capital can be of two types, preference share capital and equity share capital.

c) **Debentures**: debentures are the loans taken by the company. It is a certificate or letter by the company under its common seal acknowledging the receipt of loan. A debenture holder is the creditor of the company. A debenture holder is entitled to a fixed rate of interest on thedebenture amount.

d) **Government grants and loans**: government may provide long term finance directly to the business houses or by indirectly subscribing to the shares of the companies. The government gives loans only if the project satisfies certain conditions, such as setting up a project in a notified area, or ventures into projects which are beneficial for the society as a whole.

2. Medium term finance

a. Bank loans ; bank loans are extended at a fixed rate of interest. Repayment of the loan and interest are scheduled at the beginning and are usually directly debited to the current account of the borrower. These are secured loans.

b. Hire purchase: it is a facility to buy a fixed asset while paying the price over a long period of time. In other words , the possession of the asset can be taken by making a down payment of a part of the price and the balance will be repaid with a fixed rate of interest in agreed number of installments.

c. Leasing or renting: where there is a need for fixed assets, the asset need not be purchased. It can be taken on lease or rent for specified number of years. The company who owns the assets is called lessor and the company which takes the asset on lease is called lessee. The agreement between the lessor and lessee is called a lease agreement.

d. Venture capital: this form of finance is available only for limited companies. Venture capital is normally provided in such projects where there is relatively a higher degree of risk. For such projects, finance through the conventional sources may not be available. Many banks offer such finance through their merchant banking divisions, or specialist banks which offer advice and financial assistance. The financial assistance may take form of loans and venture capital.

3. SHORT TERM FINANCE

a. Commercial paper: it is new money market instrument introduced in india in recent times. Cps are issued in large denominations by the leading, nationally reputed, highly rated and credit worthy, large manufacturing and finance companies in the public and private sector. The proceeds of the issue of commercial paper are used to finance current transactions and seasonal and interim needs for funds.

b. Bank overdraft: this is special arrangement with the banker where the customer can draw more than what he has in his saving/ current account subject to a maximum limit. interest is chargedon a day to day basis on the actual amount overdrawn .

c. Trade credit: this is short term credit facility extended by the creditors to the debtors, normally, itis common for the traders to buy the materials and other supplies from the suppliers on credit basis. After selling the stocks the traders pay the cash and buy fresh stocks again on credit. Sometimes , the suppliers may insist on the buyer to sign a bill.

CAPITAL BUDGETING

Capital budgeting is the process of making investment decision in long-term assets or courses of action. Capital expenditure incurred today is expected to bring its benefits over a period of time. These expenditures are related to the acquisition & improvement of fixes assets.

Capital budgeting is the planning of expenditure and the benefit, which spread over a number of years. It is the process of deciding whether or not to invest in a particular project, as the investment possibilities may not be rewarding. The manager has to choose a project, which gives a rate of return, which is more than the cost of financing the project. For this the manager has to evaluate the worth of the projects in-terms of cost and benefits. The benefits are the expected cash inflows from the project, which are discounted against a standard, generally the cost of capital.

Methods of capital budgeting

The capital budgeting appraisal methods are techniques of evaluation of investment proposal will help the company to decide upon the desirability of an investment proposal depending upon their; relative income generating capacity and rank them in order of their desirability. These methods provide the company a set of norms on the basis of which either it has to accept or reject the investment proposal. The most widely accepted techniques used in estimating the cost-returns of investment projects can be grouped under two categories.

1. Traditional methods
2. Discounted Cash flow methods

1. Traditional methods

These methods are based on the principles to determine the desirability of an investment project on the basis of its useful life and expected returns. These methods depend upon the accounting information available from the books of accounts of the company. These will not take into account the concept of
„time value of money‟, which is a significant factor to determine the desirability of a project in terms of present value.

A. Pay-back period method: It is the most popular and widely recognized traditional method of evaluating the investment proposals. It can be defined, as „the number of years required to recover the original cash out lay invested in a project‟.

According to Weston & Brigham, "The pay back period is the number of years it takes the firm to recover its original investment by net returns before depreciation, but after taxes".

According to James. C. Vanhorne, "The payback period is the number of years required to recover initialcash investment.

The pay back period is also called payout or payoff period. This period is calculated by dividing the cost of the project by the annual earnings after tax but before depreciation under this method the projects are ranked on the basis of the length of the payback period. A project with the shortest payback period will be given the highest rank and taken as the best investment.

Merits:

1. It is one of the earliest methods of evaluating the investment projects
2. It is simple to understand and to compute.
3. It dose not involve any cost for computation of the payback period
4. It is one of the widely used methods in small scale industry sector
5. It can be computed on the basis of accounting information available from the books.

Demerits:

1. This method fails to take into account the cash flows received by the company after the payback period.
2. It doesn‟t take into account the interest factor involved in an investment outlay.
3. It doesn‟t take into account the interest factor involved in an investment outlay.
4. It is not consistent with the objective of maximizing the market value of the company‟s share.
5. It fails to consider the pattern of cash inflows i. e., the magnitude and timing of cash in flows.

$$\textbf{Pay-back period} = \frac{\textbf{Cash outlay (or) original cost of project}}{\textbf{Annual cash inflow}}$$

B. Accounting (or) Average rate of return method (ARR):

It is an accounting method, which uses the accounting information repeated by the financial statements to measure the probability of an investment proposal. It can be determine by dividing the average income after taxes by the average investment i.e., the average book value after depreciation.

According to „Soloman", accounting rate of return on an investment can be calculated as the ratio of accounting net income to the initial investment, i.e.,

$$\textbf{Average rate of return} = \frac{\textbf{average annual profit after tax}}{\textbf{Average investment}} \times 100$$

$$\textbf{Average annual profit after tax} = \frac{\textbf{sum of profit after tax}}{\textbf{No. of the years}}$$

$$\textbf{Average investment} = \frac{\textbf{cost – scrap value}}{\textbf{2}} + \textbf{additional working capital} + \textbf{scrap value}$$

Merits:

1. It is very simple to understand and calculate.
2. It can be readily computed with the help of the available accounting data.
3. It uses the entire stream of earning to calculate the ARR.

Demerits:

1. It is not based on cash flows generated by a project.
2. This method does not consider the objective of wealth maximization
3. IT ignores the length of the projects useful life.
4. It does not take into account the fact that the profits can be re-invested.

II: Discounted cash flow methods:

The traditional method does not take into consideration the time value of money. They give equal weight age to the present and future flow of incomes. The DCF methods are based on the concept that a rupee earned today is more worth than a rupee earned tomorrow. These methods take into consideration the profitability and also time value of money.

<u>A. Net present value method (NPV)</u>

The NPV takes into consideration the time value of money. The cash flows of different years and valued differently and made comparable in terms of present values for this the net cash inflows of various period are discounted using required rate of return which is predetermined.

According to Ezra Solomon, "It is a present value of future returns, discounted at the required rate of return minus the present value of the cost of the investment."

NPV is the difference between the present value of cash inflows of a project and the initial cost of theproject.

According the NPV technique, only one project will be selected whose NPV is positive or above zero. If a project(s) NPV is less than „Zero‟. It gives negative NPV hence. It must be rejected. If there are more than one project with positive NPV‟s the project is selected whose NPV is the highest.

NPV = PRESENT VALUE OF CASH INFLOW – PRESENT VALUE OF CASH OUTFLOW

Merits:

1. It recognizes the time value of money.
2. It is based on the entire cash flows generated during the useful life of the asset.
3. It is consistent with the objective of maximization of wealth of the owners.The ranking of projects is independent of the discount rate used for determining the presentvalue.

Demerits:

1. It is different to understand and use.
2. The NPV is calculated by using the cost of capital as a discount rate. But the concept of cost ofcapital. If self is difficult to understood and determine.
3. It does not give solutions when the comparable projects are involved in different amounts ofinvestment.

4. It does not give correct answer to a question whether alternative projects or limited funds areavailable with unequal lines.

Problem 1

The **cost** of a project is $50,000 and it generates cash inflows of $20,000, $15,000, $25,000, and $10,000 over four years.

Required: Using the present value index method, appraise the profitability of the proposed investment, assuming a 10% rate of discount.

Solution

The first step is to calculate the present value and profitability index.

Year	Cash Inflows	Present Value Factor	Present Value
	$	@10%	$
1	20,000	0.909	18,180
2	15,000	0.826	12,390
3	25,000	0.751	18,775
4	10,000	0.683	6,830
			56,175

Total present value = $56,175
Less: intial outlay = $50,000
Net present value = $6,175

Profitability Index (gross) = Present value of cash inflows / Intial cash outflow
= 56,175 / 50,000
= 1.1235

Given that the profitability index (PI) is greater than 1.0, we can accept the proposal.

Net Profitability = NPV / Initial cash outlay
= 6,175 / 50,000 = 0.1235
N.P.I. = 1.1235 – 1 = 0.1235

Given that the net profitability index (NPI) is positive, we can accept the proposal.

Problem 2

A company is considering whether to **purchase** a new machine. Machines A and B are available for $80,000 each. Earnings after taxation are as follows:

Year	Machine A	Machine B
	$	$
1	24,000	8,000
2	32,000	24,000
3	40,000	32,000
4	24,000	48,000
5	16,000	32,000

Required: Evaluate the two alternatives using the following: (a) payback method, (b) **rate of return** on investment method, and (c) net present value method. You should use a **discount rate** of 10%.

Solution

(a) Payback method

24,000 of 40,000 = 2 years and 7.2 months

Payback period:

Machine A: (24,000 + 32,000 + 1 3/5 of 40,000) = 2 3/5 years.
Machine B: (8,000 + 24,000 + 32,000 + 1/3 of 48,000) = 3 1/3 years.

According to the payback method, Machine A is preferred.

(b) Rate of return on investment method

Particular	Machine A	Machine B
Total Cash Flows	1,36,000	1,44,000
Average Annual Cash Flows	1,36,000 / 5 = $27,000	1,44,000 / 5 = $28,800
Annual Depreciation	80,000 / 5 = $16,000	80,000 / 5 = $16,000
Annual Net Savings	27,200 – 16,000 = $11,200	28,800 – 16,000 = $12,800

Average Investment	80,000 / 2 = $40,000	80,000 / 2 = $40,000
ROI = (Annual Net Savings / Average Investments) x 100	(11,200 / 40,000) x 100	(12,800 / 40,000) x 100
	= 28%	= 32%

According to the rate of return on investment (ROI) method, Machine B is preferred due to the higher ROI rate.

(c) Net present value method

The idea of this method is to calculate the present value of cash flows.

Year	**Discount Factor**	**Machine A**		**Machine B**	
	(at 10%)	**Cash Flows ($)**	**P.V ($)**	**Cash Flows ($)**	**P.V ($)**
1	.909	24,000	21,816	8,000	7,272
2	.826	32,000	26,432	24,000	19,824
3	.751	40,000	30,040	32,000	24,032
4	.683	24,000	16,392	48,000	32,784
5	.621	16,000	9,936	32,000	19,872
		1,36,000	**1,04,616**	**1,44,000**	**1,03,784**

Net Present Value = Present Value – Investment
Net Present Value of Machine A: $1,04,616 – $80,000 = $24,616
Net Present Value of Machine B: $1,03,784 – 80,000 = $23,784

According to the net present value (NPV) method, Machine A is preferred because its NPV is greater than that of Machine B.

Problem 3

At the beginning of 2015, a **business** enterprise is trying to decide between two potential **investments**.

Required: Assuming a required rate of return of 10% p.a., evaluate the investment proposals under: (a) return on investment, (b) payback period, (c) discounted payback period, and (d) profitability index.

The forecast details are given below.

	Proposal A	Proposal B
Cost of Investment	$20,000	28,000
Life	4 years	5 years
Scrap Value	Nil	Nil
Net Income (After depreciation and tax)		
End of 2015	$500	Nil
End of 2016	$2,000	$3,400
End of 2017	$3,500	$3,400
End of 2018	$2,500	$3,400
End of 2019	Nil	$3,400

It is estimated that each of the alternative projects will require an additional **working capital** of $2,000, which will be received back in full after the end of each project.

Depreciation is provided using the straight line method. The **present value** of $1.00 to be received at the end of each year (at 10% p.a.) is shown below:

Year	1	2	3	4	5
P.V.	0.91	0.83	0.75	0.68	0.62

Solution

Calculation of profit after tax

Year	Proposal A $20,000			Proposal B $28,000		
	Net Income	Dep.	Cash Inflow	Net Income	Dep.	Cash Inflow
	$	$	$	$	$	$
2015	500	5,000	5,500	–	5,600	5,600
2016	2,000	5,000	7,000	3,400	5,600	9,000
2017	3,500	5,000	8,500	3,400	5,600	9,000
2018	2,500	5,000	7,500	3,400	5,600	9,000
2019	–	–	–	3,400	5,600	9,000
Total	**8,500**	**20,000**	**28,500**	**13,600**	**28,000**	**41,600**

(a) Return on investment

	Proposal A	Proposal B
Investment	20,000 + 2,000 = 22,000	28,000 + 2,000 = 30,000
Life	4 years	5 years
Total Net Income	$8,500	$13,600
Average Return ($)	8,500 / 4 = 2,125	13,600 / 5 = 2,720
Average Investment ($)	(22,000 + 2,000) / 2 = 12,000	(30,000 + 2,000) / 2 = 16,000

Average Return on Average Investment ($)	(2,125 / 12,000) x 100 = 17.7%	(2,720 / 16,000) x 100 = 17%

(b) Payback period

Proposal A	**Cash Inflow ($)**
2015	5,500
2016	7,000
2017	7,500 (7,500 / 8,500 = 0.9)
	20,000

Payback period = 2.9 years

Proposal B	**Cash Inflow**
	$
2015	5,600
2016	9,000
2017	9,000
2018	4,400 (4,400 / 9,000 = 0.5)

Payback period = 3.5 years

(c) Discounted payback period

Proposal A		**Proposal B**	
P.V. of Cash Inflow		**P.V. of Cash Inflow**	
Year	**$**	**Year**	**$**
2015	5,005	2015	5,096
2016	5,810	2016	7,470
2017	6,375	2017	6,750
2018	2,810 (2,810 / 5,100 = 0.5)	2018	6,120
		2019	2,564 (2,564 / 5,580 = 0.4)
	20,000		**28,000**

Discounted Payback Period = 3.5 years	Discounted Payback Period = 4.4 years

(d) Profitability index method

	Proposal A	**Proposal B**
Gross Profitability Index	(22,290 / 20,000) x 100 = 111.45%	(31,016 / 28,000) x 100 = 111.08%
Net Profitability Index	(2,290 / 20,000) x 100 = 11.45%	(3,016 / 28,000) x 100 = 10.8%

UNIT – V
INTRODUCTION TO FINANCIAL ACCOUNTING CONCEPTS

Synopsis:

1. Introduction
2. Book-keeping and Accounting
3. Function of an Accountant
4. Users of Accounting
5. Advantages of Accounting
6. Limitations of Accounting
7. Basic Accounting concepts

1. INTRODUCITON

As you are aware, every trader generally starts business for purpose of earning profit. While establishing business, he brings own capital, borrows money from relatives, friends, outsiders or financial institutions. Then he purchases machinery, plant , furniture, raw materials and other assets. He starts buying and selling of goods, paying for salaries, rent and other expenses, depositing and withdrawing cash from bank. Like this he undertakes innumerable transactions in business. Observe the following transactions of small trader for one week during the month of July, 1998.

1998		Rs.
July 24	Purchase of goods from Sree Ram	12,000
July 25	Goods sold for cash	5,000
July 25	Sold gods to Syam on credit	8,000
July 26	Advertising expenses	5,200
July 27	Stationary expenses	600
July 27	Withdrawal for personal use	2,500
July 28	Rent paid through cheque	1,000
July 31	Salaries paid	9,000
July 31	Received cash from Syam	5,000

The number of transactions in an organization depends upon the size of the organization. In small organizations, the transactions generally will be in thousand and in big organizations they may be in lakhs. As such it is humanly impossible to remember all these transactions. Further, it may not by possible to find out the final result of the business without recording and analyzing these transactions.

Accounting came into practice as an aid to human memory by maintaining a systematic record of business transactions.

1.1 History of Accounting:

Accounting is as old as civilization itself. From the ancient relics of Babylon, it can be will proved that accounting did exist as long as 2600 B.C. However, in modern form accounting based on the principles of Double Entry System came into existence in 17th Century. Fra Luka Paciolo, a Fransiscan monk and mathematician published a book *De computic et scripturies* in 1494 at Venice in Italyl. This book was translated into English in 1543. In this book he covered a brief section on ‘book-keeping’.

1.2 Origin of Accounting in India:

Accounting was practiced in India thousand years ago and there is a clear evidence for this. In his famous book *Arthashastra* Kautilya dealt with not only politics and economics but also the art of proper keeping of accounts. However, the accounting on modern lines was introduced in India after 1850 with the formation joint stock companies in India.
Accounting in India is now a fast developing discipline. The two premier Accounting Institutes in India viz., chartered Accountants of India and the Institute of Cost and Works Accountants of India are making continuous and substantial contributions. The international Accounts Standards Committee (IASC) was established as on 29th June. In India the 'Accounting Standards Board (ASB) is formulating 'Accounting Standards' on the lines of standards framed by International Accounting Standards Committee.

2. BOOK-KEEPING AND ACCOUNTING

According to G.A. Lee the accounting system has two stages.
1. The making of routine records in the prescribed from and according to set rules of all events with affect the financial state of the organization; and
2. The summarization from time to time of the information contained in the records, its presentation in a significant form to interested parties and its interpretation as an aid to decision making by these parties.

First stage is called Book-Keeping and the second one is Accounting.

Book – Keeping: Book – Keeping involves the chronological recording of financial transactions in a set of books in a systematic manner.
Accounting: Accounting is concerned with the maintenance of accounts giving stress to the design of the system of records, the preparation of reports based on the recorded date and the interpretation of the reports.

Distinction between Book – Keeping and Accountancy

Thus, the terms, book-keeping and accounting are very closely related, through there is a subtle difference as mentioned below.
1. Object : The object of book-keeping is to prepare original books of Accounts. It is restricted to journal, subsidiary book and ledge accounts only. On the other hand, the main object of accounting is to record analyse and interpret the business transactions.
2. Level of Work: Book-keeping is restricted to level of work. Clerical work is mainly involved in it. Accountancy on the other hand, is concerned with all level of management.
3. Principles of Accountancy: In Book-keeping Accounting concepts and conventions will be followed by all without any difference. On the other hand, various firms follow various methods of reporting and interpretation in accounting.
3. Final Result: In Book-Keeping it is not possible to know the final result of business every year,

2.1 Meaning of Accounting

Thus, book-keeping is an art of recording the business transactions in the books of original entry and the ledges. Accountancy begins where Book-keeping ends. Accountancy means the compiliation of accounts in such a way that one is in a position to know the state of affairs of the business. The work of an accountant is to analyse, interpret and review the accounts and draw conclusion with a view to guide the management in chalking out the future policy of the business.

2.2 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**.

2.3 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 loass 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 assist 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 assest 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.

3. 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.

4. 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.

4.1 Internal Users:

Managers : These are the persons who manage the business, i.e. management at he 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.”

4.2 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.

5. 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 had, 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 an 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 asses 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.

6. 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, locational 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, which ever is less. In case of, building, machinery etc., we adopt historical cost as the basis.

Infact, 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 collectibility, 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.

7. 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)

FINAL ACCOUNTS

<u>INTRODUCTION</u>: The main object of any Business is to make profit. Every trader generally starts business for the purpose of earning profit. While establishing Business, he brings his own capital, borrows money from relatives, friends, outsiders or financial institutions, then purchases machinery, plant, furniture, raw materials and other assets. He starts buying and selling of goods, paying for salaries, rent and other expenses, depositing and withdrawing cash from Bank. Like this he undertakes innumerable transactions in Business.

The number of Business transactions in an organization depends up on the size of the organization. In small organizations the transactions generally will be in thousands and in big organizations they may be in lacks. As such it is humanly impossible to remember all these transactions. Further it may not be possible to find out the final result of the Business with out recording and analyzing these transactions.

Accounting came in practice as an aid to human memory by maintaining a systematic record of Business transactions.

<u>BOOK KEEPING AND ACCOUNTING:</u>

According to G.A.Lee the Accounting system has two stages. First stage is Book keeping and the second stage is accounting.

[A]. *BOOK KEEPING*:
Book keeping involves the chronological recording of financial transactions in a set of books in a systematic manner

“Book keeping is the system of recording Business transactions for the purpose of providing reliable information to the owners and managers about the state and prospect of the Business concepts”.

Thus Book keeping is an art of recording business transactions in the books of original entry and the ledges.

[B]. *ACCOUNTING*: Accounting begins where the Bookkeeping ends
1. SMITH AND ASHBUNNE: Accounting means “measuring and reporting the results of economic activities”.
2. *R.N ANTHONY*: Accounting is a system of “collecting, summarizing, Analyzing and reporting in monster terms, the information about the Business”.
3. *ICPA:* Recording, classifying and summarizing is 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 there.
Thus accounting is an art of recording, classifying, summarizing and interpreting business transactions of financial nature. Hence accounting is the “Language of Business”.

ADVANTAGE OF ACCOUNTING

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 PRPARATION OF FINANCIAL STATEMENTS*: Profit and Loss account 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 hand, stack of goods, accounts receivable 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. *PROVIES THE REQUIRED INFORMATION*: Interested parties such as owners, lenders, creditors etc, get necessary information at frequent intervals.

5. *COMPARITIVE STUDY*: One can compare present performance of the organization with that of its past. This enables the managers to draw useful conclusions 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 MALTERS: 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 of substantial the claim of the Business. Thus records are based on documentary proof. Authentic vouchers support every entry. 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 weaknesses of the business can be identified and corrective measures can be applied to remove them with the help of 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, locational advantages, business contacts etc.

2.*DOES NOT REFLECT CURRENT VLAUES*: The data available under book keeping is historical in nature. So they do not reflect current values. For instance we record the values of stock at cost price or market price, which ever is less. In case of building, machinery etc., we adapt historical case as the basis. Infact, 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 JUDGEMENT*: The estimates used for determining the values of various items may not be correct. For example, debtors are estimated in terms of collectibles, 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 over all profitability of the business. No information is given about the cost and profitability of different activities of products or divisions.

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 ONCEPTS”. 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 CONEPT*: 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 can not 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 ASCEPT 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. *REALISATION 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, which ever 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.

KEY WORDS IN BOOK-KEEPING

1. *TRANSACTIONS*: Any sale or purchase of goods of services is called the transaction. Transactions are two types.
[a]. cash transaction: cash transaction is one where cash receipt or payment is involved in the exchange.
[b]. Credit transaction: Credit transaction will not have cash, either received or paid, for something given or received respectively.

2.*GOODS*: Fill those things which a firm purchases for resale are called goods.

3.*PURCHASES*: Purchases means purchase of goods, unless it is stated otherwise it also represents the Goods purchased.

4.*SALES*: Sales means sale of goods, unless it is stated otherwise it also represents these goods sold.

5.*EXPENSES*: Payments for the purchase of goods as services are known as expenses.

6.*REVENUE*: Revenue is the amount realized or receivable from the sale of goods or services.

7.*ASSETS*: The valuable things owned by the business are known as assets. These are the properties Owned by the business.

8.*LIABILITIES*: Liabilities are the obligations or debts payable by the enterprise in future in the term Of money or goods.

9. *DEBTORS*: Debtors means a person who owes money to the trader.

10.*CREDITORS*: A creditor is a person to whom something is owned by the business.

11.*DRAWINGS*: cash or goods withdrawn by the proprietor from the Business for his personal or Household is termed to as "drawing".

12.*RESERVE*: An amount set aside out of profits or other surplus and designed to meet contingencies.

13.*ACCOUNT*: A summarized statements of transactions relating to a particular person, thing, Expense or income.

14.*DISCOUNT*: There are two types of discounts..

a. cash discount: An allowable made to encourage frame payment or before the expiration of the period allowed for credit.

b. Trade discount: A deduction from the gross or catalogue price allowed to traders who buys them for resale.

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.

DateDate	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***

Particulars 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 FOR TRAIL BALANCE:
Trail balance for MR…………………………………… as on …………

NO	NAME OF ACCOUNT (PARTICULARS)	DEBIT AMOUNT(RS.)	CREDIT AMOUNT(RS.)

Trail Balanc e

Specimen 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 debtors	Debit	Liability
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		Commission received	Xxxxx
Audit fee	Xxxx	Income from investments	
TO Insurance	Xxxx		
TO General expenses	Xxxx	Dividend on shares	Xxxx
TO Advertisements	Xxxxx	Miscellaneous investments	Xxxx
TO Bad debts	Xxxx		
TO Carriage outwards	Xxxx	Rent received	xxxx
TO Repairs	Xxxx		
TO Depreciation	Xxxxx		
TO interest paid	Xxxxx		
TO Interest on capital	Xxxxx		
TO Interest on loans	Xxxx		
TO Discount allowed	Xxxxx		
TO Commission	Xxxxx		
TO Net profit-------→ (transferred to capital a/c)	Xxxxx		
	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 as certain 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
<u>Add</u>:		Plats&machinery	
Net Profit xxxx		Land & buildings	Xxxx
-------		Patents, tm ,copyrights	Xxxx
xxxxxxx		Goodwill	Xxxx
--------		Prepaid expenses	
		Outstanding incomes	Xxxx
<u>Less</u>:			Xxxx
Drawings xxxx	Xxxx		Xxxx
---------	XXXX		XXXX

<u>Advantages</u>: 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.*PREAPID 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] ACCURED 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 added 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.

Note: Problems to be solved on final accounts

SUBSIDIARY BOOKS

In a small business concern, the numbers of transactions are limited. These transactions are first recorded in the journal as and when they take place. Subsequently, these transactions are posted in the appropriate accounts of the ledger. Therefore, the journal is known as “Book Of Original Entry” or “Book of Prime Entry” while the ledger is known as main book of accounts.

On the other hand, the transactions in big concern are numerous and sometimes even run into thousands and lakhs. It is inconvenient and time wasting process if all the transactions are going to be managed with a journal.

Therefore, a convenient device is made. Smaller account books known as subsidiary books or subsidiary journals are disturbed to various sections of the business house. As and when transactions take place, they are recorded in these subsidiary books simultaneously without delay. The original journal (which is known as Journal Proper) is used only occasionally to record those transactions which cannot be recorded in any of the subsidiary books.

TYPES OF SUBSIDIARY BOOKS:-- Subsidiary books are divided into eight types. They are,

1.Purchases Book
2.Sales Book
3.Purchase Returns Book
4.Sales Returns Book
5.Cash Book
6.Bills Receivable Book
7.Bills Payable Book
8.Journal Proper

1. *PURCHASES BOOK* :- This book records all credit purchases only. Purchase of goods for cash and purchase of assets for cash. Credit will not be recorded in this book. Purchases book is otherwise

called Purchases Day Book, Purchases Journal or Purchases Register.

2. *SALES BOOK* :-This book is used to record credit sales only. Goods are sold for cash and sale of assets for cash or credit will not be recorded in this book. This book is otherwise called Sales Day Book, Sales Journal or Sales Register.

3.*PURCHASE RETURNS BOOK* :- This book is used to record the particulars of goods returned to the suppliers .This book is otherwise called Returns Outward Book.

4.*SALES RETURNS BOOK* :- This book is used to record the particulars of goods returned by the customers. This book is otherwise called Returns Inward Book.

5.*CASH BOOK* :- All cash transactions , receipts and payments are recorded in this book. Cash includes cheques, money orders etc.

6.*BILLS REEECEIVABLE BOOK* :- This book is used to record all the bills and promissory notes are received from the customers.

7.*BILLS PAYABLE BOOK* :- This book is used to record all the bills or promissory notes accepted to the suppliers.

8.*JOURNAL PROPER* :- This is used to record all the transactions that cannot be recorded in any of the above mentioned subsidiary books.

FORMAT FOR PURCHASE BOOK

Date	Name of supplier	Invoice No	Lf no	Details	Amount(Rs.)

FORMAT FOR SALES BOOK

Date	Name of customer	Invoice No	Lf no	Details	Amount(Rs.)

FORMAT FOR PURCHASE RETURNS BOOK

Date	Name of supplier	Debit note No	Lf no	Details	Amount(Rs.)

FORMAT FOR SALES RETURNS BOOK

Date	Name of supplier	Credit note No	Lf no	Details	Amount(Rs.)

CASH BOOK

Cash book plays an important role in accounting. Whether transactions made are in the form of cash or credit, final statement will be in the form of receipt or payment of cash. So, every transaction finds place in the cash book finally.

Cash book is a principal book as well as the subsidiary book. It is a book of original entry since the transactions are recorded for the first time from the source of documents. It is a ledger in a sense it is designed in the form of cash account and records cash receipts on the debit side and the cash payments on the credit side. Thus, a cash book fulfils the functions of both a ledger account and a journal.

Cash book is divided into two sides. Receipt side (debit side) and payment side (credit side). The method of recording cash sample is very simple. All cash receipts will be posted on the debit side and all the payments will be recorded on the credit side.

Types of cash book: cash book may be of the following types according to the needs of the business.

- Simple cash book
- Double column or two column cash book
- Three column cash book
- Petty cash book

SINGLE COLUMN CASH BOOK: The simple cash book is a record of only cash transactions. The model of the cash book is given below.

CASH BOOK

Date	Particulars	Lf no	Amount	Date	Particulars	Lf no	Amo unt

TWO COLUMN CASH BOOK: This book has two columns on each side one for discount and the other for cash. Discount column on debit side represents loss being discount allowed to customers. Similarly, discount column on credit side represents gain being discount received.

Discount may be two types.

(i)Trade discount
(ii)cash discount

TRADE DISCOUNT: when a retailer purchases goods from the wholesaler, he allows some discount on the catalogue price. This discount is called as Trade discount. Trade discount is adjusted in the invoice and the net amount is recorded in the purchase book. As such it will not appear in the book of accounts.

CASH DISCOUNT: When the goods are purchased on credit, payment will be made in the future as agreed by the parties. If the amount is paid early as promptly a discount by a way of incentive will be allowed by the seller to the buyer. This discount is called as cash discount. So cash discount is the discount allowed by the seller to encourage prompt payment from the buyer. Cash discount is entered in the discount column of the cash book. The discount recorded in the debit side of the cash book is discount allowed. The discount recorded in the credit side of the cash book is discount received.

CASH DISCOUNT COLUMN CASH BOOK

Date	particulars	Lf no	Disc. Allo wed	cash	Date	Particulars	Lf No	Disc Recei Ved.	cash

PETTY CASH BOOK: We have seen that all the cash receipts and payments will be recorded in the cash book. But in the case of big concerns if all transactions like postage, cleaning charges, etc., are recorded in the cash book, the cash book becomes bulky and un wieldy. So, all petty disbursement of cash is recorded in a separate cash book called petty cash book.

Note: Problems to be solved on subsidiary books

FINANCIAL ANALYSIS THROUGH RATIOS

Ratio Analysis

Absolute figures are valuable but they standing alone convey no meaning unless compared with another. Accounting ratio show inter-relationships which exist among various accounting data. When relationships among various accounting data supplied by financial statements are worked out, they are known as accounting ratios.

Accounting ratios can be expressed in various ways such as:
1. a pure ratio says ratio of current assets to current liabilities is 2:1 or
2. a rate say current assets are two times of current liabilities or
3. a percentage say current assets are 200% of current liabilities.

Each method of expression has a distinct advantage over the other the analyst will selected that mode which will best suit his convenience and purpose.

Uses or Advantages or Importance of Ratio Analysis

Ratio Analysis stands for the process of determining and presenting the relationship of items and groups of items in the financial statements. It is an important technique of financial analysis. It is a way by which financial stability and health of a concern can be judged. The following are the main uses of Ratio analysis:

(a) Useful in financial position analysis: Accounting reveals the financial position of the concern. This helps banks, insurance companies and other financial institution in lending and making investment decisions.
(ii) Useful in simplifying accounting figures: Accounting ratios simplify, summaries and systematic the accounting figures in order to make them more understandable and in lucid form.

(iii) Useful in assessing the operational efficiency: Accounting ratios helps to have an idea of the working of a concern. The efficiency of the firm becomes evident when analysis is based on accounting ratio. This helps the management to assess financial requirements and the capabilities of various business units.

(iv) Useful in forecasting purposes: If accounting ratios are calculated for number of years, then a trend is established. This trend helps in setting up future plans and forecasting.

(v) Useful in locating the weak spots of the business: Accounting ratios are of great assistance in locating the weak spots in the business even through the overall performance may be efficient.

(vi) Useful in comparison of performance: Managers are usually interested to know which department performance is good and for that he compare one department with the another department of the same firm. Ratios also help him to make any change in the organisation structure.

Limitations of Ratio Analysis: These limitations should be kept in mind while making use of ratio analyses for interpreting the financial statements. The following are the main limitations of ratio analysis.

1. False results if based on incorrect accounting data: Accounting ratios can be correct only if the data (on which they are based) is correct. Sometimes, the information given in the financial statements is affected by window dressing, i. e. showing position better than what actually is.
2. No idea of probable happenings in future: Ratios are an attempt to make an analysis of the past financial statements; so they are historical documents. Now-a-days keeping in view the complexities of the business, it is important to have an idea of the probable happenings in future.
3. Variation in accounting methods: The two firms' results are comparable with the help of accounting ratios only if they follow the some accounting methods or bases. Comparison will become difficult if the two concerns follow the different methods of providing depreciation or valuing stock.
4. Price level change: Change in price levels make comparison for various years difficult.
5. Only one method of analysis: Ratio analysis is only a beginning and gives just a fraction of information needed for decision-making so, to have a comprehensive analysis of financial statements, ratios should be used along with other methods of analysis.
6. No common standards: It is very difficult to by down a common standard for comparison because circumstances differ from concern to concern and the nature of each industry is different.
7. Different meanings assigned to the some term: Different firms, in order to calculate ratio may assign different meanings. This may affect the calculation of ratio in different firms and such ratio when used for comparison may lead to wrong conclusions.
8. Ignores qualitative factors: Accounting ratios are tools of quantitative analysis only. But sometimes qualitative factors may surmount the quantitative aspects. The calculations derived from the ratio analysis under such circumstances may get distorted.
9. No use if ratios are worked out for insignificant and unrelated figure: Accounting ratios should be calculated on the basis of cause and effect relationship. One should be clear as to what cause is and what effect is before calculating a ratio between two figures.

Ratio Analysis: Ratio is an expression of one number is relation to another. It is one of the methods of analyzing financial statement. Ratio analysis facilities the presentation of the information of the financial statements in simplified and summarized from. Ratio is a measuring of two numerical positions. It expresses the relation between two numeric figures. It can be found by dividing one figure by another ratios are expressed in three ways.

1. Jines method
2. Ratio Method
3. Percentage Method

Classification of ratios: All the ratios broadly classified into four types due to the interest of different parties for different purposes. They are:

1. Profitability ratios
2. Turn over ratios
3. Financial ratios
4. Leverage ratios

1. Profitability ratios: These ratios are calculated to understand the profit positions of the business. These ratios measure the profit earning capacity of an enterprise. These ratios can be related its save or capital to a certain margin on sales or profitability of capital employ. These ratios are of interest to management. Who are responsible for success and growth of enterprise? Owners as well as financiers are interested in profitability ratios as these reflect ability of enterprises to generate return on capital employ important profitability ratios are:
2.

Profitability ratios in relation to sales: Profitability ratios are almost importance of concern. These ratios are calculated is focus the end results of the business activities which are the sole eritesiour of overall efficiency of organisation.

1. Gross profit ratio: x 100 $\frac{\text{gross profit}}{\text{Nest sales}}$

Note: Higher the ratio the better it is

3. Net profit ratio: X $\frac{\text{Net profit after interest \& Tax}}{\text{Net sales}}$ 100

Note: Higher the ratio the better it is

4. Operating ratio (Operating expenses ratio)

X $\frac{\text{Cost of goods sold + operating exenses}}{\text{Net sales}}$ 100

Net: Lower the ratio the better it is

5. Operating profit ratio: $\frac{\text{Operating profit}}{\text{Net sales}}$ X 100 = 100 operating ratio

Note: Higher the ratio the better it is cost of goods sold= opening stock + purchase + wages + other direct expenses- closing stock (or) sales – gross profit.

Operating expenses:

= administration expenses + setting, distribution expenses operating profit= gross profit – operating expense.

Expenses ratio = $\frac{\text{concern expense}}{\text{Net sales}}$ X 100

Note: Lower the ratio the better it is

Profitability ratios in relation to investments:

1. Return on investments: $\frac{\text{Net profit after tax \& latest depreciation}}{\text{share holders funds}}$ X 100

Share holders funds = equity share capital + preference share capital + receives & surpluses +undistributed profits.

Note: Higher the ratio the better it is

2. Return on equity capital: $\frac{\text{Net Profit after tax \& interest - preference divident}}{\text{equity share capital}}$ X 100

Note: Higher the ratio the better it is

3. Earnings per share= $\frac{\text{Net profit after tax - preferecne divident}}{\text{No. of equity shares}}$

4. Return on capital employed = $\frac{\text{operating profit}}{\text{capital employed}}$ x 100

5. Return on total assets = $\frac{\text{N.P. after tax and interest}}{\text{Total Assets}}$

Here, capital employed = equity share capital + preference share capital + reserves & surpluses + undistributed profits + debentures+ public deposit + securities + long term loan + other long term liability – factious assets (preliminary expressed & profit & loss account debt balance)

II. Turn over ratios or activity ratios:

These ratios measure how efficiency the enterprise employees the resources of assets at its command. They indicate the performance of the business. The performance if an enterprise is judged with its save. It means ratios are also laced efficiency ratios.

These ratios are used to know the turn over position of various things in the ___________. The turnover ratios are measured to help the management in taking the decisions regarding the levels maintained in the assets, and raw materials and in the funds. These ratio s are measured in ratio method.

1. Stock turnover ratio = $\frac{\text{cost of goods sold}}{\text{average stock}}$

Here,
Average stock= $\frac{\text{opening stock} + \text{closing stock}}{2}$

Note: Higher the ratio, the better it is

2. Working capital turnover ratio = $\frac{\text{sales}}{\text{working capital}}$

Note: Higher the ratio the better it is working capital = current assets – essential liabilities.

3. Fixed assets turnover ratio = $\frac{\text{sales}}{\text{fixed assets}}$

Note: Higher the ratio the better it is.

3 (i) Total assets turnover ratio is : $\frac{\text{sales}}{\text{total assets}}$

Note: Higher the ratio the better it is.

4. Capital turnover ratio= $\frac{\text{Sales}}{\text{Capital employed}}$

Note: Higher the ratio the better it is

5. Debtors turnover ratio= $\frac{\text{credits sales or sales}}{\text{average debtors}}$

5(i)= Debtors collection period= $\frac{365\,(\text{or})\,12}{\text{Turnove ratio}}$

Here,
Average debtors = $\frac{\text{opening debitors} + \text{closing bebtors}}{2}$

Debtors = debtors + bills receivable

Note: Higher the ratio the better it is.

6. Creditors turnover ratio = $\frac{\text{credit purchasers or purchases}}{\text{average credetors}}$

6 (i) creditors collection period= $\frac{365\,(\text{or})\,12}{\text{Creditor turnover ratio}}$

Here,
Average creditor= $\frac{\text{opening + closing credetors}}{2}$

Creditors = creditors + bills payable.

Note: lower the ratio the better it is.

3. Financial ratios or liquidity ratios:

Liquidity refers to ability of organisation to meet its current obligation. These ratios are used to measure the financial status of an organisation. These ratios help to the management to make the decisions about the maintained level of current assets & current libraries of the business. The main purpose to calculate these ratios is to know the short terms solvency of the concern. These ratios are useful to various parties having interest in the enterprise over a short period – such parties include banks. Lenders, suppliers, employees and other.

The liquidity ratios assess the capacity of the company to repay its short term liabilities. These ratios are calculated in ratio method.

Current ratio = $\frac{\text{current assets}}{\text{current liabilitie s}}$

Note: The ideal ratio is 2:1
i. e., current assets should be twice. The current liabilities.

Quick ratio or liquid ratio or acid test ratio: $\frac{\text{quick assets}}{\text{current liabilitie s}}$

Quick assets = cash in hand + cash at bank + short term investments + debtors + bills receivables short term investments are also known as marketable securities.
Here the ideal ratio is 1:1 is, quick assets should be equal to the current liabilities.

Absolute liquid ratio= $\frac{\text{absolute liquid assets}}{\text{current liabilitie s}}$

Here,
Absolute liquid assets=cash in hand + cash at bank + short term investments + marketable securities.

Here, the ideal ratio is 0,0:1 or 1:2 it, absolute liquid assets must be half of current liabilities.

Leverage ratio of solvency ratios: Solvency refers to the ability of a business to honour long item obligations like interest and installments associated with long term debts. Solvency ratios indicate long term stability of an enterprise. These ratios are used to understand the yield rate if the organisation.

Lenders like financial institutions, debenture, holders, banks are interested in ascertaining solvency of the enterprise. The important solvency ratios are:

$\frac{\text{outsiders funds}}{\text{share holders funds}}$ $\frac{\text{Debt}}{\text{Equity}}$

1. Debt – equity ratio= =

Here,
Outsiders funds = Debentures, public deposits, securities, long term bank loans + other long term liabilities.

Share holders funds = equity share capital + preference share capital + reserves & surpluses + undistributed projects.

The ideal ratio is 2:1

2. Preprimary ratio or equity ratio= $\frac{\text{share holder funds}}{\text{total assets}}$
The ideal ratio is 1:3 or 0.33:1

3. Capital – greasing ratio:

$$= \frac{(\text{equity share capital} + \text{reserves \& surplusses} + \text{undistributed projects})}{(\text{Outsiders funds} + \text{preference share capital})}$$

Here,

higher gearing ratio is not good for a new company or the company in which future earnings are uncertain.

11. Debt to total fund ratio= $\frac{\text{outsiders funds}}{\text{capital employed}}$
Capital employed= outsiders funds + share holders funds = debt + equity.
The ideal ratio is 0.6.7 :1 or 2:3

1Q. Define Accounting. Explain its objectives. Ans: Definitions of Accounting:

According to Smith and Ashburne, "Accounting is the science of recording and classifying business transactions and events, primarily of financial character and art of making significant summaries, analysis and interpretations of those transactions and events and communicating the results to persons who must make decisions or form judgements".

According to committee on terminology of American Institute of Certified Public Accountants (AICPA), "Accounting is the art of recording, classifying and summarizing in a significantmanner and in terms of money transactions and events which are in part, at least of financial character and interpreting the results thereof."

Another definition given by the same professional body, namely, AICPA stated that: "Accounting is the collection, measurement, recording, classification and communication of economic data relating to an enterprise for the purpose of reporting, decision making and control.

In 1966, the American **Accounting Association** defined accounting as follows: "Accounting is the process of identifying, measuring and communicating economic information to permit informed judgements and decisions by the users of the information."

Meaning of Accounting

Accounting is an art as well as science of recording, classifying and summarizing business transactions which are of financial character and are expressed in terms of money. It also includes interpretation aspect of the recorded information.

Objectives of Accounting:

1. **Maintaining proper/systematic record of Business**

   Transactions: Accounting replaces the limitations of human memory. The main purpose of accounting is to identify business transactions of financial nature and enter them into appropriatebooks of accounts. Accounting helps to keep record of all financial transactions and events systematically in proper books of accounts.

2. **To ascertain the financial results of the enterprise:** One of the main

   objects of accounting is to ascertain or calculate the profit or loss of the business enterprise. Income statements are prepared with the help of trial balance (prepared with the balances of ledger accounts). At the end of the accounting period, we prepare trading account and ascertain gross profit or gross loss. Afterwards profit and loss account is prepared to ascertain net profit or net loss.

3. **To ascertain financial position or financial health of the**

   business: At the end of the accounting period, we prepare position statement. Blance sheet is a statement of assets and liabilities of the business on a particular date and serves as a parameter to measure the financial health of the business.

4. **To help in decision making:** Accounting serves as an information system for helping to arrive at rational decisions. American Accounting Association also stresses upon this point while defining the term Accounting as "the process of identifying, measuring and communicating economic information to permit informed judgements and decisions by the users of the information. Accounting keeps systematic record of all transactions and events which are used to assist the management in its function of decision making and control.

5. **Providing Effective Control over the Business:** Accounting reveals the

   actual performance of the business in terms of production, sales, profit, loss, cost of production and the book value of the sundry assets. The actual performance can be compared with the planned and or desired performance of the business. I t can also be compared with the previous performance. Comparison reveals deviation in terms of weaknesses and plus points.

6. **Making Information to various groups:** Accounting makes information

   available to all these interested parties. Proprietors have interest in profit or dividend, debenture holders, lenders and investors are concerned with the safety of money advanced by them to the business and interest thereon. The object of the accounting is to provide meaningful information to all these interested parties.

2Q. Explain the Importance/ Advantages of Accounting.Ans: Advantages of Accounting:

1. **Replacement of memory:** In a large business it is very difficult for a business-man to remember all the transactions. Accounting provides records which will furnish information as and when desired and thus it replaces human memory. All financial transactions are recorded in a systematic manner in books of accounts so that there is no need to relay on memory.

2. **Evidence in court:** Properly maintained accounts are often treated as good evidence inthe court to settle a dispute.

3. **Settlement of taxation liability:** If accounts are properly maintained, it will be of great assistance to the businessman in settling the income tax and sale tax liability otherwise tax authorities may impose any amount of tax which the businessman will have to pay.

4. **Comparative study:** Accounting provides the facility of comparative study of the various aspects of the business such as profits, sales, expenses etc. with that of previous year andhelps the business man to locate significant factor leading to the change, if any. Systematic maintenance of business records enables the accountant to compare the profit of one year with thoseof earlier year‟s profits and to know the significant facts about the changes. This helps the business toplan its future affairs accordingly.

5. **Sale of the business:** If accounts are properly maintained, it helps to ascertain the proper purchase price in case the businessman is interested to sell his business.

6. **Assistance to the insolvent person:** If a person is maintaining

proper accounts and unfortunately he becomes insolvent (i.e., when he is unable to pay to his creditors), he can explain many things about the past with the help of accounts and can start a fresh life.

7. **Assistance to various interested parties:** It provides information

to various interested parties, i.e., owners, creditors, investors, government, managers, research scholars, public and employees and financial position of a business enterprise from their own view point. Various interested parties or groups are interested in accounting information related to various aspects viz., sales, production, profit etc. Accounting provides suitable information to such interested parties.

8. **Preparation of Financial Statements:** Systematic records enable

the accountant to prepare financial statements. Trading and Profit and Loss account is prepared for calculating profit or loss during a particular period and Balance sheet is prepared to state the financialposition of the business on a particular date.

9. **Decision Making:** The accountant helps the management by providing the relevantinformation for solving the day to day problems of the business.

10. **Planning and Control of Operations:** Planning operations like sales,

production, cash requirements for the next account period are achieved with the help of accounting information and estimates can be prepared based on that information.

11. **Value of Business:** Accounting records kept in a proper way enables a business unit todetermine the purchase or sale value of the business in a simple manner.

3.Q. What are the limitations or disadvantages of Accounting?

Ans: The following are the limitations of Accounting.

1. **Records only monetary transactions:** Accounting records only those transactions which can be measured in monetary terms. Those transactions which can not be measured in monetary terms as conflict between production manager and marketing manager , office management etc., may be very important for concern but not recorded in the business books.

2. **Effect of price level changes not considered:** Accounting transactions are recorded at cost in the books. The effect of price level changes is not brought into the books with the result that comparison of various years becomes difficult. For example, the sales to total assetsin 2007 would be much higher than in 2003 due to rising prices, fixed assets being shown at costand not at market price.

3. **No realistic information:** Accounting information may not be realistic as accounting statements are properly prepared by following basic concepts and conventions. For example, going concern concept gives us an idea that the business will continue and assets are to be recorded at cost but the book value which the asset is showing may not be actually realizable. Similarly, by followingthe principles of conservation the financial statements will not reflect the true position of the business.

4. **No real test of managerial performance:** Profit earned during an accounting period is the test of managerial performance. Profit may be shown in excess by manipulation of accounts by suppressing such costs as depreciation, advertisement and research and development or taking excess value of closing stock. Consequently real idea of managerial performance may not be available by manipulated profit.

5. **Historical in nature:** Usually accounting supplies information in the form of Profit and Loss Account and Balance Sheet at the end of the year. So, the information provided is of historical interest and only gives post-mortem analysis of the past accounting information. For control and planning purposes management is interested in quick and timely information which is not provided by financial accounting.

6. **Personal bias / judgement of Accountant affects the accounting Statements:** Accounting statements are influenced by the personal judgement of the accountant. He may select any method of depreciation, valuation of stock, amortization of fixed assets and treatment of deferred revenue expenditure. Such judgement based on integrity and competency of the accountant will definitely affect the preparation of accounting statements.

7. **Permits alternative treatments:** Accounting permits alternernative treatments within generally accepted accounting concepts and conventions. For example, method of

charging depreciation may be straight line method or diminishing balance method or some other method. Similarly, closing stock may be valued by FIFO(First-in-First Out) or LIFO(Last in First Out) or Average Price Method. Application of different methods may give different results and results may not becomparable.

4.Q. What is Double Entry System? What are the advantages and limitations of Double EntrySystem?

Ans: Double entry system is a scientific way of presenting accounts. As such all the business concerns feel it convenient to prepare the accounts under double entry system. The taxation authorities also compel the businessmen to prepare the accounts under Double Entry System. Under dual aspect the Account deals with the two aspects of business transaction i.e., (1) Receiving Aspect and (2) Giving Aspect. Receiving Aspect is known as Debit aspect and Giving Aspect is known as Credit aspect. Under which system these two aspects of transactions are recorded in chronological manner in the books of the business concern is known as Double Entry System. In Double Entry System these two aspects are recorded facilitating the preparation of Trial Balance and the Final Accounts therefrom.

Principle of Double Entry System

Every business transaction has got two accounts, where one account is debited and the other account is credited. If one account receives a benefit, there should be another account to impart/give the benefit. **The principle of Double Entry** is based on the fact that there can be no giving without receiving nor can there be receiving without something giving. The receiving account is debited (i.e., entered on the debit side of the account) and the giving account is credited (i.e., entered on the credit side of the account).

The principle under which both debit and credit aspects are recorded is known as the principle of double entry. According to this principle **every debit must necessarily have a corresponding credit and vice versa.**

Advantages of Double Entry System:

1. Scientific system: Double entry system records, classifies and summarizes business transactions in a systematic manner and, thus, produces useful information for decision makers. It is more scientific as compared to single entry of book-keeping.

2. Full Information: Full and authentic information can be had about all transactions as the trader maintains the ledger with all types of accounts**.**

3. Assessment of Profit and Loss: The businessman/trader will be able to know correctly whether he had earned profit or sustained loss. It facilitates the trader to take such steps so as to increase the efficiency of the firm.

4. Knowledge of Debtors: The trader will be able to know exactly what amounts are owed by different customers to the firm. If any amount is pending for a long time from any customer, he may stop credit facility to that customer.

5. Knowledge of Creditors: The trader is also knows the exact amounts owed by the firm to others and he will be able to arrange prompt payment to obtain cash discount.

6. Arithmetical Accuracy: The arithmetical accuracy of the books can be proved by the trialbalance.

7. Assessment of Financial Position: The trader will be able to prepare the Balance Sheet which will help the interested parties to know fully about the financial position of the firm.

8. Comparison of Results: It facilitates the comparison of current year results with those ofprevious years.

9. Maintenance according to Income Tax Rules: Proper maintenance of books will satisfy the tax authorities and facilitates accurate assessment. In India Joint stock companies should maintain accounts under double entry system.

10. Detection of Frauds: The systematic and scientific recording of business transactions on the basis of this system minimizes the chances of embezzlement and frauds or errors. The frauds or errors can be easily detected by vouching, verification and auditing of accounts.

Limitations / Disadvantages of Double Entry System:

The Double Entry System however may not provide any solution to the following errors.

1. Not Practical to All Concerns: This system requires the maintenance of a number of books of accounts which is not practical in small concerns.

2. Costly system: This system is costly because of a number of records are to be maintained.

3. No guarantee of Absolute Accuracy of the Books of Account: There is no guarantee of absolute accuracy of the books of account inspite of agreement of the trial balance because of there are some errors like errors of principles, errors of omission, compensating errors etc., which remain understand inspite of agreement of trial balance.

4. Errors of Omission: In case the entire transaction is not recorded in the books of accounts, the mistake cannot be detected by accounting. The Trial Balance will tally inspite of the mistakes.

5. Errors of Principle: Double entry is based upon the fact that every debit has its corresponding creditand vice versa. It will not be able to detect the mistake such as debiting

Ram‟s account instead of Rao‟s account or Building account in place of Repairs account.

6. Compensating Errors: If Rahim‟s account is by mistake debited with Rs. 15 lesser and Mohan‟s account is also by mistake credited with Rs.15 lesser, the Trial Balance will tally but mistake will remainin accounts.

5.Q. Explain the process of accounting.

Answer: Accounting Process consists of the following stages:

1. Recording of entries for all business transactions in Journal.

2. Posting of entries into Ledger.

3. Balancing of accounts.

4. Preparing of Trial Balance with the help of different accounts to know the arithmeticalaccuracy.

5. Preparing final accounts with the help of Trial Balance.

   - Trading and Profit and Loss Account is prepared to know the Profit or Loss.

   - Balance Sheet is prepared to know the financial position of the Business concern.
     Accounting Process is also known as accounting cycle.

6.Q. Explain the steps which are involved in theAccounting Cycle.

An Accounting cycle is a complete sequence beginning with the recording of the transactions and ending with the preparation of the final accounts. The sequential steps involved in an accounting cycle are as follows:

Accounting Cycle Chart:

Step 1: Journalizing: Record the transactions and events in the Journal.

Step 2: Posting: Transfer the transactions in the respective accounts opened in theLedger.

Step 3: Balancing: Ascertain the difference between the total of debit amount column and thetotal of credit amount column of a ledger account.

Step 4: Trial Balance: Prepare a list showing the balance of each and every account to verifywhether the sum of the debit balances is equal to the sum of the credit balances.

Step 5: Income Statement: Prepare Trading and Profit and Loss account to ascertain the profitor loss for accounting period.

Step 6: Position Statement/Balance Sheet: Prepare the Balance Sheet toascertain the financial position as at the end of accounting period.

7. Q. Explain the Classification of Accounts and their Principles (Rules of Debit andCredit).

Answer:

Meaning of an Account:

- An account is a classified summary of business transactions relating to a particular person or property or an income or an expense Or An Account is a classified record of business transactions which are relating to a particular person or an Item or a thing.
- It is vertically divided into two halves/parts.
- It is prepared in the form of Alphabet T.
- The left side of this account is known as Debit side and right side of the account is known asCredit side.
- Debit is the Receiving Aspect / Benefit and Credit is the Giving Aspect / Benefit.
- The word Dr should be written at the top left hand corner side of the account.
- The word Cr should be written at the top right hand corner side of the account.
- The title or name of the account should be written at the top in the middle of the account.
- The word „To" should be written on the debit side of an account in the particulars column.
- The word „By" should be written on the credit side in the particulars column of an account.
- All the Receiving Aspects are entered on the debit side and all the Giving Aspects are entered onthe credit side of the account in the particulars column.
- All accounts are maintained in Ledger. So they are called "Ledger accounts".

Proforma of an Account: An account contains the following columns on the following columns on either side. 1) Date column 2) Particulars column 3) Journal Folio column 4) Amount column. Theformat or ruling of an account is as follows:

Date	Particulars	J.F	Amount Rs.	Date	Particulars	J.F	Amoun t Rs.
	To Particulars of benefits received		Xxxxxx		By Particulars of benefits given		xxxxxx

Classification of Accounts: Broadly speaking accounts are classified into two types. They are I.Personal Accounts

II. Impersonal Accounts. Impersonal accounts are again divided into Real Accounts andNominal Accounts. Thus accounts are of Three types.

1. Personal Accounts
2. Real Accounts
3. Nominal Accounts

Real and Nominal Accounts are collectively called "Impersonal Accounts".

1. **Personal Accounts: Personal Accounts are those which are opened in the names of persons.**These are accounts of persons and institutions with whom the business deals. A separate accountis kept for each person. Personal accounts can be also sub classified into three categories:

   They are i) Natural personal accounts ii) Artificial Personal accounts iii) RepresentativePersonal accounts.

   i) **Natural Personal Accounts:** The term Natural Persons means who are creations of Gods. For example Ravi Account, Rani Account, Raghu account Nagarjuna Account etc., are called as Natural Personal Accounts.

   ii) **Artificial Personal Accounts:** These accounts include accounts of corporate bodies or institutions which are recognized as persons in business dealings. The account ofa Limited Company, the accounts of co-operative society, the accounts of clubs, the account of Government, the account of insurance company, the account of Colleges, Schools, Universities and Hotels etc., are examples of Artificial Personal Accounts.

   iii) **Representative Personal Accounts:** These are accounts which

   represent a certain person or group of persons. For example, Outstanding expenses A/c, Prepaid expenses A/c, Income Receivable A/c and Income received in advance A/c, Drawings A/c and Capital A/c are termed as Representative Accounts.

Principle/ Rule of Personal Account:

1. **Debit the receiver and**

2. **Credit the giver.**

For example, if cash has been paid to Raja, the account of Raja will have to be debitedsince Raja is the receiver of cash.

Similarly, if cash received from Krishna, the account of Krishna will have to be creditedsince Krishna is the giver of cash.

2. Real Account: Real Accounts are those which are relating to Properties and Assets of the business concern. Accounts relating to properties or assets or possessions of the firm are called Real Accounts. Every business firm needs Fixed Assets such as Land and Buildings, Plant and Machinery, Furniture and Fixtures etc for running its business. A separate account is maintained for each asset. There are Four types ofAssets. They are

i) **Fixed Assets:** Those assets which are acquired for long term use by the business concern are known as Fixed assets. For example Land and Buildings, Plant and Machinery, Furniture and Fixtures etc are called as Fixed Assets.

ii) **Current Assets:** Those assets which are possible to convert into cash are known as known as Current assets. For example cash in hand, cash at Bank, Stock in trade, Debtors, Bills Receivable etc., are called as current assets.

iii) **Tangible Assets:** Tangible assets are those which relate to such things which can be touched, felt, measured etc., Tangible assets have physical existence. Hence these assets may be transferred from one place to another place. Fixed assets and Current assets are the examples of Tangible assets.

iv) **Intangible Assets:** These accounts represent such things which cannot be touched. Of course, they can be measured interms of money. Intangible assets haven‟t any physical existence. Goodwill, copy rights, patents and trademarks are the examples of Intangible assets.

Principle/Rule of Real Account:

1. **Debit what comes into the business and**

2. **Credit what goes out of the business.**

For example, if machinery has been purchased for cash, machinery account should be debited since Machinery is coming into the business, while cash account should be credited since cash is going out of the business.

If furniture is sold for cash, cash account should be debited since cash is coming into the business, whileFurniture account should be credited since furniture is going out of the business.

3. **Nominal Accounts:** Nominal accounts include accounts of all Expenses, Losses, Incomes andProfits or Gains.

The examples of Expenses and Losses are salaries, wages, rent, taxes, lighting charges, transport charges, travelling charges, coolie charges, warehouse rent, insurance, advertisement paid, Bad debts, commission paid, Discount allowed, interest paid, interest paid on capital,

The examples of Incomes and Profits are rent received, interest received, commission received, discount received, dividend received, interest on investment received, bad debts recovered etc.,

These accounts are opened in the books to simply explain the nature of the transactions. They do not really exist. For example, in a business when salary is paid to the manager, commission is paid to the salesmen, rent is paid to landlord, cash goes out of the business and it is something real, while salary, commission, or rent as such does not exist. The accounts of these items are opened simply to explain how the cash has been spent. In the absence of such information, it may be difficult for the cashier to explain how the cash at his disposal was utilized. Nominal accounts are also called Fictitious Accounts.

Principle or Rule of Nominal Account:

1. **Debit all Expenses and Losses and**

2. **Credit all Incomes and Profits/Gains.**

For example when salaries paid in cash, salaries account should be debited since Salaries is an expenditure to the business, while cash account should be credited since cash is going out of the business.

For example If Rent received in cash, Cash account should be debited since cash is coming into the business, while rent account should be credited since Rent Received is an income to the business.

The principle of Nominal account is quite opposite to the principles of personal account and real account. As per the principle of Nominal account receiving aspects (Incomes and profits) are credited and giving aspects (expenses and losses) are debited. But as per the principles of personal account and real account, receiving aspect is debited and giving aspect is credited.Hence the rule of Nominal account is different from the principles of Real account and Nominal account.

8. Q. Describe the functions / scope of Financial Accounting.

Ans: The various functions of accounting are as follows:

1. Systematic record of business transactions / Recording: Recording is the basic function of accounting. Accounting records business transactions in terms of money. It is essentially concerned with ensuring that all business transactions of financial nature are properly recorded. Recording is done in **Journal** or **subsidiary books** in chronological order. To keep systematic record of transactions, post them into ledger and ultimately to prepare the final accounts is the first function of accounting.

2. Classifying: Accounting also facilitates classification of all business transactions recorded in the journal. Items of similar nature are classified under appropriated heads. It deals with classification of recorded transactions so as to group similar transactions at one place. The work of classification is done in a book called the Ledger, where similar transactions are recorded at one place under individual account heads. Eg. In sales account all sale of goods are recorded. In purchases account all purchase of goods are recorded.

3. Summarizing: It involves presenting classified transactions in a manner useful to both its internal and external users. It involves preparation of financial statements i.e profit& loss account and Balance sheet etc., Accounting summarizes the classified information. This process leads to the preparation of Trial balance, Income statement and balance sheet.

4. Analyzing: The recorded data in financial statement is analyzed to make useful interpretation. The figures given in financial statements need to be put in a simplified manner. Eg. All items relating to fixed assets are placed at one place while long term liabilities are placed at one place.

5. Interpretation: It deals with explaining the meaning and significance of the data simplified. The accountants should interpret the statements in a manner useful to the users. Interpretation of data helps management, outsiders and shareholders in decision making. It aims at drawing meaningful conclusions from the information. Different parties can make meaningful judgments about the financial condition andprofitability of business operations.

6. Communicating Results to Interested Parties:

Accounting also serves as an information system. It is the language of the business. It supplies the meaningful information about the financial activities of the business to varies parties i.e., owners, creditors, investors, employees, government, public, research scholars and managers at the right time. It is a service function. It is not an end itself but a means to an end. It involves preparation and distribution of reports to the users to make decisions.

7. Compliance with legal requirements: The accounting system must aim at fulfilling the requirements of law. Under the provisions of law, the business man has to file various statements such asincome-tax returns, sales tax returns etc.

8. Protecting the property of the business: For performing this function the accountant is required to devise such a system of recording information so that assets of the business are not put to wrong use and a complete record of the assets of the concern is available without any difficulty.

9. Q. Explain different types of Accounting Concepts.

Ans: Account is a system evolves to achieve a set of objectives. In order to achieve the goals, we need a set of rules or guide lines. These guide lines are termed as “Basic accounting concepts”. The term concept means an idea or thought. Basic accounting concepts are the fundamental ideas or basic assumptions underlying theory and practice of financial accounting.

These concepts are termed as “generally accepted accounting principles”. These are broad working rules of accounting activity. They are evolved over a period in response to changing business environment. They are developed and accepted by accounting profession. The concepts guide theidentification of events and transactions to be accounted for.

The concepts help in bringing about uniformity in the practice in accounting. In accountancyfollowing concepts are quite popular.

1. Business Entity Concept: Business is treated separate from the proprietor. All the transactions are recorded in the books of the proprietor. The proprietor is also treated as a creditor for the business. Whenhe contributes capital, he is treated as a person who has invested his amount in the business. Therefore, capital appears in the liabilities of balance sheet of the proprietor.

Effects of this Concept:

a) **Financial position of the business can be easily found out.**

b) **Earning position of the business can be easily ascertained.**

2. Going Concern Concept: This concept relates with the long life of the

business. The assumption is that business will continue to exist unlimited period unless it is dissolveddue to some reason or the other. When final accounts are prepared, record is made for outstanding expenses and prepaid expenses because of the assumption that business will continue. Going concern concept helps other business undertaking to make contracts with specific business unit for business dealing in future.

Effects of this concept:

a) **Working life of asset is taken into consideration for writing of depreciation because of this concept.**

b) **Accountant always remains hopeful about continuity of the business. Therefore, he does not stop writing transactions even though the condition of business is deteriorating.**

3. Money Measurement Concept: Only those transactions are recorded in accounting which cannot be expressed in terms of money. The transactions which cannot be expressed in money fall beyond the scope of accounting. One serious short coming of this concept is that the money value of that date is recorded on which transaction has taken place. It does not recognize the changes in the purchasing power of monitory unit.

Effects of this concept:

a) **In the absence of this concept, it would have not been possible to add various processions. For example : A proprietor has 40 chairs, 50 tables, 15 machines and 20 acres of land. He cannot add them. But total amount of all these processions can be easily found out by finding out their value in money.**

b) **I t fails to keep any record of such matters which cannot be expressed in terms of money. Fo r example: ability of the board of directors, quality of the articles produced and efficiency of workers cannot be recorded.**

4. Cost Concept: According to this concept, an 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 depreciation. Under this concept, all such events are ignored which affect the business but have no cost. For example, if an important and influential director dies, then the earning capacity and position of the business will be affected. But this event has no cost. Hence it will not be recorded in account books.

Effects of this concept:

a) **Under this concept market price is ignored. Balance sheet indicates financial positionon cost and expired cost less.**
b) **This concept is mainly for fixed assets. Current assets are not affected by it. Current assets appear in balance sheet at cost or market price whichever is lower. But both these assets are acquired at cost price.**

5. Account 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. The life of the business is considered to be indefinite, but the measurement of income cannot be postponed for a very long period of time. Therefore, it is necessary to have a period for which the operational results are assessed for external reporting. **Hence a period of one year i.e., twelve monthsis considered as accounting period. It may be a calendar year (January to December or any period of one year.) In India, the accounting period begins on 1st April every year and ends on 31st March every year. This concept implies that at the end of each accounting period, financial statements i.e., profit & loss account and balance sheet are to be prepared. It is mandatory under Income Tax Act to assess profit of the business every year and determine tax liability.**

Effects of this concept:

a) **Financial position and earning capacity of one year maybe compared with another year.**

b) **These comparisons help the management in planning and increasing the efficiency ofbusiness.**

6. **Dual Aspect Concept:**Under this concept, every transaction has got a

twofold aspects i.e., (i) receiving aspect/ receiving benefit and (ii) giving aspect/ giving of benefit. For instance, when a firm acquires an asset (receiving of the benefit), it must have to pay cash (giving of benefit).

Therefore, two accounts are to be passed in the books of accounts. One for the receiving benefit and the other for the giving of benefit. Thus, there will be a double entry for every transaction – debit for receiving the benefit and credit for giving the benefit.

Effects of this Concept:

a) **This concept is of great help in indicating the true position of the business.**

b) **This concept helps in detecting the errors of employees and in having strict control over them.**

c) **The accounting equation, i.e., Assets= Equities (or liabilities + capital) is based on this concept.**

7. **Matching Concept:** Every businessman is eager to make maximum profit at

minimum cost. Hence, he tries to find out revenue and cost during the accounting period. An accountant records all expenses of a year (whether they are paid in cash or are outstanding) and all revenues of a year (whether they are received in cash or accrued).

Expenses, which are incurred during a particular accounting period for earning the revenue of the related period, are to be considered. All expenses incurred during the accounting period must not be taken. Only relevant cost should be deducted from the revenue of a period forperiodic income statement. The process of relating costs to revenue is called "Matching process". While ascertaining profit, other appropriate cost which are not directly related to cost of goods sold are to be taken into consideration. Example, rent paid, interest paid, depreciation etc., Thus appropriate costs have to be matched against the appropriate revenues for the accounting period.

Effects of this Concept:

a) **Proprietor can easily know about his profit or loss.**

b) **On the basis of this concept, he can make efforts to create economy, increasing efficiently and increasing his income.**

8. **Realisation Concept:** This concept is also known as "revenue

recognition concept". Revenue results out of sale of goods and services. According to this concept revenue is realized when a sale is made. Sale is considered to be made at the point when the property in goods passes to the buyer and he becomes legally liable to pay. No profit or income will arise without the realization of sales. **Likely sales and anticipated revenues are not to be recorded in account books. The realization concept is important in ascertaining the exact profit earned during a period in a business concern.** According to this concept, the revenue should be considered only when it is realized. **Any**

business transaction should be recorded only after it actually taken place. Production of goods does not mean that the total production is sold, it should be recorded only when they are sold and cash realized or obligation created.

9. **Objectivity Concept:** This concept implies that all accounting records

should be supported by proper documents. Cash memos, invoices, correspondence, agreements, vouchers, etc., are examples of business documents. These documents supply the information. They form the basis for record of entries in the books of account. Accounting record based on documentary evidence is readily and objectively verifiable.

10. **Accrual Concept:** This concept implies that revenue is recognized in the

period in which it is earned irrespective of the fact whether it is received or not during the period. For example, commission Rs.2,000 earned in the year 2008, but received in cash in the year 2009, then the commission is to be taken as income for the year 2008 only, not as income of the year 2009.

10.Q. Explain different types of Accounting Conventions.

Answer: In accounting, convention means a custom or tradition, used as a guide for thepreparation of accounting statement. The following are the accounting conventions:

1. Convention of Full Disclosure: Accounting to this convention,

accounts should be prepared honestly and they should disclose all materials and significant information. Every company shall keep proper books of accounts. Auditor records expenses, incomes, profits, losses, assets and liabilities. The essential items to be disclosed in the Profit and Loss Account are given. There is legal form for the balance sheet.

2. **Convention of Consistency:** In every business, the management draws

important conclusion from the financial statements, regarding working of the concern, for this purpose inpreparing the final accounts.

The same principle and practices should be followed from year to year.

3. **Convention of Conservation:** This is very important in preparing final

accounts. This term suggests caution. All prospective profits should be ignored. All outstanding expensesshould be taken into account. Adequate reserves or provisions should be provided for. This means that there should be no window dressing and secret reserves.

4. Convention of Materiality: This is also called the convention of reasonable

degree of accuracy. According to this, the information given in the accounts should be reasonable accurate. All the entries should be exact. Fraction of a rupee is avoided.

5. Convention of Relevance: As per this convention, the firm should give relevant accounting information whenever required with documentary evidence like, purchases or sales invoices, vouchers etc., as documentary proof of a transaction.

11.Q. What is the Journal? What are the advantages/ Importance and Limitations/ Disadvantages of the Journal?

Ans: The word Journal is derived from the French word „Jour" which means a day. Journal, therefore, means a daily record of business transactions. Journal is a book of original entry/prime entry because transaction is first written in the journal from which it is posted to the ledger at any convenient time. The journal is a complete and chronological 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**.

Proforma of Journal

Journal Entries in the books of-------------------

Date	**Particulars**	**L.F**	**Debit (Rs.)**	**Credit (Rs.)**

Advantages of Journal/ Importance of Journal

The main advantages of Journal are given below:

1. Availability of Full information/Complete Record: All business transactions date-wise will be recorded in the Journal As such the total information for every transaction can be obtained very easily without late. So Journal serves as a complete record. It provides a chronological record of all transactions and hence provides permanent record.

2. Posting becomes easy: When once the transactions are entered in the Journal, recording the same in the relevant accounts in the ledger can be made easily. The businessman can have an understanding on debit and credit principles in the beginning itself. It provides information of debit and credit in an entry and an explanation to make it understandable properly.

3. Explanation of the transaction: Every Journal entry will be briefly explained with a narration. Narration helps in proper understanding of the entry.

4. Location of the errors easy: Journal helps to locate the errors easily. Both debit and credit aspects of a transaction are recorded in the journal. Since the amount recorded in debit amount column and credit amount column must be equal. Therefore, the possibility of committing errors is reduced and the detection of errors, if any, committed becomes easy.

5. Chronological order: Transactions are recorded in a chronological order in the Journal. Hence, when any information is required, the information can be traced out quickly and easily.

6. Eliminates the need for reliance on memory: It eliminates the need for a reliance on memory of the accounts keeper. Some transactions are of a complicated nature and without the journal, the entries may be difficult, if not impossible.

7. Journal provides information relating to the following aspects:

(a) Credit sale and purchase of fixed assets, investment or any thing else not dealt inby the firm.

(b) Special allowances received from suppliers or given to the customers.

(c) Writing off extra-ordinary losses viz. losses due to fire, earth quakes, theft etc.,and bad debts.

(d) Recording in the reduction of the assets i.e., depreciation.

(e) Receipt and issue of bills of exchange, promissory notes, hundies and their dishonour, renewal etc.,

(f) Transactions with Bank(unless bank column added to the cash book)

(g) Income earned but not received in cash.

(h) Expenses incurred but not yet paid for in cash and other similar adjustingentries.

(i) Transfer entries viz. posting total of subsidiary books to the respective impersonal accounts in the ledger at the end of every month, transfer of gross profit or loss to the Profit & Loss A/c and net profit or net loss and also drawings A/c to the Capital A/c at the end of the trading period.

(j) Closing entries-entries to close the books at the time of preparing trading and profit &loss account.

LIMITATIONS / DISADVANTAGES OF JOURNAL:

The following are the main limitations of the journal.

1. The Journal will be too long and becomes unwieldy if all transactions are recorded in thejournal.

2. The Journal is unable to ascertain daily cash balance. That is why cash transactions are directlyrecorded in a separate cash book so that daily cash balances may be available.

3. It becomes difficult in practice to post each and every transaction from the Journal to the ledger. Hence in order to make the accounting easier and systematic, transactions are recorded in total in different books.

12. Q. Define the Ledger. Explain the features and importance of the Ledger.

Ans: The Third stage in the accounting cycle is ledger posting it means posting transactions entered in the journal into their respective accounts in the ledger. It is the book of final entry. The Ledger is designed to accommodate the various accounts maintained by a trader. It contains the final and permanent record of all transactions in duly classified form. A ledger is a book which contains various accounts. The process of transferring the entries from the journal into the ledger is called posting.

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 and shows their net effect. The up to date state of any account can be easily known by referring to the ledger.

Features of a Ledger:

i. Ledger contains all the accounts-personal, real and nominal accounts.

ii. It is a permanent record of business transactions.

iii. It provides a means of easy reference.

iv. It provides final balance of the accounts.

Ledger is the principal book of accounts because it helps us in achieving the objectives of accounting. It gives answers to the following pertinent questions.

a. How much amount is due from others to the business?
b. How much amount is owed to others?

c. What are the total sales to an individual customer and what are the total purchases from an individual supplier?

4. What is the amount of profit or loss made during a particular period?

5. What is the financial position of the firm on a particular date?

Advantages/ Utilities/Importance of Ledger

The following are the main utilities of Ledger

1. It provides complete information about all accounts in one book.

2. It is easy to ascertain how much money is due to suppliers (trade creditors from creditors‟ ledger) and how much money is due from customers (trade debtors from debtors‟ ledger).

3. It enables to ascertain, what are the main items of revenues/incomes (Nominal accounts).

4. It enables to ascertain, What are the main items of expenses(Nominal accounts)

5. It enables to know the kind of assets the enterprise holds and their respective values(Real Accounts)

6. It facilitates preparation of trial balance and thereafter preparation of financial statements i.e.,profit and loss account and balance sheet.

13. Q. Distinguish between the Journal and the Ledger.

Ans: **Differences between Journal and Ledger**

Sl.No.	Point of difference	Journal	Ledger
1.	Nature	It is a book of original entry	It is a book of final entry
2.	Object	It is prepared to record all the transactions.	It is prepare to know the net effect of various transactions affecting a particular account.
3.	Basis of preparation	It is prepared on the basis of source document (voucher) of transaction.	It is prepared on the basis of journal.
4.	Stage of recording	Recording in the journal is the first stage.	Recording in the ledger is the second stage.
5.	Balancing	Journal is not balanced.	All ledger accounts are balanced.
6.	Narration	Narration is written for each entry.	No narration is given.
7.	Format	In journal there are five columns viz.,date,particulars, ledger folio, debit and credit.	In the ledger there are four columns on debit and credit side viz., date, particulars, journal folio and amount.
8.	Name of the process of recording entries	The process of recording in journal is called journalizing.	The process of recording in the ledger is called posting.
9.	Basis of preparation of final accounts	Journal direcly does not serve as basis for preparation of final accounts.	

14. Define Trial Balance. Explain its features, Merits/Importance and Limitations of theTrial Balance?

Ans: Trial Balance is a statement in which debit and credit balances of all ledger accounts are shown to test the Arithmetical accuracy of the books of account. Trial Balance is not conclusive proof of accuracy of books of accounts.

Definitions of Trial Balance:

According to J.R.Batliboi, " A Trial Balance is a statement of Debit and Credit balances extracted from the various accounts in the ledger with a view to test the arithmetical accuracy of the books."

According to Spicer and Peglar, " A Trial Balance is a list of all the balances sttanding on the ledger accounts and cash book of a concern at any given date."

Features of a Trial Balance:

1. It is not an account., it is only a statement which is prepared to veryfy the arithmetical accuracyof ledger accounts.

2. It contains debit and credit balances of ledger account.

3. It is prepared on a particular date generally at the end o f business year.

4. Trial Balance helps in preparing final accounts.

5. As it is prepared by taking up the ledger account balances, both debit and credit side of a TrialBalance are always equal.

6. The preparation of Trial Balance is not compulsory. There is no hard fast rule in this regard.

Importance / Merits /Advantages of Trial Balance:

1. **Proof of Arithmetical accuracy:** It helps in checking the arithmetical accuracy of books ofaccounts.

2. **Preparation of financial statements:** It helps in the preparation of final accounts i.e., TradingAccount, Profit & Loss Account and Balance Sheet.

3. **Detection of Errors:** It will help in detection of errors in the books of accounts and in theirrectification.

4. **Rectification of Errors:** It serves as instrument for carrying out the job of rectification oferrors.

5. **Easy Checking:** It is possible to find out the balances of various accounts at one place.

Limitations of Trial Balance:

1. Trial balance can be prepared only in those concerns where double entry system of accounting is adopted. This system is **very costly** and **time consuming**. It cannot be adopted by the small business concerns.

2. Though Trial Balance gives arithmetical accuracy of the books of accounts but there are certain errors which are not disclosed by Trial Balance. That is why it is said that Trial balance is not a conclusive proof of the accuracy of the books of accounts.

3. If Trial Balance is not prepared correctly then the final accounts prepared will not reflect the true and fair view of the state of the affairs/financial position of the business. Whatever conclusions and decisions are made by the various groups of persons will

not be correct and will misleadsuch persons.

4. Trial Balance tallies even though errors are existing in the books of accounts.

5. Even some transactions are omitted the Trial Balance tallies.

15. Q. What are the objectives of Trial Balance? Explain the main methods of preparing theTrial Balance.

Ans: The following are the **main objectives** of preparing the Trial Balance.

1. To have balances of all the accounts of the ledger in order to avoid the necessity of goingthrough the pages of the ledger to find it out.

2. To have a proof that the double entry of each transaction has been recorded because of its agreement.

3. To have arithmetical accuracy of the books of accounts because of the agreement of the Trial Balance.

4. To have material for preparing the profit or loss account and balance sheet of the business.

Methods of preparing Trial Balance:
There are two methods of preparing Trial Balance;

1. **Totals Method:** Under this method the total of debits and credits of all ledger accounts are shown in the debit and credit side of the Trial Balance. The Trial Balance prepared under this method is known as gross Trial Balance.

2. **Balance Method:** Under this method all the balances of each and every account will be shown against the debit or credit side of the Trial Balance. If an account has no balance then it will not be shown in the Trial Balance. This method is more convenient and commonly used.

3. **Total and Balance Method:** Under this method, the above two methods are combined. Under this method statement of trial balance contains seven columns instead of two columns.

Rules of Preparing Trial Balance:

While preparing the trial balance from the given list of ledger balances, following rules should be takeninto care:

1. The balances of all (i) assets accounts (ii) expenses accounts (iii) Losses (iv) drawings (v) cash andbank balances are placed in the debit column of the trial balance. 2. The balances of all

(i) liabilities accounts (ii) incomes accounts (iii) profits (iv) capital are placed in the credit column oftrial balance.

Proforma of Trial Balance

Trial Balance of X as on -------------------

Serial No.	Heads of Accounts	L.F	Debit Balance Rs.	Credit Balance Rs.
	Drawings		**xxxxxx**	
2.	Capital			xxxxxx
3.	Assets		xxxxxx	
4.	Liabilities			xxxxxx
5.	Expenses		xxxxxx	
6.	Losses		xxxxxx	
7.	Incomes			xxxxxx
8.	Profits			xxxxxx
	Total		xxxxxxx	xxxxxxx

16. Q. What do you know about Trading Account? What are the Advantages or Importance ofTrading Account?

Ans: This account is prepared to know the trading results or gross margin on trading of business, i.e., how much gross profit the business has earned from buying and selling during a particular period. The difference between the sales and cost of goods sold is gross profit. This is a nominal account in its naturehence all the trading expenses should be debited where as all the trading incomes should be credited to Trading Account. The balance of trading account will be considered as Gross Profit (credit balance) or Gross Loss (debit balance) and will be transferred to profit and loss A/c. While preparing the trading A/cthe following equations also can be used.

Sales less returns – Cost of goods sold = Gross Profit or Gross LossSales = Total cash sales + credit sales.
Cost of goods sold = Opening stock + purchases less purchase returns + Direct expenses– Closingstock of goods.

Advantages / Importance of Trading A/c:

Trading Account has the following advantages.

1. **Information of Gross profit or Gross Loss:**

Trading Account provides information regarding gross profit and sets the upper limit within which indirect expenses are to be incurred. Indirect expenses should be much less than the gross profit so that a good amount of profit may be earned. If trading account discloses gross loss , it is betterto close the business rather than running at a gross loss because gross loss will further increase when indirect expenses are added to it.

2. **Gross Profit Ratio:** This ratio is calculated as follows:Gross profit Ratio = Gross Profit / Sales X 100

Higher the ratio, it is better condition. Gross profit ratio can be calculated with the help the Trading account year after year and comparison of performance of year after year can be made. A low ratio indicates unfavorable trend in the form of reduction in selling prices not accompanied by the proportionate decrease in cost of goods purchased or increase in cost of production.

3. **Comparison of Closing Stock with Opening Stock :**

Comparison of stock figures of one period with another period will be helpful in avoiding overstocking. Investment in stock should be reasonable so that production and sales go on smoothly.

4. **Fixation of selling price:** In case of a new product, the selling price can be easily fixed by adding in the cost of purchases or cost of goods manufactured the desired percentage of grossprofit.

5. It enables the comparison of sales, purchases and direct expenses of one period with another period. The comparative study helps the management to control the affairs of thebusiness and take sound decisions.

6. It helps to check the direct expenses.

7. It gives us the information about the proportion of gross profit or gross loss to the direct expenses. This study helps the management in arresting the unnecessary expenditure on any time.

17. Q. What do you understand by Profit and Loss Account? What are the Advantages orImportance of Trading Account?

Ans: This account is prepared to calculate the net profit or net loss of the business concern. There are certain items of incomes and expenses of the business which must be taken into consideration for calculating net profit or net loss of the business concern. These are of indirect nature i.e., the whole business and relating to various activities which are done by the business for the purpose of making the goods available to the customers. Indirect expenses may be administrative expenses or management expenses, selling and distribution expenses, financial expenses and extra-ordinary losses and expenses to maintain the assets into working order. This account is prepared from nominal accounts and its balance is transferred to capital account as the whole the profit or loss will be that of the owner and it will increase or decrease the capital.

Importance of Profit and Loss Account:

1. **Information of Net profit or Net loss:** One of the important objectives of

   maintains the accounts are to see whether the business has earned profit of suffered loss during the accounting period. Profit and Loss A/c provides information regarding this important objective because it gives information about the profitability or otherwise of the business.

2. **Comparison of current profit with the last year profit:** Profit and

   Loss A/c affords comparison of the current year‟s net profit with those of the past years. With this comparison it can be ascertained whether net profit of the business is showing a rising trend or down ward trend.

3. **Comparison of expenses:** Comparison of various expenses included in the profit and loss account with expenses of the previous period helps in taking effective steps for control of unnecessary expenses.

4. **Helpful in preparation of Balance Sheet**: Net profit or Net loss

   disclosed by the profit and loss A/c is transferred to capital Account and Capital Account appears on the liabilities side of the Balance Sheet. Without taking net profit or net loss, the balance sheet cannot be completed. Thus, the profit and loss account helps in the preparation of the balance sheet.
5. **Helpful in future Growth of business:** On the basis of their profit figures

   of the current and previous period, estimates about the profits in the years to come can be madeand projections about the expansion of the business can be made.

18. Q. what is Balance Sheet? What are the characteristics or features and importance of theBalance Sheet?

Ans: A Balance Sheet a statement prepared with a view to measure the financial position of a businesson a certain fixed date. The financial position of a concern is indicated by its assets on a given date and its liabilities on that date. Excess of assets over liabilities represent the capital and isindicative of the financial soundness of a company.

A Balance sheet is also described as a "statement showing the sources and application of the capital". It is a statement and not an account and prepared from real and personal accounts. Sources or liabilities are shown on the left hand side of the Balance Sheet. Application of funds (Assets) is shownon the right hand side of the Balance Sheet.

Characteristics of Balance Sheet:

1. It is prepared on a particular date and not for a particular period.
2. It is prepared after preparation of the Trading and Profit & Loss A/c.
3. As assets must be equal to the total liabilities. The two sides of the Balance must have the sametotal.
4. It shows the financial position of a business as a going concern.
5. It is a statement of assets and liabilities and not an account.

Information that Balance Sheet convey to Outsiders (Importance):

1. The nature and the value of assets.
2. It shows the nature and extent of liabilities.
3. It shows the owner‟s equity (i.e., assets-liabilities = capital)
4. It tells about the creditworthiness and solvency of the firm.
5. It reflects the liquidity of a firm.
6. It reveals other information required to changes in economic reserves andobligations.

RATIO ANALYSIS

Introduction of Ratio Analysis

Answer: Alexander Wall is considered to be the pioneer of Ratio Analysis. He presented the detailed system of Ratio
Analysis in 1909 and explained its usefulness in financial analysis.

Ratio Analysis is most widely used powerful tool of financial analysis. It is an important technique of analysis and interpretation of financial statements. It is also used to analyze various aspects of operational efficiency and degree of profitability.

Ratio Analysis is based on different ratios which are calculated from the accounting information contained in the financial statements. Different ratios are used for different purposes.

Meaning of Ratio

- Ratio is a figure expressed in terms of another.
- It is an expression of relationship between one figure, two figures and the other figures whichare mutually inter-dependent.
- In other words a ratio is a mathematical relationship between two items expressed in a quantitative form. When ratio is explained with reference to the items shown in the financial statements.
- It is called as an Accounting Ratio.
- The ratio analysis facilitates easy understanding of financial statements.ADVANTAGES OF RATIO ANALYSIS
  Ratio Analysis is an important technique of financial analysis.

  It is used as a device to analyze and interpret the financial health of enterprises. Its usefulness is not only confined to business managers but also extends to various interested parties like government, creditors, employees, investors, consumers etc.

  1. Helps in Decision making:

  Though Financial Statements provide necessary data for decision making. It is not possible to take appropriate decisions merely on the basis of each data. Ratio Analysis provides a meaningful analysis and interpretation to the data contained in Financial Statements. This ratio analysis facilitates the managers to take correct decisions.

  2. Helps in Financial Forecasting and Planning

  Ratios calculated for a number of years reveal the trends in the phenomenon. As such, it is possible to make predictions for a future period. Thus, ratio analysis helps in financial forecasting and planning

3. Helps in assessing the operational efficiency:

Ratio Analysis helps in analyzing the strengths and weaknesses of a concern. It helps in diagnosing the financial health of a concern in terms of liquidity, solvency, profitability etc

4. Helps in controlling business:

With the help of ratio analysis, it is possible to identify the weak spots with regard to the performance of the managers.

Weakness in financial structure due to incorrect policies in the past and present is revealed by the ratios. These weaknesses may be communicated to the people concerned and as such ratio analysis helps in better communication, Coordination and control of unfavorable situations.

5. Helps in comparison of performance:

Through accounting ratios comparison can be made between one departments of a firm with another of the same firm in order to evaluate the performance of various departments in the firm. This is needed for the smooth functioning of the departments.

6. Ratio analysis simplifies the complex financial data. It reveal the change in thefinancial position.

7. Ratio analysis may be used as instruments of management control, particularly in thearea of sales and control.

8. Ratios facilitates the function of communication and enhance the value of financialstatements.

9. Ratios are helpful in assessing the financial position and profitability of a concern.

10. Ratio Analysis also helps in effective control of business

– measuring performance, control of costs etc., Effective control is a keystone of bettermanagement.

11. Ratio analysis helps the investors in making investment decisions to make a profitableinvestment.

LIMITATIONS OF RATIO ANALYSIS

1. **Limited use of a Single Ratio:**

- A single ratio does not convey meaningful message. As such, a number of ratios will have to be calculated for a better understanding of particular situation.

- Thus, a series of ratios computed may create confusion.

- Ratios can be useful only when they are computed in a sufficient large number.
- calculation of more ratios sometimes confuses the analysts than help him.

2. **Lack of Adequate Standards:**

- Expecting a few situations, in majority cases, universally accepted standards forratios are not available.

- It renders interpretation of ratios difficult.

3. **Lack of comparability:**

- The results of two firms are comparable with the help of accounting ratios only if they followthe same accounting methods.

- Comparison becomes difficult if they follow different methods.

- Similarly, utilization of facilities , availability of facilities and scale of operation affectsthe Financial Statements of different firms.
- Comparison of such firms would be misleading.

4. **Inherent Limitations of Accounting:**

  - Accounting records contain historical data. As such, ratios based on data drawn from accounting records also suffer from the inherent weaknesses of accounting records.

  - Thus, accounting ratios of the past may not be true indicators of the future**.**

5. **Changes in Accounting Procedures:**

- Change in accounting procedure by a firm often makes ratio analysis misleading.

- E.g., a change in the valuation of methods of inventories from FIFO to LIFIO Increase the cost of sales and reduces the value of the closing stock which makes inventory turnover ratio to be impressive and an unfavorable gross profit ratio.

6. **Window Dressing:**

- Financial statements easily be window dressed to

  present a better picture of its financial and profitability position to outsiders.

- Hence, one has to be very careful in making a decision from ratios calculated from suchFinancial Statements.

- However, it may be difficult for an outsider to learn about the window dressing made by afirm.

7. **Price-Level Changes:**

Since ratios are computed for historical data, no consideration is made to the changes in price levels and this makes the interpretation of ratios invalid

8. Personal Bias:

- Ratios are only means of financial analysis and not an end in itself.
- They have to be interpreted and different people may interpret the same ratio in differentways.

9. Ignoring qualitative factors:

Ratio analysis ignores the qualitative factors which generally influence the conclusions derived.

10. Reliability of data:

- The accuracy and correctness of ratios are totally dependent upon reliability of data containedin financial statements.
- If there are any mistakes or omissions in the financial statements, ratio analysispresents a wrong picture about the concern.

CLASSIFICATION OF RATIOS:

I. Classification according to the nature of accounting statement from which the ratiosare derived into three categories.

They are

1. Balance sheet Ratios
2. Profit and Loss Account Ratios
3. Combined or Composite Ratios

1. BALANCE SHEET RATIOS:

These ratios deal with the relationship between two items appearing in the Balance sheet.Eg. Current Ratio, Liquid Ratio, Debt to Equity Ratio

2. PROFIT AND LOSS ACCOUNT RATIOS:

This type of ratios show the relationship between two items which are in the profit and loss accountitself.

Eg. Gross Profit Ratios, Net Profit Ratios and Operating Ratios.

3. COMBINED OR COMPOSITE RATIOS:

These ratios show the relationship between items one of which is taken from profit and lossaccount and the other from the balance sheet.

Eg. Rate of Return on capital Employed, Debtors Turnover Ratio, creditors turnover ratio, stock/inventory turnover ratio and capital turnover ratio etc.

II. CLASSIFICATION FROM POINT OF VIEW OF FINANCIAL MANAGEMENT OROBJECTIVE.

Ratios may be classified into four categories. They are

1. Liquidity Ratios
2. capital structure/ gearing Ratios.(Leverage / Solvency Ratios)
3. Turnover Ratios
4. Profitability Ratios

IMPORTANT FORMULAE IN RATIO ANALYSIS

I. LIQUIDIDTY RATIOS:

1. Current Ratio = Current Assets/ Current Liabilities.

2. Quick Ratio/ Liquid Ratio =
Liquid Assets / Quick Liabilities3.
Absolute Liquidity Ratio =

Highly liquid Assets / Current Liabilities

II. CAPITAL STRUCTURE/ SOLVENCY / LEVERAGE RATIOS:

1. Debt- Equity Ratio =

Long-Term Debts/ Shareholders Funds orExternal Equity / Internal Equity

2. Proprietary Ratio =

Shareholders' Funds / Total Assets

3. Interest Coverage Ratio=

Earnings before Interest and Taxes (EBIT) / Fixed Interest Charges.

5. Debts to Total Funds Ratio =

Debts / Total Funds.

III. TURNOVER/ ACTIVITY RATIOS:

1. Inventory /Stock Turnover Ratio=

Cost of Goods Sold / Average inventory at cost

Or

Net Sales/ Average Inventory at selling prices or Closing stock.

or

Net Sales / Average Inventory at cost or Closing stock.

2. (i) Debtors Turnover Ratio =

Net Credit Sales / Average Debtors.

(ii) Average Collection Period (in terms of days) = (Debtors / Credit Sales) x365 Days.

OR

365 DAYS / Debtors Turnover Ratio

3. Creditors Turnover Ratio =

Net Credit purchases/ Average Creditors

4. Average Payment Period (in terms of days) =

365 DAYS / Creditors Turnover Ratio

5. Working Capital Turnover Ratio =

Cost of Sales / Net Working Capital

6. Fixed Assets Turnover Ratio=

Cost of sales / Fixed Assets at cost Less Accumulated Depreciation.

7. Capital Turnover Ratio=

Cost of sales / Capital Employed

IV. PROFITABILITY RATIOS

1. Gross Profit Ratio=

(Gross Profit / Net Sales) x 100 Or (Net Sales- cost of goods sold / net sales) x100

2. Net Profit Ratio=

(Net Profit / Net Sales) x 100

3. Operating Ratio=

(Cost of goods sold + operating expenses)/ Net Sales.

4. Operating Profit Ratio=

(Operating Net profit / Net Sales) x 100

OR

100% - Operating Ratio

5.Expenses Ratios:

For cost of Materials =

(Materials consumed / Net sales) x 100 For Selling Expenses=(Selling Expenses / Net Sales) x 100

6. Return on Investment Ratio (ROI)=

(Net profit before interest and Taxes / Total Capital Employed) x 100

7. Returns on Shareholders Funds=

(Net Profit after Interest and Taxes/ Shareholders Funds) x 100

8. Return on Equity Share Capital=

(Net profit after interest, Taxes and Dividend / Equity Shareholders Funds) x 100

9. Earnings Per Share (EPS)=

(Net Profit after Taxes- Preference Dividend)/ Number of Equity Shares

10. Dividend Payout Ratio=Dividend per Share / Earning per share.

11. Price Earnings Ratio (P/E Ratio)= Market Price per Equity Share / Earning per share.

Journal - Problems and Solutions

Problem - 1

Mr. Nirmal has the following transactions in the month of April.

Write Journal Entries for the transactions.

10th April	:	Commenced business with a capital of 1,00,000
11th April	:	Purchased goods from Veeru for 20,000
13th April	:	Purchased Goods for Cash 15,000
14th April	:	Purchased Goods from Abhiram for cash 9,000
16th April	:	Bought Goods from Shyam on credit 12,000
17th April	:	Sold goods worth 15,000 to Tarun
19th April	:	Sold goods for cash 20,000
20th April	:	Sold goods to Utsav for cash 6,000
21st April	:	Sold goods to Pranav on credit 17,000
22nd April	:	Returned goods to Veeru 3,000
23rd April	:	Goods returned from Tarun 1,000
25th April	:	Goods taken by the proprietor for personal use 1,000
26th April	:	Bought Land for 50,000
27th April	:	Purchased machinery for cash 45,000
28th April	:	Bought computer from Intel Computers for 25,000
28th April	:	Cash sales 15,000
29th April	:	Cash purchases 22,000
30th April	:	Bought furniture for proprietor's residence and paid cash 10,000

Solution hide

Journal in the books of Mr. Nirmal for the period from 1st to 30th April

Date	V/R No.	Particulars	L/F	Amount (Dr)	Amount (Cr)
April	–	Cash a/c Dr	–	1,00,000	

Journal in the books of Mr. Nirmal for the period from 1st to 30th April

Date	V/R No.	Particulars	L/F	Amount (Dr)	Amount (Cr)
10th		To Capital a/c [Being the amount received from Mr. Nirmal in cash, the proprietor as his capital contribution vide receipt no:__ dated:__]	–		1,00,000
11th	–	Goods/Stock a/c Dr To Veeru a/c [Being the value of stock purchased from Mr. Veeru on credit vide bill no:___ dated:__]	– –	20,000	 20,000
13th	–	Goods/Stock a/c Dr To Cash a/c [Being the value of stock purchased for cash from M/s ___ vide bill no:___ dated:__]	– –	15,000	 15,000
14th	–	Goods/Stock a/c Dr To Cash a/c [Being the value of stock purchased for cash from Mr. Abhiram vide bill no:___ dated:__]	– –	9,000	 9,000
16th	–	Goods/Stock a/c Dr To Shyam a/c [Being the value of stock purchased from Mr. Shyam on credit vide bill no:___ dated:__]	– –	12,000	 12,000
17th	–	Tarun a/c Dr To Goods/Stock a/c [Being the value of stock sold on credit to Mr. Tarun vide invoice no:___ dated:__]	– –	15,000	 15,000
19th	–	Cash a/c Dr	–	20,000	

Journal in the books of Mr. Nirmal for the period from 1st to 30th April

Date	V/R No.	Particulars	L/F	Amount (Dr)	Amount (Cr)
		To Goods/Stock a/c [Being the value of goods sold for cash vide receipt no:___ dated:__]	–		20,000
20th	–	Cash a/c Dr To Goods/Stock a/c [Being the value of stock sold to Mr. Utsav for cash vide receipt no:___ dated:__]	– –	6,000	 6,000
21st	–	Pranav a/c Dr To Goods/Stock a/c [Being the value of stock sold to Mr. Pranav on credit vide bill no:___ dated:__]	– –	17,000	 17,000
22nd	–	Veeru a/c Dr To Goods/Stock a/c [Being the value of goods returned to Mr. Veeru vide returns bill no:___ dated:__]	– –	3,000	 3,000
23rd	–	Goods/Stock a/c Dr To Tarun a/c [Being the value of stock returned by Mr. Tarun vide returns bill no:___ dated:__]	– –	1,000	 1,000
25rd	–	Drawings a/c Dr To Goods/Stock a/c [Being the value of stock taken by the proprietor vide bill no:___ dated:__]	– –	1,000	 1,000
26th	–	Land a/c Dr To Cash a/c	– –	50,000	 50,000

Journal in the books of Mr. Nirmal for the period from 1st to 30th April

Date	V/R No.	Particulars	L/F	Amount (Dr)	Amount (Cr)
		[Being the amount paid for land purchased on:__]			
27th	–	Machinery a/c Dr To Cash a/c [Being the amount paid for the purchase of machinery vide bill no:___ dated:__]	– –	45,000	 45,000
28th	–	Computers a/c Dr To Intel Computers a/c [Being the value of a computer purchased from M/S Intel Computers on credit vide bill no:___ dated:__]	– –	25,000	 25,000
29th	–	Cash a/c Dr To Goods/Stock a/c [Being the value of stock sold for cash vide receipt no:___ dated:__]	– –	15,000	 15,000
29th	–	Goods/Stock a/c Dr To Cash a/c [Being the value of stock purchased for cash vide bill no:___ dated:__]	– –	22,000	 22,000
30th	–	Drawings a/c Dr To Cash a/c [Being the amount of cash paid for furniture purchased for proprietor's residence vide bill no:___ dated:__]	– –	10,000	 10,000

Problem - 2

Journalise the following transactions in the books of Rama & Sons

3rd May : Cash deposited into bank 60,000

4th May : Loan given to Bhuvan 20,000

4th May : Paid cash to Veeru 20,000

5th May : Paid to Veeru by cheque 15,000

5th May : Cash received from Tarun 12,000

5th May : Took loan from Anush 15,000

6th May : Cheque received from Pranav 15,000

6th May : Paid to Intel Computers by cheque 17,000

6th May : Withdrew from bank 5,000

7th May : Withdrew from bank for office use 8,000

7th May : Cash received from Bhuvan on loan account 10,000

8th May : Withdrew from bank for personal use 1,000

8th May : Cash taken by proprietor for personal use 3,000

9th May : Bought furniture and paid by cheque 15,000

9th May : Paid to Anush by cheque on loan account 5,000

9th May : Brought additional capital of 25,000

Solution hide

Journal in the books of M/s Rama & Sons

for the period from 1st May to 10th May

Date	V/R No.	Particulars		L/F	Amount (Dr)	Amount (Cr)
May 3rd	–	Bank a/c To Cash a/c [Being the amount of cash deposited into bank vide voucher no:___ dated:__]	Dr	– –	60,000	 60,000
4th	–	Loan to Bhuvan a/c	Dr	–	20,000	

Journal in the books of M/s Rama & Sons
for the period from 1^{st} May to 10^{th} May

Date	V/R No.	Particulars	L/F	Amount (Dr)	Amount (Cr)
		To Cash a/c [Being the amount of cash given as loan to Bhuvan vide voucher no:___ dated:__]	–		20,000
4^{th}	–	Veeru a/c Dr To Cash a/c [Being the amount of cash paid to Veeru vide voucher no:___ dated:__]	– –	20,000	 20,000
5^{th}	–	Veeru a/c Dr To Bank a/c [Being the amount paid to veeru on account by cheque no. ___ dated ___]	– –	15,000	 15,000
5^{th}	–	Cash a/c Dr To Tarun a/c [Being the amount of cash received from Tarun vide cash receipt no:___ dated:__]	– –	12,000	 12,000
5^{th}	–	Cash a/c Dr To Loan from Anush a/c [Being the amount of loan taken from Anush on:__]	– –	15,000	 15,000
6^{th}	–	Bank a/c Dr To Pranav a/c [Being the amount received by cheque no. ____ date ____from Pranav]	– –	15,000	 15,000
6^{th}	–	Intel Computers a/c Dr To Bank a/c	– –	17,000	 17,000

Journal in the books of M/s Rama & Sons
for the period from 1st May to 10th May

Date	V/R No.	Particulars	L/F	Amount (Dr)	Amount (Cr)
		[Being the amount paid by cheque no. ____ date ____to Intel Computers]			
6th	–	Cash a/c Dr To Bank a/c [Being the amount of cash withdrawn from bank]	– –	5,000	 5,000
7th	–	Cash a/c Dr To Bank a/c [Being the amount of cash withdrawn from bank vide bill no:___ dated:__]	– –	8,000	 8,000
7th	–	Cash a/c Dr To Loan to Bhuvan a/c [Being the amount of cash received from Bhuvan as loan vide cash receipt no:___ dated:__]	– –	10,000	 10,000
8th	–	Drawings a/c Dr To Bank a/c [Being the amount of withdrawn from bank for personal use vide cheque no:___ dated:__]	– –	1,000	 1,000
8th	–	Drawings a/c Dr To Cash a/c [Being the amount of cash taken by the proprietor for personal purposes vide voucher no:___ dated:__]	– –	3,000	 3,000
9th	–	Furniture a/c Dr To Bank a/c [Being the amount paid by cheque no ____ date ____	– –	15,000	 15,000

Journal in the books of M/s Rama & Sons
for the period from 1st May to 10th May

Date	V/R No.	Particulars	L/F	Amount (Dr)	Amount (Cr)
		towards the purchase of furniture vide bill no:___ dated:__]			
9th	–	Loan from Anush a/c Dr To Bank a/c [Being the amount paid by cheque no ____ date ____ towards repayment of loan from Anush vide voucher no:___ dated:__]	– –	5,000	 5,000
9th	–	Cash a/c Dr To Capital a/c [Being the amount received from proprietor as capital vide cash receipt no:___ dated:__]	– –	25,000	 25,000

Problem - 3

Write journal entries in the books of Chikky & Bros.

10th June : Paid wages 12,000
11th June : paid rent by cheque 10,000
13th June : Paid salary to Mr. Charan 12,000
14th June : Purchased stationery from Kagaz & Co. and paid by cheque 5,000
15th June : Received interest 14,000
17th June : Received commission by cheque 6,000
18th June : Rent received from Mr. Mody 8,000
19th June : Interest received from Mr.Bijju by cheque 10,000
20th June : Carriage paid on purchase of goods 3,000
22nd June : Carriage paid on sale of goods 2,000

Solution hide

Journal in the books of M/s Chikky & Bros.
for the period from 1st June to 30th June

Date	V/R No.	Particulars	L/F	Amount (Dr)	Amount (Cr)
June 10th	–	Wages a/c Dr To Cash a/c [Being the amount of cash paid towards wages vide voucher no:___ dated:__]	– –	12,000	 12,000
11th	–	Rent paid a/c Dr To Bank a/c [Being the amount paid by cheque no.____ date ____ towards rent vide voucher no:___ dated:__]	– –	10,000	 10,000
13th	–	Salaries a/c Dr To Cash a/c [Being the amount of cash paid towards Salary to Mr.	– –	12,000	 12,000

Journal in the books of M/s Chikky & Bros.
for the period from 1st June to 30th June

Date	V/R No.	Particulars	L/F	Amount (Dr)	Amount (Cr)
		Charan vide voucher no:___ dated:__]			
14th	–	Stationery a/c Dr To Bank a/c [Being the amount paid by cheque no.____ date ____ towards stationery purchased from Kagaz & co. vide voucher no:___ dated:__]	– –	5,000	 5,000
15th	–	Cash a/c Dr To Interest Received a/c [Being the amount of cash received towards interest vide receipt no:___ dated:__]	– –	14,000	 14,000
17th	–	Bank a/c Dr To Commission Received a/c [Being the amount received by cheque no. ____ date____ towards commission vide receipt no:___ dated:__]	– –	6,000	 6,000
18th	–	Cash a/c Dr To Rent Received a/c [Being the amount of cash received towards rent from Mr. Mody vide receipt no:___ dated:__]	– –	8,000	 8,000
19th	–	Bank a/c Dr To Interest Received a/c [Being the amount received by cheque no. ____ date____ towards interest from Bijju vide receipt no:___ dated:__]	– –	10,000	 10,000
20th	–	Carriage Outwards a/c Dr To Cash a/c	– –	3,000	 3,000

Journal in the books of M/s Chikky & Bros.
for the period from 1st June to 30th June

Date	V/R No.	Particulars	L/F	Amount (Dr)	Amount (Cr)
		[Being the amount of cash paid towards carriage on goods purchased vide voucher no:___ dated:__]			
22nd	–	Carriage Inwards a/c Dr To Cash a/c [Being the amount of cash paid towards carriage on goods sold vide voucher no:___ dated:__]	– –	2,000	 2,000

Ledger - Problems and Solutions

Problem - 1

Mr. Ramu has the following transactions in the month of July.

Record them into the journal and show postings in the ledger and balance the accounts.

July 1st : Ramu started business with a capital of 75,000
1st : Purchased goods from Manu on credit 25,000
2nd : Sold goods to Sonu 20,000
3rd : Purchased goods from Meenu 15,000
4th : Sold goods to Tanu for cash 16,000
5th : Goods retuned to Manu 2,000
6th : Bought furniture for 15,000
7th : Bought goods from Zenu 12,000
8th : Cash paid to Manu 10,000
9th : Sold goods to Jane 13,500
10th : Goods returned from Sonu 3,000
11th : Cash received from Jane 5,500
12th : Goods taken by Ramu for domestic use 3,000

13th : Returned Goods to Zenu 1,000

14th : Cash received from Sonu 12,000

15th : Bought machinery for 18,000

16th : Sold part of the furniture for 1,000

17th : Cash paid for the purchase of bicycle for Ramu's son 1,500

19th : Cash sales 15,000

20th : Cash purchases 13,500

Solution hide

Journal in the books of M/s Rama & Sons
for the period from July 1st, _5 to July 31st, _5

Date	V/R No.	Particulars	L/F	Amount (Dr)	Amount (Cr)
July 1st	–	Cash a/c Dr To Capital a/c [Being the amount received from Mr. Ramu, the proprietor as his capital contribution vide receipt no:___ dated:__]	– –	75,000	75,000
July 1st	–	Goods/stock a/c Dr To Manu a/c [Being the value of stock purchased from Mr. Manu vide bill no:___ dated:__]	– –	25,000	25,000
July 2nd	–	Sonu a/c Dr To Goods/stock a/c [Being the value of stock sold to Mr.Sonu vide bill no:___ dated:__]	– –	20,000	20,000
July 3rd	–	Goods/stock a/c Dr To Meenu a/c [Being the value of stock purchased from Mr.Meenu on credit vide bill no:___ dated:__]	– –	15,000	15,000

Journal in the books of M/s Rama & Sons
for the period from July 1st, _5 to July 31st, _5

Date	V/R No.	Particulars	L/F	Amount (Dr)	Amount (Cr)
July 4th	–	Cash a/c Dr To Goods/stock a/c [Being the value of stock sold to Mr. Tanu for cash vide receipt no:___ dated:__]	– –	16,000	 16,000
July 5th	–	Manu a/c Dr To Goods/stock a/c [Being the value of stock returned to Mr. Manu vide bill no:___ dated:__]	– –	2,000	 2,000
July 6th	–	Furniture a/c Dr To Cash a/c [Being the value of furniture purchased from M/s ___vide bill no:___ dated:__]	– –	15,000	 15,000
July 7th	–	Goods/stock a/c Dr To Zenu a/c [Being the value of stock Purchased from Mr. Zenu vide bill no:___ dated:__]	– –	12,000	 12,000
July 8th	–	Manu a/c Dr To Cash a/c [Being the amount paid to Mr. Manu vide voucher no:___ dated:__]	– –	10,000	 10,000
July 9th	–	Jane a/c Dr To Goods/stock a/c [Being the value of stock Sold to Ms.Zane vide bill no:___ dated:__]	– –	13,500	 13,500

Journal in the books of M/s Rama & Sons
for the period from July 1st, _5 to July 31st, _5

Date	V/R No.	Particulars	L/F	Amount (Dr)	Amount (Cr)
July 10th	–	Goods/stock a/c Dr To Sonu a/c [Being the value of stock returned from Mr. Sonu vide bill no:___ dated:__]	– –	3,000	 3,000
July 11th	–	Cash a/c Dr To Jane a/c [Being the amount of cash received from Ms. Jane vide cash receipt no:___ dated:__]	– –	5,500	 5,500
July 12th	–	Drawings a/c Dr To Goods/stock a/c [Being the amount of stock taken by Ramu for domestic use vide bill no:___ dated:__]	– –	3,000	 3,000
July 13th	–	Zenu a/c Dr To Goods/stock a/c [Being the amount of stock returned to Mr. Zenu vide bill no:___ dated:__]	– –	1,000	 1,000
July 14th	–	Cash a/c Dr To Sonu a/c [Being the amount of cash received from Mr. Sonu vide cash receipt no:___ dated:_]	– –	12,000	 12,000
July 15th	–	Machinery a/c Dr To Cash a/c [Being the amount paid for machinery purchased to M/s ____vide voucher no:___ dated:__]	– –	18,000	 18,000

Journal in the books of M/s Rama & Sons
for the period from July 1st, _5 to July 31st, _5

Date	V/R No.	Particulars	L/F	Amount (Dr)	Amount (Cr)
July 16th	–	Cash a/c Dr To Furniture a/c [Being the amount received on sale of furniture vide cash receipt no:___ dated:__]	– –	1,000	 1,000
July 17th	–	Drawings a/c Dr To Cash a/c [Being the amount of cash paid for bicycle purchases for proprietor's son vide voucher no:___ dated:__]	– –	15,000	 15,000
July 19th	–	Cash a/c Dr To Goods/stock a/c [Being the value of stock sold for cash vide receipt no:___ dated:__]	– –	15,000	 15,000
July 20th	–	Goods/stock a/c Dr To Cash a/c [Being the value of stock Purchased for vide voucher no:___ dated:__]	– –	13,500	 13,500

General Ledger
[Books of Mr. Ramu]

Cash a/c

DrCr

Date	Particulars	J/F	Amount	Date	Particulars	J/F	Amount
01/10/_5	To Capital a/c	–	75,000	06/10/_5	By Furniture a/c	–	15,000
04/10/_5	To Goods/stock a/c	–	16,000	08/10/_5	By Manu a/c	–	10,000
11/10/_5	To Jane a/c	–	5,500	15/10/_5	By Machinery a/c	–	18,000

Cash a/c

DrCr

Date	Particulars	J/F	Amount	Date	Particulars	J/F	Amount
14/10/_5	To Sonu a/c	–	12,000	17/10/_5	By Drawings a/c	–	15,000
16/10/_5	To Furniture a/c	–	1,000	20/10/_5	By Goods/stock a/c	–	13,500
19/10/_5	To Goods/stock a/c	–	15,000	30/07/_5	By Balance c/d	–	53,000
	tl		1,24,500		tl		1,24,500
31/07/_5	To Balance b/d	–	53,000				

Capital a/c

DrCr

Date	Particulars	J/F	Amount	Date	Particulars	J/F	Amount
30/07/_5	To Balance c/d	–	75,000	01/10/_5	By Cash a/c	–	75,000
	tl		75,000		tl		75,000
				31/07/_5	By Balance b/d	–	75,000

Goods/stock a/c

DrCr

Date	Particulars	J/F	Amount	Date	Particulars	J/F	Amount
01/10/_5	To Manu a/c	–	25,000	02/10/_5	By Sonu a/c	–	20,000
03/10/_5	To Meenu a/c	–	15,000	04/10/_5	By Cash a/c	–	16,000
07/10/_5	To Zenu a/c	–	12,000	05/10/_5	By Manu a/c	–	2,000
10/10/_5	To Sonu a/c	–	3,000	09/10/_5	By Jane a/c	–	13,500
20/10/_5	To Cash a/c	–	13,500	12/10/_5	By Drawings a/c	–	3,000
30/07/_5	To Balance c/d	–	2,000	13/10/_5	By Zenu a/c	–	1,000
				19/10/_5	By Cash a/c	–	15,000
	tl		70,500		tl		70,500
				31/07/_5	By Balance b/d	–	2,000

Manu a/c

DrCr

Date	Particulars	J/F	Amount	Date	Particulars	J/F	Amount
05/10/_5	To Goods/stock a/c	–	2,000	01/10/_5	By Goods/stock a/c	–	25,000
08/10/_5	To Cash a/c	–	10,000				
30/07/_5	To Balance c/d	–	13,000				
	tl		25,000		tl		25,000
				31/07/_5	By Balance b/d	–	13,000

Sonu a/c

DrCr

Date	Particulars	J/F	Amount	Date	Particulars	J/F	Amount
02/10/_5	To Goods/stock a/c	–	20,000	10/10/_5	By Goods/stock a/c	–	3,000
				14/10/_5	By Cash a/c	–	12,000
				30/07/_5	By Balance c/d	–	5,000
	tl		20,000		tl		20,000
31/07/_5	To Balance b/d	–	5,000				

Meenu a/c

DrCr

Date	Particulars	J/F	Amount	Date	Particulars	J/F	Amount
30/07/_5	To Balance c/d	–	15,000	03/10/_5	By Goods/stock a/c	–	15,000
	tl		15,000		tl		15,000
				31/07/_5	By Balance b/d	–	15,000

Furniture a/c

DrCr

Date	Particulars	J/F	Amount	Date	Particulars	J/F	Amount
06/10/_5	To Cash a/c	–	15,000	16/10/_5	By Cash a/c	–	1,000
				30/07/_5	By Balance c/d	–	14,000
	tl		15,000		tl		15,000
31/07/_5	To Balance b/d	–	14,000				

Zenu a/c

DrCr

Date	Particulars	J/F	Amount	Date	Particulars	J/F	Amount
13/10/_5	To Goods/stock a/c	–	1,000	07/10/_5	By Goods/stock a/c	–	12,000
30/07/_5	To Balance c/d	–	11,000				
	tl		12,000		tl		12,000
				31/07/_5	By Balance b/d	–	11,000

Jane a/c

DrCr

Date	Particulars	J/F	Amount	Date	Particulars	J/F	Amount
09/10/_5	To Goods/stock a/c	–	13,500	11/10/_5	By Cash a/c	–	5,500
				30/07/_5	By Balance c/d	–	8,000
	tl		13,500		tl		13,500
31/07/_5	To Balance b/d	–	8,000				

Drawings a/c

DrCr

Date	Particulars	J/F	Amount	Date	Particulars	J/F	Amount
12/10/_5	To Goods/stock a/c	–	3,000	30/07/_5	By Balance c/d	–	18,000
17/10/_5	To Cash a/c	–	15,000				
	tl		18,000		tl		18,000
31/07/_5	To Balance b/d	–	18,000				

Machinery a/c

DrCr

Date	Particulars	J/F	Amount	Date	Particulars	J/F	Amount
15/10/_5	To Cash a/c	–	18,000	30/07/_5	By Balance c/d	–	18,000
	tl		18,000		tl		18,000
31/07/_5	To Balance b/d	–	18,000				

Problem - 2

Journalise the following transactions in the books of Moon and post them into the ledger for the month of August

Aug 10th : Moon commenced business with a capital of 1,50,000

11th : Cash deposited into bank 50,000

12th : Bought equipment for 15,000

13th : Bought goods worth 20,000 from Star and payment made by cheque

14th : Sold goods to Sun for 15,000 and payment received through cheque

16th : Paid rent by cheque 5,000

17th : Took loan from Mr. Storm 25,000

18th : Received commission from Mr. Air by cheque 5,000

19th : Wages paid 15,000

20th : Withdrew from bank for personal use 3,000

21st : Withdrew from bank for office use 10,000

22nd : Bought goods for 25,000

23rd : Cash paid into bank 30,000

24th : Interest paid through cheque 2,000

25th : Gave loan to Mr.Wind 10,000

26th : Amount paid to Mr. Storm on loan account 15,000

27th : Salary paid to Manager Mr. Liquid 5,000

28th : Postage paid 1,000

29th : Received cheque from Mr. Wind on loan account 3,000

30th : Sold part of the equipment for 2,000

Solution hide

Journal in the books of M/s Rama & Sons

for the period from August 10th, _5 to August 30th, _5

Date	V/R No.	Particulars	L/F	Amount (Dr)	Amount (Cr)
August	–	Cash a/c Dr	–	1,50,000	

Journal in the books of M/s Rama & Sons
for the period from August 10th, _5 to August 30th, _5

Date	V/R No.	Particulars	L/F	Amount (Dr)	Amount (Cr)
10th		To Capital a/c [Being the amount received from Mr. Moon, the proprietor as his capital contribution vide receipt no:__ dated:__]	–		1,50,000
11th	–	Bank a/c Dr To Cash a/c [Being the amount of cash deposited into bank vide bill no:___ dated:__]	– –	50,000	 50,000
12th	–	Equipment a/c Dr To Cash a/c [Being the value of equipment purchased from M/s___ for cash vide bill no:___ dated:__]	– –	15,000	 15,000
13th	–	Goods/stock a/c Dr To Bank a/c [Being the payment made for stock purchased vide Cheque no:__ dated:__]	– –	20,000	 20,000
14th	–	Bank a/c Dr To Goods/stock a/c [Being the amount received for stock sold to Mr. Sun vide Cheque no:__ dated:__]	– –	15,000	 15,000
16th	–	Rent a/c Dr To Bank a/c [Being the amount paid for rent vide voucher no:___ dated:__]	– –	5,000	 5,000

Journal in the books of M/s Rama & Sons
for the period from August 10th, _5 to August 30th, _5

Date	V/R No.	Particulars	L/F	Amount (Dr)	Amount (Cr)
17th	–	Cash a/c Dr To Loan from Storm a/c [Being the cash received from Mr. Storm as loan vide receipt no:___ dated:__]	– –	25,000	 25,000
18th	–	Bank a/c Dr To Commission a/c [Being the amount received for commission vide cheque no:__ dated:__]	– –	5,000	 5,000
19th	–	Wages a/c Dr To Cash a/c [Being the amount paid for wages vide voucher no:___ dated:__]	– –	15,000	 15,000
20th	–	Drawings a/c Dr To Bank a/c [Being the amount withdrawn from bank for personal use vide cheque no:___ dated:__]	– –	3,000	 3,000
21st	–	Cash a/c Dr To Bank a/c [Being the amount withdrawn from bank for office purpose vide cheque no:___ dated:__]	– –	10,000	 10,000
22nd	–	Goods/stock a/c Dr To Cash a/c [Being the amount of cash paid for stock purchases vide voucher no:___ dated:__]	– –	25,000	 25,000

Journal in the books of M/s Rama & Sons
for the period from August 10th, _5 to August 30th, _5

Date	V/R No.	Particulars	L/F	Amount (Dr)	Amount (Cr)
23rd	–	Bank a/c Dr To Cash a/c [Being the amount deposited into bank vide voucher no:___ dated:__]	– –	30,000	 30,000
24th	–	Interest a/c Dr To Bank a/c [Being the amount of interest paid vide cheque no:___ dated:__]	– –	2,000	 2,000
25th	–	Loan to Mr. Wind a/c Dr To Cash a/c [Being the amount of cash given to Mr. Wind as loan vide voucher no:___ dated:__]	– –	10,000	 10,000
26th	–	Loan from Strom a/c Dr To Cash a/c [Being the amount paid to Mr. Storm for repayment of loan vide voucher no:___ dated:__]	– –	15,000	 15,000
27th	–	Salary a/c Dr To Cash a/c [Being the amount paid for salary to Mr. Liquid vide voucher no:___ dated:__]	– –	5,000	 5,000
28th	–	Postage a/c Dr To Cash a/c [Being the amount paid for purchase of postage vide voucher no:___ dated:__]	– –	1,000	 1,000

Journal in the books of M/s Rama & Sons

for the period from August 10th, _5 to August 30th, _5

Date	V/R No.	Particulars	L/F	Amount (Dr)	Amount (Cr)
29th	–	Bank a/c Dr To Loan to Mr. wind a/c [Being the Cheque no:___ date___ received from Mr. Wind for repayment of loan]	– –	3,000	 3,000
30th	–	Cash a/c Dr To Equipment a/c [Being the amount received on sale of equipment vide receipt no:___ dated:__]	– –	2,000	 2,000

General Ledger
[Books of M/s Rama & Sons]

Cash a/c

DrCr

Date	Particulars	J/F	Amount	Date	Particulars	J/F	Amount
10/10/_5	To Capital a/c	–	1,50,000	11/10/_5	By Bank a/c	–	50,000
17/10/_5	To Loan from Storm a/c	–	25,000	12/10/_5	By Equipment a/c	–	15,000
21/10/_5	To Bank a/c	–	10,000	19/10/_5	By Wages a/c	–	15,000
30/10/_5	To Equipment a/c	–	2,000	22/10/_5	By Goods/stock a/c	–	25,000
				23/10/_5	By Bank a/c	–	30,000
				25/10/_5	By Loan to Mr. Wind a/c	–	10,000
				26/10/_5	By Loan from Strom a/c	–	15,000
				27/10/_5	By Salary a/c	–	5,000
				28/10/_5	By Postage a/c	–	1,000
				31/08/_5	By Balance c/d	–	21,000

Cash a/c

DrCr

Date	Particulars	J/F	Amount	Date	Particulars	J/F	Amount
	tl		1,87,000		tl		1,87,000
01/09/_5	To Balance b/d	–	21,000				

Capital a/c

DrCr

Date	Particulars	J/F	Amount	Date	Particulars	J/F	Amount
31/08/_5	To Balance c/d	–	1,50,000	10/10/_5	By Cash a/c	–	1,50,000
	tl		1,50,000		tl		1,50,000
				01/09/_5	By Balance b/d	–	1,50,000

Bank a/c

DrCr

Date	Particulars	J/F	Amount	Date	Particulars	J/F	Amount
11/10/_5	To Cash a/c	–	50,000	13/10/_5	By Goods/stock a/c	–	20,000
14/10/_5	To Goods/stock a/c	–	15,000	16/10/_5	By Rent a/c	–	5,000
18/10/_5	To Commission a/c	–	5,000	20/10/_5	By Drawings a/c	–	3,000
23/10/_5	To Cash a/c	–	30,000	21/10/_5	By Cash a/c	–	10,000
29/10/_5	To Loan to Mr. wind a/c	–	3,000	24/10/_5	By Interest a/c	–	2,000
				31/08/_5	By Balance c/d	–	63,000
	tl		1,03,000		tl		1,03,000
01/09/_5	To Balance b/d	–	63,000				

Equipment a/c

DrCr

Date	Particulars	J/F	Amount	Date	Particulars	J/F	Amount
12/10/_5	To Cash a/c	–	15,000	30/10/_5	By Cash a/c	–	2,000
				31/08/_5	By Balance c/d	–	13,000
	tl		15,000		tl		15,000

Equipment a/c

DrCr

Date	Particulars	J/F	Amount	Date	Particulars	J/F	Amount
01/09/_5	To Balance b/d	–	13,000				

Goods/stock a/c

DrCr

Date	Particulars	J/F	Amount	Date	Particulars	J/F	Amount
13/10/_5	To Bank a/c	–	20,000	14/10/_5	By Bank a/c	–	15,000
22/10/_5	To Cash a/c	–	25,000	31/08/_5	By Balance c/d	–	30,000
	tl		45,000		tl		45,000
01/09/_5	To Balance b/d	–	30,000				

Rent a/c

DrCr

Date	Particulars	J/F	Amount	Date	Particulars	J/F	Amount
16/10/_5	To Bank a/c	–	5,000	31/08/_5	By Balance c/d	–	5,000
	tl		5,000		tl		5,000
01/09/_5	To Balance b/d	–	5,000				

Loan from Storm a/c

DrCr

Date	Particulars	J/F	Amount	Date	Particulars	J/F	Amount
31/08/_5	To Balance c/d	–	25,000	17/10/_5	By Cash a/c	–	25,000
	tl		25,000		tl		25,000
				01/09/_5	By Balance b/d	–	25,000

Commission a/c

DrCr

Date	Particulars	J/F	Amount	Date	Particulars	J/F	Amount
31/08/_5	To Balance c/d	–	5,000	18/10/_5	By Bank a/c	–	5,000

Commission a/c

DrCr

Date	Particulars	J/F	Amount	Date	Particulars	J/F	Amount
	tl		5,000		tl		5,000
				01/09/_5	By Balance b/d	–	5,000

Wages a/c

DrCr

Date	Particulars	J/F	Amount	Date	Particulars	J/F	Amount
19/10/_5	To Cash a/c	–	15,000	31/08/_5	By Balance c/d	–	15,000
	tl		15,000		tl		15,000
01/09/_5	To Balance b/d	–	15,000				

Drawings a/c

DrCr

Date	Particulars	J/F	Amount	Date	Particulars	J/F	Amount
20/10/_5	To Bank a/c	–	3,000	31/08/_5	By Balance c/d	–	3,000
	tl		3,000		tl		3,000
01/09/_5	To Balance b/d	–	3,000				

Interest a/c

DrCr

Date	Particulars	J/F	Amount	Date	Particulars	J/F	Amount
24/10/_5	To Bank a/c	–	2,000	31/08/_5	By Balance c/d	–	2,000
	tl		2,000		tl		2,000
01/09/_5	To Balance b/d	–	2,000				

Loan to Mr. Wind a/c

DrCr

Date	Particulars	J/F	Amount	Date	Particulars	J/F	Amount
25/10/_5	To Cash a/c	–	10,000	31/08/_5	By Balance c/d	–	10,000

Loan to Mr. Wind a/c

DrCr

Date	Particulars	J/F	Amount	Date	Particulars	J/F	Amount
	tl		10,000		tl		10,000
01/09/_5	To Balance b/d	–	10,000				

Loan from Strom a/c

DrCr

Date	Particulars	J/F	Amount	Date	Particulars	J/F	Amount
26/10/_5	To Cash a/c	–	15,000	31/08/_5	By Balance c/d	–	15,000
	tl		15,000		tl		15,000
01/09/_5	To Balance b/d	–	15,000				

Salary a/c

DrCr

Date	Particulars	J/F	Amount	Date	Particulars	J/F	Amount
27/10/_5	To Cash a/c	–	5,000	31/08/_5	By Balance c/d	–	5,000
	tl		5,000		tl		5,000
01/09/_5	To Balance b/d	–	5,000				

Postage a/c

DrCr

Date	Particulars	J/F	Amount	Date	Particulars	J/F	Amount
28/10/_5	To Cash a/c	–	1,000	31/08/_5	By Balance c/d	–	1,000
	tl		1,000		tl		1,000
01/09/_5	To Balance b/d	–	1,000				

Loan to Mr. wind a/c

DrCr

Date	Particulars	J/F	Amount	Date	Particulars	J/F	Amount
31/08/_5	To Balance c/d	–	3,000	29/10/_5	By Bank a/c	–	3,000

Loan to Mr. wind a/c

DrCr

Date	Particulars	J/F	Amount	Date	Particulars	J/F	Amount
	tl		3,000		tl		3,000
				01/09/_5	By Balance b/d	–	3,000

Author : The Edifier

Final accounts with adjustments

Illustration 9

Prepare trading account from the following ledger balances presented by P. Sen as on 31st March, 2016.

Particulars	₹	Particulars	₹
Stock (1-4-2015)	10,000	Sales	3,00,000
Purchases	1,60,000	Returns inward	16,000
Wages	30,000	Returns outward	10,000
Carriage inwards	10,000	Gas and Fuel	8,000
Freight inwards	8,000		

Additional information:

i. Stock on 31st March, 2016 Rs. 20,000

ii. Outstanding wages amounted to Rs. 4,000

iii. Gas and fuel was paid in advance for Rs. 1,000

Dr.	Trading account for the year ended 31st March, 2016				Cr.
Particulars	**₹**	**₹**	**Particulars**	**₹**	**₹**
To Opening Stock		10,000	By Sales	3,00,000	
To Purchases	1,60,000		Less: Returns inward	16,000	2,84,000
Less: Returns outward	10,000	1,50,000	By Closing Stock		20,000
To Wages	30,000				
Add: Outstanding	4,000	34,000			
To Carriage inwards		10,000			
To Freight inwards		8,000			
To Gas and fuel	8,000				
Less: Prepaid	1,000	7,000			
To Gross profit c/d		**85,000**			
		3,04,000			3,04,000

Illustration 10

From the following particulars presented by Thilak for the year ended 31st March, 2017, prepare profit and loss account.

Particulars	₹	Particulars	₹
Gross profit	1,00,000	Interest received	6,000
Rent paid	22,000	Bad debts	2,000
Salaries	10,000	Provision for bad debts (1-4-2016)	4,000
Commission (Cr.)	12,000	Sundry debtors	40,000
Discount received	2,000	Buildings	80,000
Insurance premium paid	8,000		

Adjustments:

i. Outstanding salaries amounted to Rs. 4,000

ii. Rent paid for 11 months

iii. Interest due but not received amounted to Rs. 2,000

iv. Prepaid insurance amounted to Rs. 2,000

v. Depreciate buildings by 10%

vi. Further bad debts amounted to Rs. 3,000 and make a provision for bad debts @ 5% on sundry debtors

vii. Commission received in advance amounted to Rs. 2,000

Solution

Dr. Profit and Loss Account for the year ended 31st March, 2017 Cr.

Particulars	₹	₹	Particulars	₹	₹
To Rent	22,000		By Gross profit b/d	–	1,00,000
Add: Outstanding	2,000	24,000	By Commission	12,000	
(22,000x1/11)	10,000		Less: Received in	2,000	10,000
To Salaries	4,000		advance	6,000	2,000
Add: Outstanding	8,000	14,000	By Discount received	2,000	8,000
To Insurance premium	2,000		By Interest received		
Less: Prepaid insurance	1,900	6,000	Add: Accrued		
To Provision for bad and	2,000				
doubtful debts (closing)	3,000				
Add: Bad debts	6,900				
Add: Further bad debts					
	4,000				
Less: Opening provision for					
bad and doubtful debts		2,900			
To Depreciation on building		8,000			
(80,000x10%)					
To Net profit (transferred to					
capital A/c)		**65,100**			
		1,20,000			1,20,000

Working Note:
Debtors : 40,000
Less: Further bad debts : 2,000
: 38,000
Provision for bad and doubtful debts at 5% : 38,000 x 5% = Rs. 1,900

Illustration 11

From the following balances as on 31st December, 2017, prepare profit and loss account.

Particulars	₹	Particulars	₹
Gross profit	50,000	Rent received	2,000
Salaries	18,000	Discount received	3,000
Office rent paid	12,000	Carriage outwards	2,500
Advertisement	8,000	Fire insurance premium	6,500

Adjustments:

i. Rent accrued but not yet received Rs. 500

ii. Fire insurance premium prepaid to the extent of Rs. 1,500

iii. Provide manager's commission at 10% on profits before charging such commission.

Dr. Profit and Loss Account for the year ended 31st December, 2017 Cr.

Particulars	₹	₹	Particulars	₹	₹
To Salaries		18,000	By Gross profit b/d		50,000
To Office rent		12,000	By Rent received	2,000	
To Advertisement		8,000	Add: Rent accrued	500	2,500
To Carriage outwards		2,500	By Discount received		3,000
To Fire insurance premium	6,500				
Less: Prepaid	1,500	5,000			
To Manager's commission		1,000			
To Net profit (transferred to capital account)	-	9,000			
		55,500			55,500

Working note:

$$\text{Manager's Commission} = \text{Net profit before charging commission} \times \frac{\text{Rate of commission}}{100}$$

Net profit = 55,500 – (18,000 + 12,000 + 8,000 + 2,500 + 5,000) = Rs. 10,000

$$\text{Manager's commission} = 10{,}000 \times \frac{10}{100} = 1{,}000$$

Illustration 12

From the following balances obtained from the books of Siva, prepare trading and profit and loss account.

Particulars	₹	Particulars	₹
Stock on 01.01.2016	9,000	Bad debts	1,200
Purchases	22,000	Sundry expenses	1,800
Sales	42,000	Discount allowed	1,700
Expenses on purchases	1,500	Expenses on sale	1,000
Bank charges paid	3,500	Repairs on office furniture	600

Adjustments:

i. Closing stock on, 31st December, 2016 was Rs. 4,500

ii. Manager is entitled to receive commission @ 5% of net profit after providing such commission.

Solution

Dr. Trading and Profit and Loss Account for the year ended 31st December, 2016 Cr.

Particulars	₹	Particulars	₹
To Opening stock	9,000	By Sales	42,000
To Purchases	22,000	By Closing stock	4,500
To Expenses on purchases	1,500		
To Gross profit c/d	**14,000**		
	46,500		46,500
To Bank charges	3,500	By Gross profit b/d	14,000
To Bad debts	1,200		
To Sundry expenses	1,800		
To Discount allowed	1,700		
To Expenses on sale	1,000		
To Repairs on office furniture	600		
To Manager's commission	200		
To Net profit (transferred to capital A/c)	**4,000**		
	14,000		14,000

Working notes:

$$\text{Commission} = \text{Net profit before charging commission} \times \frac{\text{Rate of commission}}{(100+ \text{Rate of commission})} \times 100$$

Net profit = 14,000 – (3,500 + 1,000+1,200+1,800+1,700+600) = ₹ 4,200

$$\text{Manager's commission} = 4{,}200 \times \frac{5}{105} = ₹\ 200$$

Illustration 13

From the following particulars, prepare the balance sheet of Madhu, for the year ended 31st March, 2018.

Particulars	₹	Particulars	₹
Capital	2,00,000	Sundry creditors	40,000
Drawings	40,000	Bills payable	20,000
Cash in hand	15,000	Goodwill	60,000
Loan from bank	40,000	Sundry debtors	80,000
Bank overdraft	20,000	Land and building	50,000
Investments	20,000	Vehicles	80,000
Bills receivable	10,000	Cash at bank	25,000

The following adjustments were made at the time of preparing final accounts:

i. Outstanding liabilities: Salaries Rs. 10,000; Wages Rs. 20,000; Interest on Bank overdraft Rs. 3,000 and Interest on bank loan Rs. 6,000

ii. Provide interest on capital @ 10% p.a.

iii. Bad debts amounted to Rs. 10,000 and make a provision for bad debts @ 10% on sundry debtors.

iv. Closing stock amounted to Rs. 1,20,000

v. Depreciate vehicles @ 10% p.a.

Net profit for the year amounted to Rs. 96,000 after considering all the above adjustments.

Solution

In the books of Madhu

Balance Sheet as on 31st March, 2018

Particulars	₹	₹	Particulars	₹	₹
Capital	2,00,000		Goodwill		60,000
Add: Net profit	96,000		Land and Building		50,000
Add: Interest on capital	20,000		Vehicles	80,000	
	3,16,000		Less: Depreciation	8,000	72,000
Less: Drawings	40,000	2,76,000	Investments		20,000
Loan from bank	40,000		Stock-in-trade		1,20,000
Add: Interest outstanding	6,000	46,000	Sundry debtors	80,000	
Bills payable		20,000	Less: Bad debts	10,000	
Sundry creditors		40,000		70,000	
Bank overdraft	20,000		Less: Provision		
Add: Interest outstanding	3,000	23,000	for bad and doubtful debts	7,000	63,000
Outstanding liabilities:			Bills receivable		10,000
Salaries	10,000		Cash at bank		25,000
Wages	20,000	30,000	Cash in hand		15,000
		4,35,000			4,35,000

Illustration 14

The following balances were extracted from the books of Thomas as on 31st March, 2018

Particulars	₹	Particulars	₹
Purchases	75,000	Capital	60,000
Returns inward	2,000	Creditors	30,000
Opening stock	10,000	Sales	1,20,000
Freight inwards	4,000	Returns outward	1,000
Wages	2,000		
Investments	10,000		
Bank charges	1,000		
Land	30,000		
Machinery	30,000		
Building	25,000		
Cash at bank	18,000		
Cash in hand	4,000		
	2,11,000		2,11,000

Additional information:

i. Closing stock Rs. 9,000

ii. Provide depreciation @ 10% on machinery

iii. Interest accrued on investment Rs. 2,000

Prepare trading account, profit and loss account and balance sheet.

Solution

In the books of Thomas

Dr. Trading and Profit and Loss Account for the year ended 31st March, 2018 Cr.

Particulars	₹	₹	Particulars	₹	₹
To Opening stock		10,000	By Sales	1,20,000	
To Purchases	75,000		Less: Returns inward	2,000	1,18,000
Less: Returns outward	1,000	74,000			
To Freight inwards		4,000	By Closing stock		9,000
To Wages		2,000			
To Gross profit c/d		**37,000**			
		1,27,000			1,27,000
To Depreciation on machinery		3,000	By Gross Profit b/d		37,000
To Bank charges		1,000	By Accrued interest on investment		2,000
To Net profit (transferred to capital a/c)		**35,000**			
		39,000			39,000

Balance Sheet as on 31st March, 2018

Particulars	₹	₹	Particulars	₹	₹
Capital	60,000		Land		30,000
Add: Net profit	35,000	95,000	Building		25,000
Creditors		30,000	Machinery	30,000	
			Less: Depreciation	3,000	27,000
			Investment	10,000	
			Add: Accrued interest	2,000	12,000
			Stock-in-trade		9,000
			Cash at bank		18,000
			Cash in hand		4,000
		1,25,000			1,25,000

Illustration 15

Given below are the balances extracted from the books of Nagarajan as on 31st March, 2016.

Particulars	₹	Particulars	₹
Purchases	10,000	Sales	15,100
Wages	600	Commission received	1,900
Freight inwards	750	Rent received	600
Advertisement	500	Creditors	2,400
Carriage outwards	400	Capital	5,000
Cash	1,200		
Machinery	8,000		
Debtors	2,250		
Bills receivable	300		
Stock on 1st January, 2016	1,000		
	25,000		25,000

Prepare the trading and profit and loss account for the year ended 31st March, 2016 and the balance sheet as on that date after adjusting the following:

i. Commission received in advance Rs. 400

ii. Advertisement paid in advance Rs. 150

iii. Wages outstanding Rs. 200

iv. Closing stock on 31st March 2016, Rs. 2,100

Solution

In the books of Nagarajan

Dr. Trading and Profit and Loss Account for the year ended 31st March, 2016 Cr.

Particulars	₹	₹	Particulars	₹	₹
To Opening stock		1,000	By Sales		15,100
To Purchases		10,000	By Closing stock		2,100
To Wages	600				
Add: Outstanding	200	800			
To Freight inwards		750			
To Gross profit c/d		**4,650**			
		17,200			17,200
To Advertisement	500		By Gross profit b/d		4,650
Less: Prepaid	150	350	By Commission received	1,900	
advertisement		400	Less: Received in	400	1,500
To Carriage outwards			advance		600
To Net profit (transferred to capital a/c)		**6,000**	By Rent received		
		6,750			6,750

Balance Sheet as on 31st March, 2016

Particulars	₹	₹	Particulars	₹	₹
Capital	5,000		Machinery		8,000
Add: Net profit	6,000	11,000	Stock in trade		2,100
Creditors		2,400	Debtors		300
Commission received in			Bills receivable		2,250
advance		400	Advertisement prepaid		150
Outstanding wages		200	Cash		1,200
		14,000			14,000

Illustration 16

Consider the following balances extracted from the books of Jain as on 31st December, 2016.

Prepare the final accounts.

Particulars	₹	Particulars	₹
Capital	20,000	Office Salaries	6,600
Debtors	8,000	Establishment expenses	4,500
Creditors	10,500	Selling expenses	2,300
Purchases	60,000	Furniture	10,000
Sales	80,000	Cash at bank	2,400
Income tax of Jain paid	500	Miscellaneous receipts	600
Opening stock	12,000	Drawings	4,800

Adjustments

i. Salaries outstanding for December, 2016 amounted to Rs. 600

ii. Provide depreciation on furniture @ 10% p.a.

iii. Provide interest on capital for the year @ 5% p.a.

iv. Stock on 31st December, 2016 Rs. 14,000

Solution

In the books of Jain

Dr. Trading and Profit and Loss Account for the year ended 31st December, 2016 Cr.

Particulars	₹	₹	Particulars	₹	₹
To Opening Stock		12,000	By Sales		80,000
To Purchases		60,000	By Closing Stock		14,000
To Gross Profit c/d		22,000			
		94,000			94,000
					22,000
To Office salaries	6,600		By Gross Profit b/d		
Add: Outstanding	600	7,200	By Miscellaneous receipts		600
To Establishment expenses		4,500			
To Selling expenses		2,300			
To Depreciation on furniture (10,000 x 10%)		1,000			
To Interest on capital (20,000 x 5%)		1,000			
To Net profit (transferred to capital A/c)		6,600			
		22,600			22,600

Balance Sheet as on 31st December, 2016

Liabilities		₹	₹	Assets	₹	₹
Capital		20,000		Furniture	10,000	
Add: Net profit		6,600		Less: Depreciation	1,000	9,000
Add: Interest on capital		1,000		Stock in trade		14,000
		27,600		Debtors		8,000
Less: Drawings	4,800			Cash at bank		2,400
Income tax	500	5,300	22,300			
Creditors			10,500			
Office salaries outstanding			600			
			33,400			33,400

Illustration 17

Edward's books show the following balances. Prepare his trading and profit and loss A/c for the year ended 31st December, 2016 and a balance sheet on at that date.

Debit balances	₹	Credit balances	₹
Drawings	5,000	Capital	1,31,500
Sundry debtors	60,000	Loan at 6% p.a.	20,000
Coal, gas and water	10,500	Sales	3,56,500
Returns inward	2,500	Interest on investments	2,550
Purchases	2,56,500	Sundry creditors	40,000
Stock on 1-1-2016	89,700		
Travelling expenses	51,250		
Interest on loan paid	300		
Petty cash	710		
Repairs	4,090		
Investments	70,000		
	5,50,550		5,50,550

Adjustments:

i. Closing stock was Rs. 1,30,000 on 31st December, 2016.

ii. Create 5% provision for bad and doubtful debts on sundry debtors

iii. Create provision at 2% for discount on debtors

iv. Interest on loan due for 9 months.

Solution

In the books of Edward

Dr. Trading and Profit and Loss Account for the year ended 31st December, 2016 Cr.

Particulars	₹	₹	Particulars	₹	₹
To Opening Stock		89,700	By Sales	3,56,500	
To Purchases		2,56,500	Less: Returns inward	2,500	3,54,000
To Coal, gas and water		10,500	By Closing stock		1,30,000
To Gross profit c/d		1,27,300			
		4,84,000			4,84,000
To Travelling expenses		51,250	By Gross Profit b/d		1,27,300
To Interest on loan paid	300		By Interest on		
Add: Interest outstanding	900	1,200	investments		2,550
(20,000 x 6/100 x 9/12)					
To Repairs		4,090			
To Provision for bad and doubtful debts		3,000			
To Provision for discount on debtors		1,140			
To Net profit (transferred to capital A/c)		69,170			
		1,29,850			1,29,850

Balance Sheet as on 31st December, 2016

Liabilities	₹	₹	Assets	₹	₹
Capital	1,31,500		Investments		70,000
Add: Net profit	69,170		Stock in trade		1,30,000
	2,00,670		Sundry debtors	60,000	
Less: Drawings	5,000	1,95,670	Less: Provision for		
6% Loan	20,000		bad and doubtful		
Add: Interest outstanding	900	20,900	debts (60,000 x 5/100)	3,000	
Sundry creditors		40,000		57,000	
			Less: Provision for discount on debtors		
			(57,000 x 2/100)	1,140	55,860
			Petty cash		710
		2,56,570			2,56,570

Illustration 18

Following is the trial balance of Brijesh. Prepare final accounts for the year ended on 31st March, 2016.

Particulars	Debit ₹	Credit ₹
Stock as on 01-04-2015	2,00,000	
Purchases and Sales	22,00,000	33,00,000
Returns	1,00,000	80,000
Carriage inwards	50,000	
Salaries	2,60,000	
Insurance	1,20,000	
Wages	80,000	
Bad debts	10,000	
Furniture	7,00,000	
Capital		7,50,000
Printing and stationery	80,000	
Cash at bank	3,15,000	
Petty cash	5,000	
Commission	10,000	
	41,30,000	41,30,000

Adjustments:

i. Stock on 31st March, 2016 was valued at Rs. 4,00,000.

ii. Depreciate furniture @ 10% p.a.

iii. Insurance of Rs. 60,000 was paid in advance

iv. Commission receivable Rs. 50,000.

Solution

In the books of Brijesh

Dr. Trading and Profit and Loss Account for the year ended 31st March, 2016 Cr.

Particulars	₹	₹	Particulars	₹	₹
To Opening Stock		2,00,000	By Sales	33,00,000	
To Purchases	22,00,000		Less: Returns	1,00,000	32,00,000
Less: Returns	80,000	21,20,000	By Closing stock		4,00,000
To Carriage inwards		50,000			
To Wages		80,000			
To Gross profit c/d		**11,50,000**			
		36,00,000			36,00,000
To Salaries		2,60,000	By Gross profit b/d		11,50,000
To Insurance	1,20,000		By Commission		
Less: Prepaid	60,000	60,000	receivable		50,000
To Bad debts		10,000			
To Printing and stationery		80,000			
To Depreciation on furniture (7,00,000 x 10/100)		70,000			
To Commission		10,000			
To Net profit (transferred to capital A/c)		**7,10,000**			
		12,00,000			12,00,000

Balance Sheet as on 31st March, 2016

Liabilities	₹	₹	Assets	₹	₹
Capital	7,50,000		Furniture	7,00,000	
Add: Net profit	7,10,000	14,60,000	Less: Depreciation	70,000	6,30,000
			Stock in trade		4,00,000
			Commission receivable		50,000
			Insurance prepaid		60,000
			Cash at bank		3,15,000
			Petty cash		5,000
		14,60,000			14,60,000

Illustration 19

Given below are the balances of Pandian as on 31st March, 2016.

Particulars	Debit ₹	Credit ₹
Capital		1,20,000
Sundry debtors and creditors	22,000	22,500
Sales		59,700
Drawings	2,000	
Cash in hand	8,200	
Cash at bank	30,000	
Wages	2,500	
Purchases	10,000	
Opening stock	30,000	
Business premises	60,000	
Bills receivable	14,500	
Office telephone expenses	3,500	
General expenses	9,000	
Goodwill	10,500	
	2,02,200	2,02,200

Adjustments:

i. The stock value at the end of the accounting period was Rs. 5,000

ii. Interest on capital at 6% is to be provided

iii. Interest on drawing at 5% is to be provided

iv. Write off bad debts amounting to Rs. 2,000

v. Create provision for bad and doubtful debts on sundry debtors @ 10%

vi. Prepare final accounts for the year ended 31st March, 2016.

Solution

In the books of Pandian

Dr. Trading and Profit and Loss Account for the year ended 31st March, 2016 Cr.

Particulars	₹	₹	Particulars	₹	₹
To Opening stock		30,000	By Sales		59,700
To Purchases		10,000	By Closing Stock		5,000
To Wages		2,500			
To Gross Profit c/d		**22,200**			
		64,700			64,700
To Office telephone expenses		3,500	By Gross profit b/d		22,200
To General expenses		9,000	By Interest on drawings (2000 x5/100)		100
To Interest on capital (1,20,000 x 6/100)		7,200	By Net loss (transferred to capital account)		**1,400**
To Bad debts		2,000			
To Provision for bad and doubtful debts		2,000			
		23,700			23,700

Balance Sheet as on 31st March, 2016

Liabilities	₹	₹	Assets	₹	₹
Capital	1,20,000		Goodwill		10,500
Less: Net loss	1,400		Business premises		60,000
	1,18,600		Stock in trade		5,000
Add: Interest on capital	7,200		Sundry debtors	22,000	
	1,25,800		Less: Bad debts	2,000	
Less: Drawings and Interest on drawings (2000+100)	2,100	1,23,700		20,000	
Sundry creditors		22,500	Less: Provision for bad and doubtful debts (20,000 x 10/100)	2,000	18,000
			Bills receivable		14,500
			Cash at bank		30,000
			Cash in hand		8,200
		1,46,200			1,46,200

Illustration 20

From the trial balance of Ajith and the adjustments given below, prepare trading and profit and loss A/c for the year ended 31st March, 2016 and the balance sheet as on that date.

Particulars	Debit ₹	Particulars	Credit ₹
Opening stock	15,000	Capital	25,000
Furniture and fixtures	30,000	Returns outward	1,000
Purchases	40,000	Bills payable	10,000
Sales returns	2,000	Sales	1,24,000
Carriage inwards	10,000	Provision for doubtful debts	500
Office rent	23,000	Provision for discount on debtors	100
Sundry debtors	20,100		
Bank balance	19,600		
Bad debts	900		
	1,60,600		1,60,600

Adjustments:

i. Stock at the end of the year was Rs. 8,000

ii. Further bad debts amounted to Rs. 100

iii. Create 2% provision for doubtful debts on sundry debtors

iv. Create 1% provision for discount on sundry debtors

In the books of Ajith

Dr. Trading and Profit and Loss Account for the year ended 31st March, 2016 Cr.

Particulars	₹	₹	Particulars	₹	₹
To Opening Stock		15,000	By Sales	1,24,000	
To Purchases	40,000		Less: Sales returns	2,000	1,22,000
Less: Returns outward	1,000	39,000	By Closing stock		8,000
To Carriage inwards		10,000			
To Gross profit c/d		**66,000**			
		1,30,000			1,30,000
To Office rent		23,000	By Gross profit b/d		66,000
To Provision for bad and doubtful debts (closing)	400				
Add: Bad debts	900				
Add: Further bad debts	100				
	1,400				
Less: Provision for bad and doubtful debts (opening)	500	900			
To Provision for discount on debtors (closing)	196				
Less: Provision for discount on debtors (opening)	100	96			
To Net profit (transferred to capital A/c)		**42,004**			
		66,000			66,000

Balance Sheet as on 31st March, 2016

Liabilities	₹	₹	Assets	₹	₹
Capital	25,000		Furniture and fixtures		30,000
Add: Net profit	42,004	67,004	Sundry debtors	20,100	
Bills payable		10,000	Less: Further bad debts	100	
				20,000	
			Less: Provision for bad and doubtful debts (20,000 × 2%)	400	
				19,600	
			Less: Provision for discount (19,600 × 1%)	196	19,404
			Stock-in-trade		8,000
			Cash at bank		19,600
		77,004			77,004

Illustration 21

The following trial balance has been extracted from the books of Rajesh on 31st December, 2016.

Debit balance	₹	Credit balance	₹
Drawings	44,000	Capital	1,76,000
Plant and machinery	1,00,000	Cash sales	1,72,000
Opening stock	20,000	Provision for bad and doubtful debts	
Purchases	2,70,000		2,000
Wages	62,000	Bank overdraft	20,000
Salaries	70,000	Discount received	6,000
Insurance	45,000	Credit sales	3,00,000
Rent and taxes	17,000	Sundry creditors	24,000
Sundry debtors	50,000		
Suspense A/c	22,000		
	7,00,000		7,00,000

The following adjustments are to be made:

i. Stock on 31st December, 2016 was Rs. 28,000

ii. Unexpired insurance was Rs. 15,000

iii. Provision for doubtful debts is to be maintained at 5% on sundry debtors.

iv. Depreciate plant and machinery at 20%.

You are required to prepare trading and profit and loss account for the year ended 31st December, 2016 and a balance sheet as on that date.

In the books of Rajesh

Dr. Trading and Profit and Loss Account for the year ended 31st December, 2016 Cr.

Particulars	₹	₹	Particulars	₹	₹
To Opening stock		20,000	By Sales: Cash	1,72,000	
To Purchases		2,70,000	Credit	3,00,000	4,72,000
To Wages		62,000	By Closing stock		28,000
To Gross profit c/d		1,48,000			
		5,00,000			5,00,000
To Salaries		70,000	By Gross profit b/d		1,48,000
To Insurance	45,000		By Discount received		6,000
Less: Unexpired	15,000	30,000	By Provision for bad		
To Rent and taxes		17,000	and doubtful debts		
To Depreciation on plant			(opening)	2,000	
and machinery		20,000	Less: Closing	1,000	1,000
(1,00,000 × 20%)			provision		
To Net profit (transferred					
to capital A/c)		18,000			
		1,55,000			1,55,000

Balance Sheet as on 31st December, 2016

Liabilities	₹	₹	Assets	₹	₹
Capital	1,76,000		Plant & Machinery	1,00,000	
Add: Net profit	18,000		Less: Depreciation	20,000	80,000
	1,94,000		Stock-in-trade		28,000
Less: Drawings	44,000	1,50,000	Sundry debtors	50,000	
Sundry creditors		24,000	Less: Provision		
Bank overdraft		20,000	for bad and doubtful		
			debts (2%)	1,000	49,000
			Unexpired insurance		15,000
			Suspense A/c		22,000
		1,94,000			1,94,000