UNIT-I

INTRODUCTION TO MANAGERIAL ECONOMICS

The father of economics is "**ADAM SMITH"**

Introduction to Economics :

Economics is a study of human activity for both individual and national level. Everyone is involving earning money and spending money to satisfy our needs and wants such as food, Clothing, shelter, and others. Such activities of earning and spending money are called "Economic activities".

Types of Economics

1. **Micro Economics**
2. **Macro Economics**

1. Micro Economics

The study of an individual firm is called microeconomics. 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.

2. Macro Economics

The study of Industry is called *macroeconomics*. It deals with total national income, total employment, output and total investment. It studies the interrelations among various aggregates and examines their nature and behavior, their determination and causes of fluctuations in it.

Meaning of Managerial Economics

Managerial Economics means provide necessary tools to get solution for a particular problem in the business. Managerial Economics refers to the firm's decision making process.

Definition of Managerial Economics

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

Nature of Managerial Economics

(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) **Normative statements:** A normative statements 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.

(c) **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 or not.

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

Scope of Managerial Economics

1. Demand Analysis

Demand analysis should be a basic activity of the firm because many of the other activities of the firms depend upon the outcome of the demand forecast. Demand analysis provides:

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 Analysis

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.

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. 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.

Managerial Economics Relationship with Other Disciplines

1. Managerial Economics Relationship with 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.

2. Managerial Economics Relationship with 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, how 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.

3. Managerial Economics Relationship with 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.

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.

4. 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.

5. Managerial Economics Relationship with 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 program for managerial trainees.

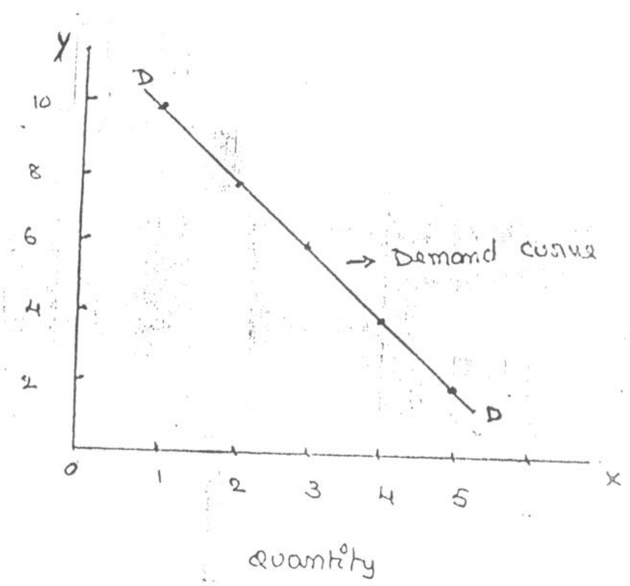
DEMAND ANALYSIS

Demand: Demand in economics means the desire and 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".

LAW of Demand

Law of demand shows the relation between price and quantity demanded of a commodity in the market. 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.

Price



Assumptions of Law of Demand

1. There is no change in consumers taste and preferences.
2. Income of the customer should remain constant.
3. Prices of the commodity should not change.
4. There is no change in customer expectation of future income.
5. Customers should not expect future price of the commodity

DEMAND DETERMINANTS (or) FACTORS DETERMINING DEMAND

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 Customers

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. Tastes and Preferences of the Customers

The amount demanded also depends on Customers tastes and preferences. Tastes include fashion, habit, customs, etc. A Customers tastes and preferences are 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.

4. Customer Expectations of future prices

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.

5. Customer Expectations of future income

The level of demand for different commodities also depends upon the future income of the customers 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 based on income of the customers.

Significance of Elasticity of Demand

1. Price

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. Nationalization

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

4. Internationalization

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.

Demand Forecasting

Introduction

Demand forecasting refers to an estimate of future demand for the product. 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.

Factors Governing Demand Forecasting

1. Durable Consumer Goods
2. Non-Durable Consumer Goods

1. Consumer Durable goods

Each Consumer durable goods has a special market for its product, which in turn has its peculiarities. So, forecasting demand for individual products in such cases requires special techniques adopted to meet these peculiarities. The special difficulties or peculiarities in forecasting in case of consumer durables are as follows

1. Change in size and characteristics of population
2. Existing stock of the good
3. Replacement demand Vs new demand
4. Income levels of consumers
5. Consumer credit outstanding
6. Tastes and Preferences of consumers

2. Non-Durable Consumer Goods

These include those consumer goods which can be used only ones (Examples: Food, Beverages, Tobacco, etc.,). Demand for such goods is basically influenced by the following factors,

1. The purchasing power of the consumer: The purchasing power of the consumer and is equal to personal income minus direct taxes.
2. Price: Demand for a good depends up on its own price vice versa price of its substitutes and complements we know that the demand for a good is negatively related to its own price and rice of its complimentary goods, while it is positively to the price of its substitutes.
3. Size and characteristics of the Population: It is commonly known as demography and refers to the total population , income groups, social status , age , urban- rural ratios , geographical characteristics , level of education etc .consumers demands for non durable is influenced by all these factors

Methods of Demand Forecasting

A. OPINION POLLING METHODS

The Opinion Polling Methods of demand forecasting are of three kinds, as discussed below,

1. Consumer Survey 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.

a. Test Marketing

In this method, a sample of customers is selected for interview. A sample may be random sampling. This method is easy, less costly and also highly useful. Correct sampling and co-operation of the consumers are essential for the success of this method.

2. Sales Force Opinion 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.

3. 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.

B. STATISTICAL METHODS

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

1. Mechanical Extrapolation (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.

a. Time Series

We know that a time series is composed of trend, seasonal fluctuations, cyclical movements and irregular variations. If the available data is quarter-wise/month-wise, it is possible to identify the seasonal effect. And, if this data is available for sufficiently long period of time, the trend and cyclical effects can also be found out.

b. Averages

This method is based on the assumption that the future is the average of past achievements. Hence based on past achievements the futures predicted. When the demand is stable this method can provide good forecast. The main issue in averages is determining the ideal number of periods to include the averages

2. Barometric Techniques

a. Leading, Lagging & Coincident Indicators

A leading series consists of the data that move ahead of the series compared. When data in series moves up and down alone with some other, it is known as coincidence. There are lagging series where data moves up and down behind the series being compared.

3. 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.

Demand Function

The demand function means the functional relationship between demand and demand determinants.

Mathematically demand function can be written as,

D= f (P,I,T&P,C.P,C.I -----------------)

Where,

D - Demand

f - Function

P - Price of the commodity

I - Income of the customer

T&P - Taste & Preference of the customer

C.P - Customer expectation of future price

C.I - Customer expectation of future income

Important Questions: 2 Marks

1. Define Economics.
2. What is mean by Micro Economics?
3. Meaning of Macro Economics.
4. Define Managerial Economics.
5. Define Demand.
6. Define Elasticity of demand.
7. Define Demand forecasting.
8. What is Production?
9. Define Law of demand.
10. Explain the Demand function.

Important Questions: 10 Marks

1. Define Managerial Economics. Explain the Nature and Scope of Managerial Economics.
2. Define Demand. Explain the Demand Determinants and Significance of Elasticity of Demand.
3. Define Elasticity of demand? Elaborate the Price, Income and Cross Elasticity of Demand.
4. Define Demand Forecasting. Explain the Methods of Demand Forecasting.
5. Write the Relationship of managerial economics with other disciplines? And explain the factors governing demand forecasting.

UNIT - II

THEORY OF PRODUCTION AND COST ANALYSIS

Production Function

The production function expresses a functional relationship between inputs and output of the firm. The output is a function of inputs. Mathematically production function can be written as,

$$Q = f(A, B, C, \text{-----------------})$$

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

Assumptions of Production Function

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

Cobb-Douglas Production Function

This famous statistical production function is known as Cobb-Douglas production function. Originally the function is applied on the empirical study of the American manufacturing industry. Cobb–Douglas production function takes the following mathematical form.

$$Q = (AK^{E} L^{1-E})$$

Where,

Q=output

K=Capital

L=Labour

A=positive constant

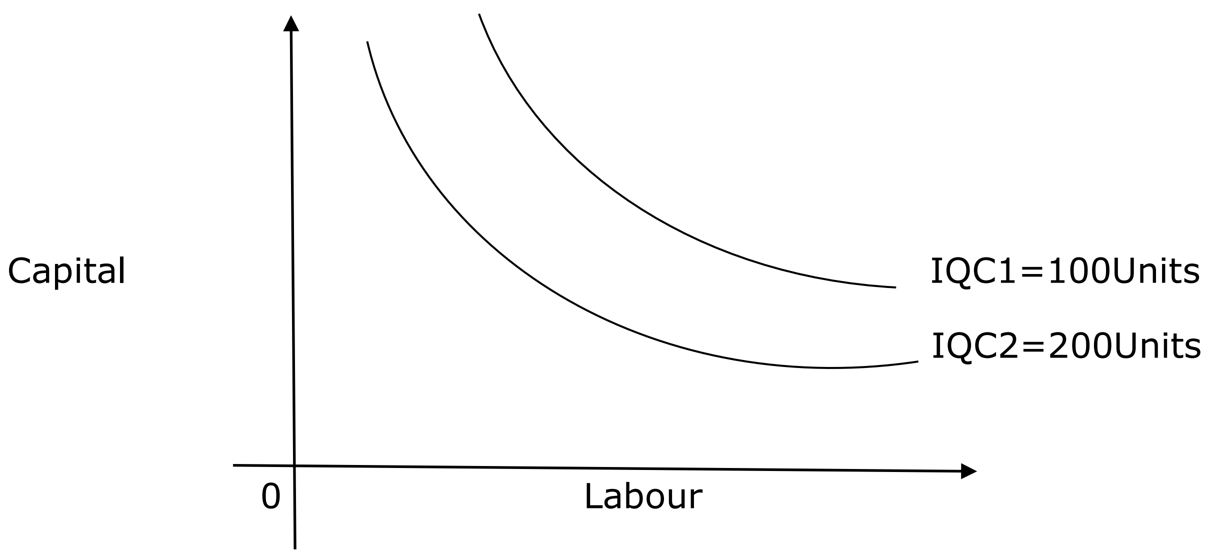
E=Elasticity of demand

Assumptions of Cobb-Douglas Production Function

1. The function assumes that output is the function of two factors viz. capital and labour.
2. It is a linear homogenous production function of the first degree
3. All inputs are homogenous
4. There is no change in technology

ISO-QUANT

The term Isoquant is derived from the words 'iso' and 'quant'. 'Iso' means equal and 'quant' means quantity, therefore Isoquant means equal quantity but different in inputs. Iso-quants are the curves, which represent the different combinations of inputs producing the same level of output. Any combination on the Iso-quant represents the same level of output.

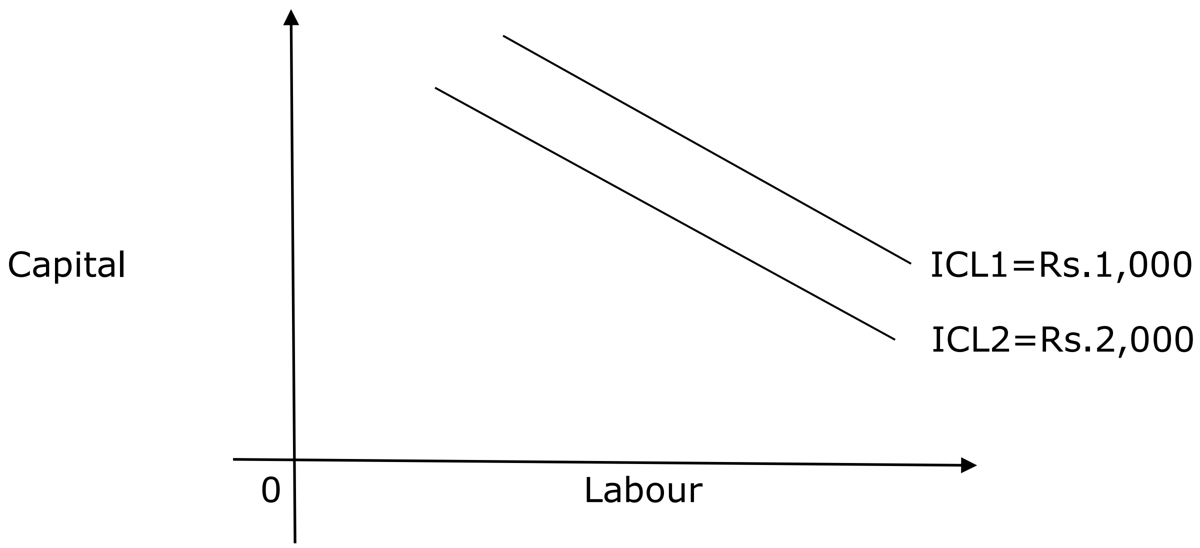


Assumptions of Iso-Quant

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

ISO-COST

The term Isocost is derived from the words 'iso' and 'cost'. 'Iso' means equal and 'cost' means cost of output, therefore Isocosts means equal cost of output but different in cost of inputs. Isocosts are the lines, which represents the different cost of inputs producing the same cost of output. Any combination on the Isocosts represents the same cost of output.



Marginal Rate of Technical Substitution (MRTS)

Marginal Rate of Technical Substitution (*MRTS) means the change in one input which leads to change in another input.*

$$MRTS = \frac{\text{Change in one input}}{\text{Change in another input}}$$

$$MRTS = \frac{\Delta K}{\Delta L}$$

Where Δk= change in capital.

ΔL=change in labour.

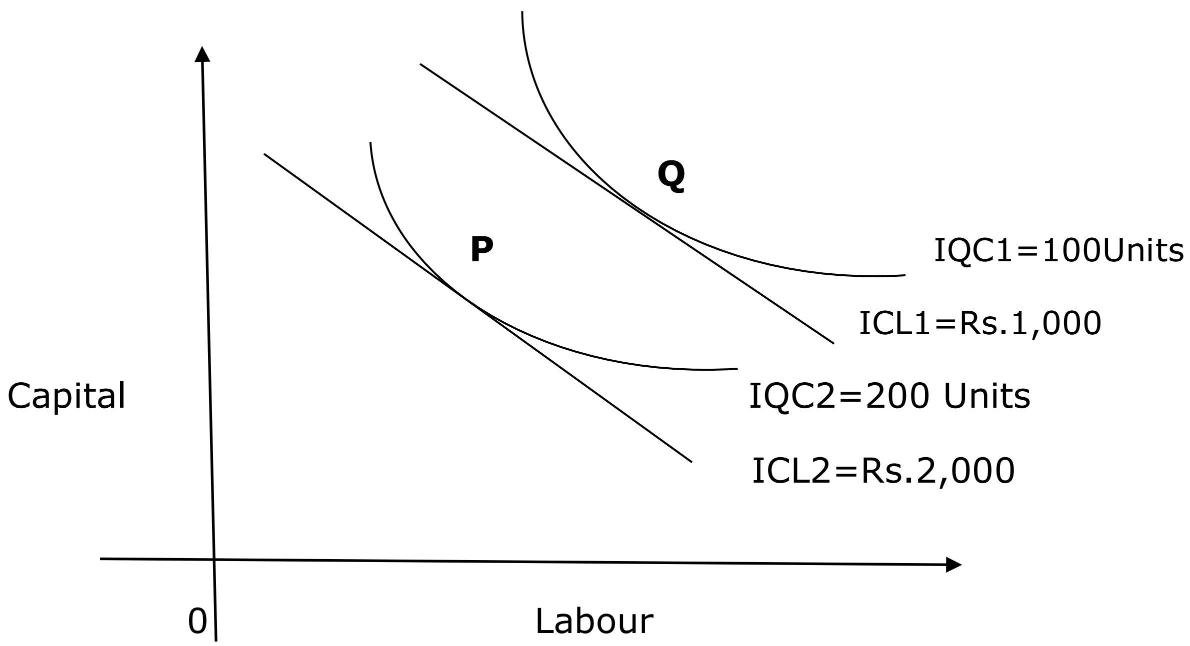
Calculation of MRTS

Combinations	Capital(Rs. In lakh)	Labour	MRTS
A	1	20	-
B	2	15	1:5
C	3	11	1:4
D	4	8	1:3
E	5	6	1:2
F	6	5	1:1

Least Cost Combination of Inputs

The manufacturer has to produce at lower cost to attain higher profits. The Iso-costs &Iso-quants can be used to determine the input usage that minimizes the production.

The point, Where the intersecting of Iso-quants curves and Iso-costs lines is known as Least Cost Combination of Inputs. In this point the cost of production decreases and the profit increases.



LAW OF RETURNS TO SCALE

1. Law of increasing returns to scale
2. Law of constant returns to scale
3. Law of decreasing returns to scale

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 labor 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 labor 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 or decrease in volume of output is same to that of rate of increase or decrease in inputs

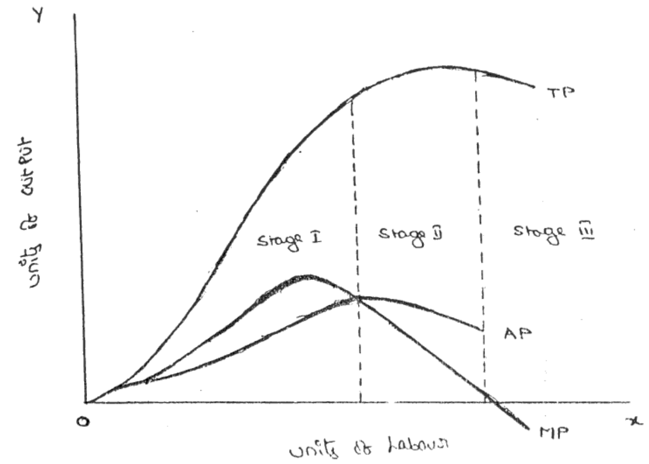
3. **Law of Decreasing Returns to Scale**
   Where the proportionate increase in the inputs does not lead to equivalent increase in output. The output increases at a decreasing rate, the law of decreasing returns to scales is said to operate. This results in higher average cost per unit.

Production Function with One Variable Input (Short-run)

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

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

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



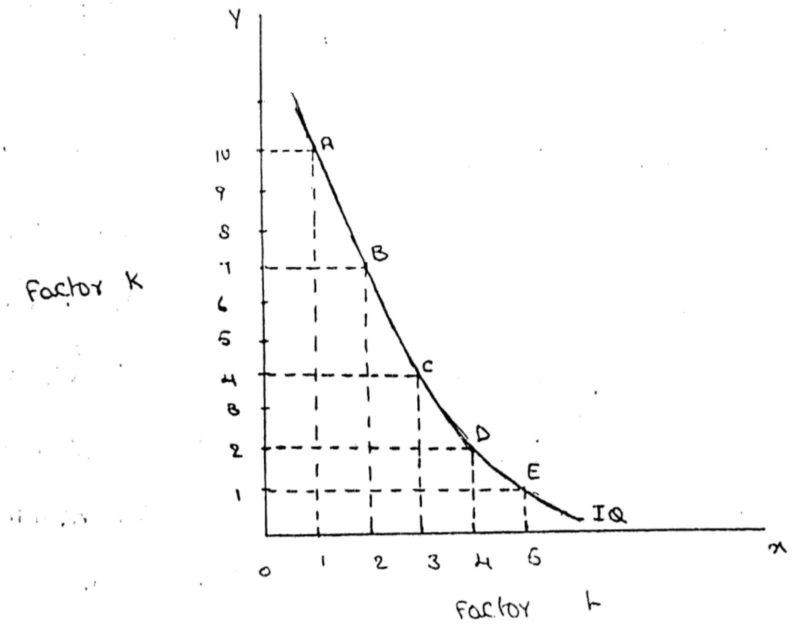
From the above graph the law of variable proportions operates in three stages. In the first stage, total product increases at an increasing rate. The marginal product in this stage increases at an increasing rate resulting in a greater increase in total product. The average product also increases. This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

Production Function with Two Variable Input (Long-run)

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

Combination 'A' represent 1 unit of labour and 10 units of capital and produces '50' quintals of a product all other combinations in the table are assumed to yield the same given output of a product say '50' quintals by employing any one of the alternative combinations of the two factors labour and capital.

If we plot all these combinations on a paper and join them, we will get continues and smooth curve called Iso-product curve as shown below. Labour is on the X-axis and capital is on the Y-axis. IQ is the ISO-Product curve which shows all the alternative combinations A, B, C, D, E which can produce 50 quintals of a product.



ECONOMIES OF SCALE

Internal Economies

A). Financial Economies

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.

B). 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.

C). 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.

D). Research Economies

A large firm possesses larger resources and can establish it's own research laboratory and employ trained research workers. The firm may even invent new production techniques for increasing its output and reducing cost.

External Economies

A). Economies of Concentration

When an industry is concentrated in a particular area, all the member firms reap some common economies like skilled labor, 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). Economies of Information

The industry can set up an information centre which may publish a journal and pass on information regarding the availability of raw materials, modern machines, export potentialities and provide other information needed by the firms. It will benefit all firms and reduction in their costs.

Cost Concepts/Types of Cost

1. Opportunity Costs (or) Alternative Costs

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.

2. Explicit Costs (or) Out-of Pocket 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.

3. Implicit Costs (or) Imputed Costs

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.

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. 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.

6. Past and Future Costs

Past 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.

7. Total, Average and Marginal Costs

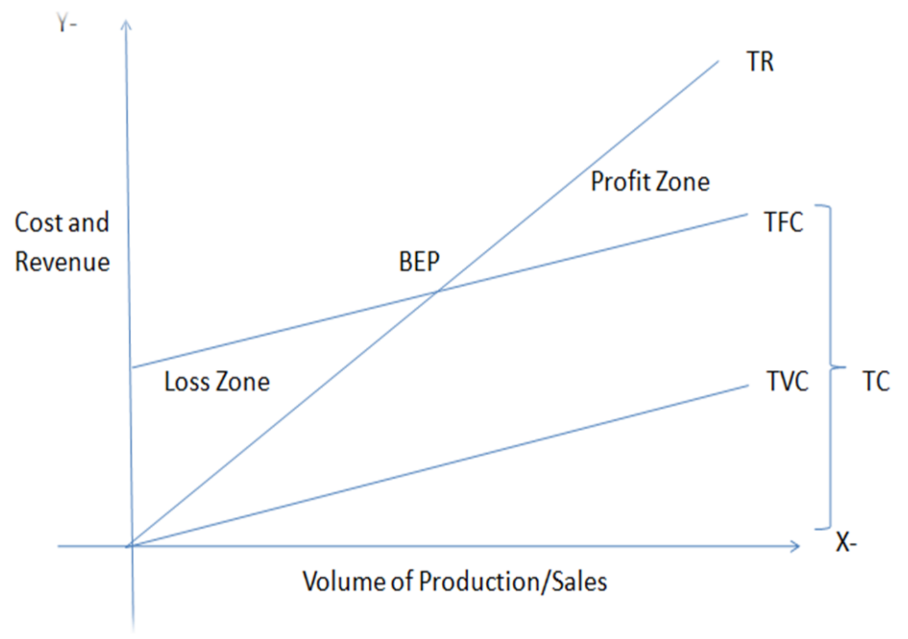
Total cost is the total cash payment made for the input needed for production. It may be explicit or implicit. It is the sum total of the fixed and variable costs. Average cost is the cost per unit of output. If is obtained by dividing the total cost (TC) by the total quantity produced (Q)

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

BREAK-EVEN ANALYSIS (BEA)

The study of cost-volume-profit relationship is known as Break-Even Analysis (BEA). In its narrow sense, it is concerned with finding out BEP. BEP is the point at which total revenue is equal to total cost. It is the point of no profit, no loss.

Determination of Break Even Point



TVC=Total Variable Cost

TFC=Total Fixed Cost

TC=Total Cost

TC=TVC+TFC

TR=Total Revenue

- BEP is a point where intersecting of Total cost and Total revenue
- **BEP** means "**No Profit and No Loss"** of the company
- **Profit Zone**: Above BEP is called Profit Zone
- **Loss Zone**: Below BEP is called Loss Zone

BEP Formulas

1. 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.

2. Profit Volume Ratio

The formula is, $\text{Profit Volume Ratio} = \dfrac{\text{Contribution}}{\text{Selling Price}} \times 100\%$

3.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.

$$\text{Break Even point (OUTPUT in Units)} = \frac{\text{Fixed Cost}}{\text{Contribution per unit}}$$

$$\text{Break Even point (SALES in Rupees)} = \frac{\text{Fixed Cost}}{\text{Contribution per unit}} \times \text{Selling Price}$$

4. Margin of Safety

Margin of Safety =Actual sales – BEP sales

Margin of Safety =Actual Units – BEP Units

Assumptions of Break-Even Analysis

1. All costs are classified into two – fixed and variable costs.
2. Fixed costs remain constant at all levels of output.
3. Variable costs vary proportionally with the volume of output.
4. There will be no change in operating efficiency.
5. There will be no change in the general price level.
6. Volume of production is the only factor affecting the cost.

Significance of Break-Even Analysis

1. To compare the product lines for individual company.
2. To calculate sales required to earn a particular desired level of profit.
3. To compare the efficiency of the different firms.
4. To decide whether to add a product to the existing product line or drop from it.

Limitations of Break-Even Analysis

1. Break-Even point is based on fixed cost, variable cost and total revenue. A change in one variable is going to affect the BEP.
2. All costs cannot be classified into fixed and variable costs. We have semi-variable costs also.
3. Where the business conditions are volatile, BEP cannot give stable results.

Problem1.

If 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.

a. Determine break-even point in terms of volume and sales value.

b. Calculate the margin of safety considering that the actual production is 8000 units.

c. Calculate P/V ratio.

Solution: **a) Determination of BEP in units:**

BEP in units = Fixed cost / Contribution

Contribution= Selling price – Variable cost

=5-3=2

BEP in units=10000/2=5000 units.

Determination of BEP in sales:

$$\text{BEP in sales} = \frac{\text{Fixed cost}}{\text{Contribution}} \times \text{Selling Price}$$

Contribution= Selling price – Variable cost

=5-3=2

BEP in sales =(10000/2)X5

=Rs.25000

B) Margin of safety = Actual Units – BEP Units

=8,000 – 5,000

=3,000 units

C) P/V Ratio

$$\text{P/V Ratio} = \frac{\text{Contribution}}{\text{Selling Price}} \times 100\% = (2/5)\text{X}100 = 40\%$$

Important Questions: 2 Marks

1. What is Production?
2. Explain the Isoquant.
3. What is Cost?
4. What is Break Even point?
5. Define Production Function.
6. Explain the Isocost.
7. Explain Cobb-Douglas Production Function.
8. Explain Least cost combination of inputs.
9. Implicit cost Vs Explicit cost.
10. Differentiate Variable cost and Fixed cost.

Important Questions: 10 Marks

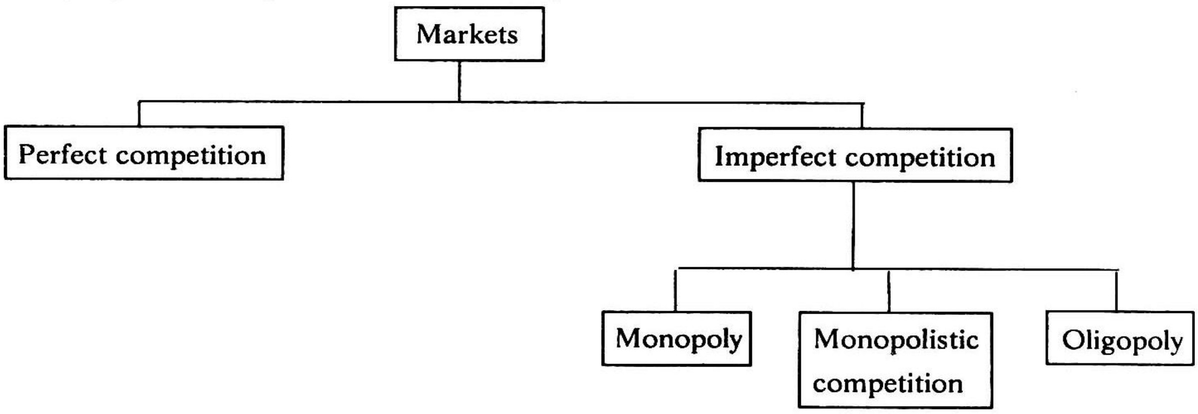
1. Elaborate the Isoquant, Isocost and MRTS.
2. Explain Production Function with one variable and two variables.
3. Explain the Law of returns and Economies of Scale.
4. Define Cost. Explain the types of Cost (Cost Concepts).
5. Determination of Break Even Point with graph, Significance & Limitations of Break Even Analysis.

UNIT – III
INTRODUCTION TO MARKETS AND NEW ECONOMIC ENVIRONMENT

Meaning of Market
Market means a place where to buy & sell the goods and services. Example: Super Market and Share Market.

Definition of Market
According to Benham, Market is any area over which buyers and sellers are in close touch with one another, either directly or indirectly. That the price obtainable in one part of the market affects the prices paid in other parts.

CLASSIFICATION OF MARKETS



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.

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

1. **A large number of Buyers and Sellers**
   The number of buyers and sellers is large and the share of each one of them in the market is so small that none has any influence on the market price.
2. **Homogeneous product**
   The product of each seller is totally undifferentiated from those of the others.
3. **Free entry and exit**
   Any buyer and seller is free to enter or leave the market of the commodity.

4. **Perfect knowledge**
   All buyers and sellers have perfect knowledge about the market for the commodity.
5. **Each firm is a price taker**: A firm in a perfect market cannot influence the market through its own actions. It has no alternative other than selling its products at price prevailing in the market.

MONOPOLY

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

Features of Monopoly

The following are the features of monopoly.

1. **Single 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. **Large number of Buyers**
   Under monopoly, there may be a large number of buyers in the market who compete among themselves.
3. **Price Maker**
   Since the monopolist controls the whole supply of a commodity, he is a price-maker, and then he can change the price.
4. **Free entry and exit**
   Any buyer and seller is free to enter or leave the market of the commodity.

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.

Features of Oligopoly

The main features of oligopoly are:

1. **Two (or) 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. **Large number of Buyers**

Under monopoly, there may be a large number of buyers in the market who compete among themselves.

3.Each firm is a price taker: A firm in a perfect market cannot influence the market through its own actions. It has no alternative other than selling its products at price prevailing in the market.

4.Free entry and exit

Any buyer and seller is free to enter or leave the market of the commodity.

MONOPOLISTIC COMPETITION

The large number of sellers produce different type of products in the market is called Monopolistic Competition

Features of Monopolistic Competition

The important characteristics of monopolistic competition are:

1. **A large number of Sellers**

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. **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.

3. **Product Differentiation/Heterogeneous Products**

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.

4. **Free Entry and Exist of Firms**

As in the perfect competition, in the monopolistic competition too, there is freedom of entry and exit. That is, there is no barrier as found under monopoly.

5. **Each firm is a price taker**: A firm in a perfect market cannot influence the market through its own actions. It has no alternative other than selling its products at price prevailing in the market.

PRICING METHODS

Cost Based Pricing Methods

1. **Cost plus pricing:** this is also called as full cost method or mark up pricing. Here average cost at normal capacity of output is ascertained and then conventional margin of profit is added to the cost to arrive at the price. In other words find out the product units total cost and add a 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 followed in departmental stores, and other retail shops

2. **Marginal cost pricing:** in marginal cost pricing selling price is fixed in such a way that it covers fully the variable cost and contributes towards recovery of fixed cost fully or partly depending up on the market situation.
   - ✓ This is also called as target pricing.
   - ✓ Selling price = variable cost+ some rate of return

Competition based Pricing Methods

1.Going rate pricing

Under this method firm prices its new product according to the prevailing prices of comparable products in the market. If the product is new in the country, then its import cost – inclusive of the costs of certificates, insurance, and freight and customs duty, is used as the basis for pricing, Incidentally, the price is not necessarily equal to the import cost, but to the firm is either new in the country, or is a close substitute or complimentary to some other products, the prices of hitherto existing bands or / and of the related goods are taken in to a account while deciding its price. Thus, when television was first manufactures in India, its import cost must have been a guiding force in its price determination. Similarly, when

Maruti car was first manufactured in India, it must have taken into account the prices of existing cars, price of petrol, price of car accessories, etc. Needless to say, the going rate price could be below or above the average cost and it could even be an economic price.

2.Sealed bid pricing

It is quite popular in the case of construction activities and in the disposition of used produces. In this method the prospective seller (buyers) are asked to quote their prices through a sealed cover, all the offers are opened at a preannounce time in the presence of all the competitors, and the one who quoted the least is awarded the contract (purchase / sale deed).

As it sound, this method is totally competition based and if the competitors unit by any change, the buyers (seller) may have to pay (receive) an exorbitantly high (too low) price, thus there is a great degree of risk attached to this method of pricing.

Demand Based Pricing Methods

1.Perceived value pricing: it considers the buyer's perception of the value of the product add the basis of pricing. Here the pricing rule is that the firm must develop procedures for measuring the relative value of the product as perceived by consumers. Differential pricing is nothing but price discrimination. In involves selling a product or service for different prices in different market segments. Price differentiation depends on geographical location of the consumers, type of consumer, purchasing quantity, season, time of the service etc. E.g. Telephone charges, APSRTC charges.

2.Price discrimination: Price discrimination is a microeconomic pricing strategy where identical or largely similar goods or services are transacted at different prices by the same provider in different markets.

Strategy Based Pricing Methods

1.Market Skimming pricing method:
When the product is introduced in the market for the first time, the company follows skimming method under this method the company fixes very high price for product. And decreases when they get maximum profits.
Example: sony TV, dove

2.Market penetration pricing method:
it is exactly opposite to the skimming method. Here the price of the product is fixed at low prices after getting the customer attention they increase the price of products.
Example: services provided by the hotels.

Business/Enterprise

It means directly (or) indirectly concerned with the production, sale and exchange of goods/ services on regular basis with profit motive.

Characteristics of Business

- It deals with goods/ services
- It involves production, sale and exchange
- It involves regularity
- It involves risk: insurable risk, non-insurable risk
- It involves taxes

Forms(or)Types of Business/Enterprises

1. Private Enterprises
2. Public Enterprises

Private Enterprise

An enterprise is said to be private enterprise, where it is owned, managed and controlled by people (other than government).

Forms of Private Enterprises

Public enterprises can be classified into:

(a) Single Ownership/Sole Proprietorship
(b) Partnership
(c) Joint Stock Company

SOLE PROPRIETORSHIP

An enterprise is said to be Single ownership, where it is owned, managed and controlled by single person (other than government).

ADVANTAGES

1. **Easy to start and easy to close:** Formation of a sole trader from of organization is relatively easy even closing the business is easy.
2. **Quick decisions:** 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.
3. **High degree of flexibility:** Based on the profitability, the trader can decide to continue or change the business, if he need.
4. **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.
5. **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.

PARTNERSHIP

An enterprise is said to be partnership, where it is owned, managed and controlled by two (or) more people (other than government).

ADVANTAGES

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. **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.

4. **Quick decisions:** If there is consensus among partners, it is enough to implement any decision and initiate prompt action. Sometimes, it may more time for the partners on strategic issues to reach consensus.
5. **The positive impact of unlimited liability:** Every partner is always alert about his impending danger of unlimited liability. Hence he tries to do his best to bring profits for the partnership firm by making good use of all his contacts.

JOINT STOCK COMPANY

It means people come together to earn money by investing in the stock of company jointly.

ADVANTAGES

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. **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.

Public Enterprise

An enterprise is said to be public enterprise, where it is owned, managed and controlled by the State government/Central government.

Forms of Public Enterprises

Public enterprises can be classified into:
1.Public corporation
2.Government company

1. PUBLIC CORPORATION

An enterprise is said to be public corporation, where it is owned, managed and controlled by the State government/Central government (100% investment)

ADVANTAGES

1. **Independent, 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. **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.
3. **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.
4. **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.
5. **Public accountability**: It is accountable to the Parliament or legislature; it has to submit its annual report on its working results.

2. Government Company

An enterprise is said to be Government Company, where it is owned, managed and controlled by the State government/Central government (at least 51% investment)

ADVANTAGES

1. **Formation is easy**: There is no need for an Act in legislature or parliament to promote a government company. A Government company can be promoted as per the provisions of the companies Act. Which is relatively easier?
2. **Flexibility**: A Government company is more flexible than a departmental undertaking or public corporation. Necessary changes can be initiated, which the framework of the company law. Government can, if necessary, change the provisions of the Companies Act. If found restricting the freedom of the government company. The form of Government Company is so flexible that it can be used for taking over sick units promoting strategic industries in the context of national security and interest.
3. **Quick decisions**: In view of the autonomy, the government company take decision quickly and ensure that the actions and initiated promptly.
4. **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.

New Economic Environment

1.Liberalization
2.Privatization
3.Globalization

Liberalization

Advantages:

1. **Improvement in Health care:** liberalization has also positively affected the overall health care situation in the country. More and more medical innovations are coming which are improving the health condition. The infant mortality rate and the malnutrition rate have significantly come down since the last decade. All these factors clearly provide that the globalization helped to reduce the India's poverty level.
2. **Growth of agriculture:** a major portion of th4e poverty level in India is from the rural areas whose staple from income is agriculture and farming. Due to the globalization, Indian agriculture has improved to some extent which has helped to reduce the poverty problems in the rural masses.
3. **Employment Generation:** liberalization also put effect on employment scenario of the country. Over the years due to the liberalization policies, India has become a consumer oriented market where the changes are brought by demand and supply forces. Due to the right demand and supply chains, there has been significant growth in the market. As such more and more job opportunities have been created in different sectors. This increase per capital income which has improved poverty level great extent.
4. **Mergers in India:** the extents which cross border mergers and acquisitions are growing due to the globalization process. It has been observed of late that there are several sectors of the economy thet heating up with a number of cross border mergers and global alliances. This is only to improve the economic state of the country.

Privatization

Advantages:

1. Franchising: public enterprise may develop new technology in products/service which are then franchised to private sector companies for more production. So that the public enterprise do not invest additional manufacturing facilities.
2. Leasing: in this case the owner ship remains with the public enterprise. They lease out assets, particularly ideal and underutilized ones, to the private sector.
3. Contracting: another form of privatization is contracting. It is common method in public works defense and many specialized services. Contracts for road constructions, bridge construction and maintenance common in countries like India.

Globalization

Advantages

1. **Provide employment:** the benefit of the globalization in the Indian economy are that many foreign companies set up industries in India, this helped India to provide employment opportunities for many people in India.
2. **Updated Technology:** The benefits of the globalization on Indian industry are that foreign companies bring updated technology with them. And this helped to make the Indian industry more technological advanced
3. **Goods and services:** as the markets became global, more goods and services are made available at lower cost to the wider people.
4. **Lower prices and higher quality:** Indian consumers already getting the higher quality products with lower prices. Increased industrialization, spread of technology and increased production and consumption leads to lower prices for products with high quality.
5. **Cultural exchange and demand for products:** globalization reduces the physical distance among the countries and enables people of different countries to acquire the culture of other countries. The cultural exchange among the countries, I turn make the people to demand for variety of products.

Important Questions: 2 Marks

1. What is Monopolistic competition?
2. Explain the Perfect competition.
3. What is Oligopoly?
4. What is Monopoly?
5. What are the pricing objectives?
6. Explain the Partnership.
7. Explain the sole proprietorship.
8. Explain the Globalization.
9. Explain the Privatization.
10. Explain the Skimming and Penetration Pricing.

Important Questions: 10 Marks

1. Explain the types of markets.
2. Explain the Pricing methods.
3. Explain the Private and Public enterprises.
4. Explain the New economic environment/concept of LPG.
5. Explain the price output determination in perfect competition and Monopoly.

UNIT – IV
INTRODUCTION TO FINANCIAL ACCOUNTING AND ANALYSIS

DEFINITION OF ACCOUNTING

Accounting can be defined as an art of recording, classifying and summarizing the financial transactions in a significant manner.

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. **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.
4. **Tax matters:** Properly maintained book-keeping records will help in the settlement of all tax matters with the tax authorities.
5. **Documentary evidence:** Accounting records can also be used as evidence in the court to substantiate the claim of the business. These records are based on documentary proof. Every entry is supported by authentic vouchers. As such, Courts accept these records as evidence.
6. **Helpful to management:** Accounting is useful to the management in various ways. It enables the management to assess the achievement of its performance. The weakness of the business can be identified and corrective measures can be applied to remove them with the helps accounting.

ACCOUNTING PRINCIPLES

The accounting principles are classified into two types,

They are,

1. Accounting Concepts
2. Accounting Conventions

ACCOUNTING CONCEPTS

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

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

3. Money Measurement Concept: In this concept "Only those transactions are recorded in accounting which can be expressed in terms of money, those transactions which 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 Aspect Concept: According to this concept "Every business transactions has two aspects", one is the receiving benefit aspect another one is giving benefit aspect. The receiving benefit aspect is termed as "DEBIT", whereas the giving benefit aspect is termed as "CREDIT". Therefore, for every debit, there will be corresponding credit.

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

ACCOUNTING CONVENTIONS

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

2. Materiality: Under this convention the trader records important factor about the commercial activities. In the form of financial statements if any unimportant information is to be given for the sake of clarity it will be given as footnotes.

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

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

CLASSIFICATION OF ACCOUNTS

The accounts are classified into three categories.

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.

Eg: Krishna's A/C, Gopal's A/C, SBI A/C, Nagarjuna FinanaceLtd.A/C, Sons A/C , HMT Ltd. A/C,Capital A/C, Drawings A/C etc.

2. **Real Accounts:** The accounts are related 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 .

Eg: Cash A/C, Furniture A/C, Building A/C, Machinery A/C etc.

3. **Nominal Accounts:** 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.

Eg.: 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.

RULES OF ACCOUNTS (OR) DOUBLE ENTRY SYSTEM

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 ledgers. 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. The entries made in the book are called "Journal Entries".

PROFORMA OF JOURNAL

Date	Particulars	L.F	Debit RS.	Credit RS.

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".

PROFORMA OF LEDGER

Dr. ***Purchases* A/C** ***Cr.***

Date	Particulars	JF	Amount	Date	Particulars	JF	Amount

Dr. **Sales A/C** ***Cr.***

Date	Particulars	JF	Amount	Date	Particulars	JF	Amount

Dr. **Cash A/C** **Cr.**

Date	Particulars	JF	Amount	Date	Particulars	JF	amount

TRIAL BALANCE

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.

PROFORMA OF TRIAL BALANCE

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

FINAL ACCOUNTS

The financial statements are given below,

1. Trading Account
2. Profit & Loss Account
3. Balance Sheet

TRADING ACCOUNT

Particulars	Amount Rs.	Particulars	Amount Rs.
To opening stock	Xxx	By sales xxx	
To purchases xxx		Less: sales returns xxx	Xxx
Less: purchases returns xxx	Xxx	By closing stock	Xxx
	Xxx	By Gross Loss	Xxx
To carriage inwards	Xxx		
To wages	Xxx		
To Oil and Fuel	Xxx		
To Factory Rent	Xxx		
To Factory Insurance	Xxx		
To Factory Lighting	Xxx		
To Factory Heating	Xxx		
To Coal	Xxx		
To Marine Insurance			
To Any other factory expenses	Xxx		
To Gross profit	Xxx		Xxxx
	Xxxx		

PROFIT AND LOSS ACCOUNT

PARTICULARS	AMOUNT	PARTICULARS	AMOUNT
TO gross loss	Xxx	By gross profit	Xxx
TO salaries	Xxx	By Interest Received	Xxx
TO rent paid	Xxx	By Discount Received	Xxx
TO taxes	Xxx		Xxx
To godown insurance	Xxx	By Commission Received	Xxx
TO Printing and stationery	Xxx	By Rent Received	Xxx
	Xxx	By Net Loss	
To postage and telegram	Xxx		
To Audit	Xxx		
TO Legal expenses	Xxx		
TO General expenses	Xxx		
TO Advertisements	xxx		
TO Bad debts	xxx		
To parking	xxx		
To Travelling expenses	xxx		
	xxx		
TO Carriage outwards			
TO Repairs and renewals			
	Xxx		
TO Depreciation on various	Xxx		
Assets such as Buildings, Land and Furniture etc.	Xxx		
	Xxx		
TO Discount paid			
TO Commission paid			
TO Net profit			

BALANCE SHEET

Liabilities and capital	Amount	Assets	Amount
To Sundry Creditors	Xxx	By Cash in hand	Xxx
To Bills payable	Xxx	By Cash at bank	Xxx
To Bank overdraft	Xxx	By Bills receivable	Xxx
To Loans	xxx	By Sundry Debtors Xxx	
To Reserve	xxx	Less: Bad debts Xxx	Xxx
To Capital xxx			Xxx
Add: Net Profit xxx		By Closing stock	Xxx
Less: Net Loss xxx	xxx	By Furniture	Xxx
	xxx	By Plant	Xxx
To Outstanding Expenses		By Machinery	Xxx
		By Investments	Xxx
		By Land & buildings	xxx
		By copyrights	Xxx
		By Goodwill	Xxx
		By Prepaid Expenses	
	XXX		XXX

ADVANTAGES OF RATIO ANALYSIS

- 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.
- 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.
- 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.

- 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.

Important Questions: 2 Marks

1. Define Journal.
2. What is mean by Financial Accounting?
3. Meaning of Liquidity ratio.
4. Define Ledger.
5. Define Balance sheet.
6. Define Double entry system.
7. Define Activity ratios.
8. What is Ratio?
9. Define trial balance.
10. Explain the types of Accounts.

Important Questions: 10 Marks

1. Define financial accounting. Explain the types and advantages of financial accounting.
2. Explain the financial accounting principles.
3. Explain the Journal, Ledger and Trial balance
4. Explain the Trading A/C, Profit & Loss A/C and Balance Sheet.
5. Define Ratio Analysis. Explain the classification of Ratio Analysis.

UNIT- V

CAPITAL AND CAPITAL BUDGETING

Definition of Capital:

"Capital is the total amount of finance required by the business to conduct its business operation both in short and long term periods"

"Capital is defined as wealth, which is created over a period of time through abstinence to spend."

"Capital is aggregate of funds used in short term and long term."

WORKING CAPITAL

Classification or Kinds of Working Capital

Working capital may be classified in two ways:

On the basis of concept

On the Basis of Concept

1. Gross working capital
2. Net working capital

1. 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 a short period, normally one accounting year.

2. 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. Net working capital may be positive or negative. When the current assets exceed the current liabilities net working capital is positive and the negative net working capital results when the liabilities are more than the current assets.

IMPORTANCE OF WORKING CAPITAL

1. **Solvency of the business**: Adequate working capital helps in maintaining solvency of the business by providing uninterrupted flow of production.
2. **Good will**: Sufficient working capital enables a business concern to make prompt payment and hence helps in creating and maintaining good will.
3. **Easy loans**: A concern having adequate working capital, high solvency and good credit standing can arrange loans from banks and others on easy and favorable terms.
4. **Regular supply of raw materials**: Sufficient working capital ensures regular supply of raw materials and continuous production.
5. **Regular payments of salaries wages and other day to daycommitments**: A company which has ample working capital can make regular payment of salaries, wages and other day to day commitments which raises the morale of its employees, increases their efficiency, reduces wastage and cost and enhances production and profits.
6. **Quick and regular return on Investments**: Every investor wants a quick and regular return on his investment. Sufficiency of working capital enables a concern to pay quick and regular dividends to its investors, as there may not be much pressure to plough back profits. This gains the confidence of its investors and creates a favorable market to raise additional funds in the future.

FACTORS DETERMINING THE WORKING CAPITAL REQUIREMENTS

1. **Nature of the business**: 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. **Size of business or scale of operations**: 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. **Production policy**: 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. **Manufacturing process/Length of production cycle**: 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. **Seasonal variations:** 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 of cash. 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. **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.

SOURCE OF FINANCE

I. The Sources of Long – Term Finance

1. Issue of shares
2. Loan from financial institutions
3. Retained profits and

II. The Sources of Short-Term Finance

1. Trade credit
2. Bank loans and advances
3. Short-term loans from finance companies.

SOURCES OF LONG-TERM FINANCE

1. **Issue of Shares**: The amount of capital decided to be raised from members of the public is divided into units of equal value. These units are known as share and the aggregate values of shares are known as share capital of the company. Those who subscribe to the share capital become members of the company and are called shareholders. They are the

owners of the company. Hence shares are also described as ownership securities.

a) **Issue of Preference Shares**: Preference share have three distinct characteristics. Preference shareholders have the right to claim dividend at a fixed rate, which is decided according to the terms of issue of shares. Moreover, the preference dividend is to be paid first out of the net profit. The balance, it any, can be distributed among other shareholders that is, equity shareholders. However, payment of dividend is not legally compulsory. Only when dividend is declared, preference shareholders have a prior claim over equity shareholders.

b) Issue of Equity Shares: The most important source of raising long-term capital for a company is the issue of equity shares. In the case of equity shares there is no promise to shareholders a fixed dividend. But if the company is successful and the level profits are high, equity shareholders enjoy very high returns on their investment.

2. Loans from Financial Institutions

These institutions provide medium and long-term finance to industrial enterprises at a reason able rate of interest. Thus companies may obtain direct loan from the financial institutions for expansion or modernization of existing manufacturing units or for starting a new unit.Often, the financial institutions subscribe to the industrial debenture issue of companies some of the institutions (ICICI) and (IDBI) also subscribe to the share issued by companies.

3. Retained Profits

Successful companies do not distribute the whole of their profits as dividend to shareholders but reinvest a part of the profits. The amount of profit reinvested in the business of a company is known as retained profit. It is shown as reserve in the accounts. The surplus profits retained and reinvested may be regarded as an internal source of finance. Hence, this method of financing is known as self-financing. It is also called sloughing back of profits.

SOURCES OF SHORT-TERM FINANCE

1. **Trade credit**: Trade credit is a common source of short-term finance available to all companies. It refers to the amount payable to the suppliers of raw materials, goods etc. after an agreed period, which is generally less than a year. It is customary for all business firms to allow credit facility to their customers in trade business. Thus, it is an automatic source of finance. With the increase in production and corresponding purchases, the amount due to the creditors also increases. Thereby part of the funds required for increased production is financed by the creditors. The more important advantages of trade credit as a source of short-term finance are the following:
2. **Bank loans and advances**: Money advanced or granted as loan by commercial banks is known as bank credit. Companies generally secure bank credit to meet their current operating expenses. The most common forms are cash credit and overdraft facilities. Under the cash credit arrangement the maximum limit of credit is fixed in advance on the security of goods and materials in stock or against the personal security of directors. The total amount drawn is not to exceed the limit fixed. Interest is charged on the amount actually drawn and outstanding.

3. **Short term loans from finance companies**: Short-term funds may be available from finance companies on the security of assets. Some finance companies also provide funds according to the value of bills receivable or amount due from the customers of the borrowing company, which they take over.

CAPITAL BUDGETING TECHNIQUES

1. Traditional methods
2. Discounted Cash flow methods

I. Traditional methods

A. PAY-BACK PERIOD METHOD

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 pay back 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.

B. ACCOUNTING (OR) AVERAGE RATE OF RETURN METHOD (ARR)

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.

II. Discounted Cash Flow Methods

A. NET PRESENT VALUE METHOD (NPV)

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.
4. The ranking of projects is independent of the discount rate used for determining the present value.

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 of capital. If self is difficult to understood and determine.
3. It does not give solutions when the comparable projects are involved in different amounts of investment.

B. PROBABILITY INDEX METHOD (PI)

Merits

1. It requires less computational work then IRR method
2. It helps to accept / reject investment proposal on the basis of value of the index.
3. It is useful to rank the proposals on the basis of the highest/lowest value of the index.

Demerits

1. It is some what difficult to understand

2. Some people may feel no limitation for index number due to several limitation involved in their competitions
3. It is very difficult to understand the analytical part of the decision on the basis of probability index.

C. INTERNAL RATE OF RETURN METHOD (IRR)

Merits

1. It consider the time value of money
2. It takes into account the cash flows over the entire useful life of the asset.
3. It has a psychological appear to the user because when the highest rate of return projects are selected, it satisfies the investors in terms of the rate of return an capital
4. It is inconformity with the firm's objective of maximum owner's welfare.

Demerits

1. It is very difficult to understand and use.
2. It involves a very complicated computational work.
3. It may not give unique answer in all situations.

Important Questions: 2 Marks

1. What is NPV method?
2. Explain payback period method.
3. What is under capitalization?
4. What is over capitalization?
5. Define IRR method.
6. Define Capital budgeting.
7. Define Working Capital.
8. Define Capital.
9. What is ARR method?

Important Questions: 10 Marks

1. Define Working Capital. Explain the classification of working capital.
2. Explain the factors governing working capital and Importance of working capital.
3. Define Capital. Explain the sources of capital (Sources of short term and Long term).
4. Define Capital Budgeting. Explain the methods of capital budgeting (PBP, ARR, NPV, PI and IRR) and Problems.