Student Friendly Edition

LOW PRICE EDITION

FINANCE AND ACCOUNTING

III SEMESTER - IT, ECE, MECHANICAL
IV SEMESTER - CSE, EEE, CIVIL ENGG.

B.E - OU

SILENT FEATURES

- Part - A short Q&A based on examination.
- Part - B long Q&A based on examination.
- Expected important questions.
- Chapter-Wise questions, Important Q's, Previous Papers and Model Question Papers

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UNIT 1

BASICS OF ACCOUNTING

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SYLLABUS

Financial Accounting, Definition, Accounting Cycle, Journal, Ledger and Trial Balance, Cash Book-Bank Reconciliation Statement (Including Problems).

PART - A
SHORT QUESTIONS WITH ANSWERS

Q1) Define accounting. **[Dec./Jan. - 2014], [July - 2012]**

Answer :

Accounting is a process of business transactions which is used to interpret the summarized data in a meaningful manner, which helps the end user to make an appropriate decisions.

According to the *American Institute of Certified Public Accountant (AICPA),* "Accounting is an art of recording, classifying and summarizing in a significant manner and in terms of money, transactions and events which are in part, atleast of a financial character and interpreting the results thereof'.

Q2) Write about accounting rules. **[Dec. - 2015]**

Answer :

S.No.	Type of Account	Golden Rules
(1)	Real account	- Debit what comes into the business. - Credit what goes out from the business.
(2)	Personal account	- Debit the receiver. - Credit the giver.
(3)	Nominal account	- Debit the expense or loss of the business. - Credit the income or gain of the business.

Q3) Bookkeeping and accounting. [May - 2013]

Answer :

S.No.	Basic	Bookkeeping	Accounting
(1)	Object	The object of the book-keeping is to prepare original book of accounts, trial balance and final accounts and to maintain systematic records of financial result.	The object of accounting is to records, classifying, summarizing, analysis and interpret the business transaction.
(2)	Scope	It has limited scope and is considered with recording classifying and summarizing of business transaction.	It has a wide scope and covers bookkeeping plus analysis and interpretation.
(3)	Level of Work	It is restricted to clerical work and is done by lower levels of management.	It is concern with all levels of managements.

Q4) What is book keeping in accountancy? **[June - 2017]**

Answer :

Bookkeeping involves the recording, on a daily basis, of a company's financial transactions. With proper bookkeeping, companies are able to track all information on its books to make key operating, investing, and financing decisions.

Bookkeeping includes the recording, storing and retrieving of financial transactions for a business, nonprofit organization, individual etc.

Q5) What is journal proper? **[Nov./Dec. - 2016]**

(or)

Journal proper. **[May - 2013]**

Answer :

Journal proper is book of original entry (simple journal) in which miscellaneous credit transactions which do not fit in any other books are recorded. It is also called miscellaneous journal. The form and procedure for maintaining this journal is the same that of simple journal.

The use of journal proper is confined to record the following transactions,

(1) Opening entries.

(2) Closing entries.

(3) Transfer entries.

(4) Adjustment entries.

(5) Rectification entries.

(6) Entries for which there is no special journal.

(7) Entries for rare transactions.

Q6) Journal and ledger. **[Dec. - 2015], [Dec./Jan. - 2015]**

Answer :

Journal

The word journal has been derived from the *French* world *"Jour"* means *"day"*. So, journal means daily. Journal is a book of original or primary entry because all the transactions are recorded first in this book.

A journal is a book in which transaction are recording in which they occur i.e., chronological order.

Ledger Account

Ledger is also known as book of final entry or principal book of accounts. Ledger is a main book of account in which various accounts of personal, real and nominal nature are opened and maintained. It is a set of account.

Ledger is a book which contains various accounts with similar transactions relating to a particular persons or things that are recorded.

Q7) What is trial balances? **[May/June - 2017], [Dec. - 2015], [July - 2014], [Nov. - 2013]**

Answer :

A trial balance is a bookkeeping worksheet in which the balance of all ledgers are compiled into debit and credit account column totals that are equal. A company prepares a trial balance periodically, usually at the end of every reporting period. The general purpose of producing a trial balance is to ensure the entries in a company's bookkeeping system are mathematically correct.

Q8) Explain double entry system of book keeping. [Dec. - 2017]

Answer :

The double-entry system of accounting or bookkeeping means that for every business transaction, amounts must be recorded in a minimum of two accounts. The double-entry system also requires that for all transactions, the amounts entered as debits must be equal to the amounts entered as credits.

Q9) Explain petty cash book. [June - 2017], [Nov. - 2013]

(or)

What is petty cash book? [Dec. - 2017], [June - 2017]

Answer :

Petty Cash Book is an accounting book used for recording expenses which are small and of little value, for example, Stamps, postage and handling, stationery, carriage, daily wages, etc.

These are expenses which are incurred day after day, usually, petty expenses are large in quantity but insignificant in value. To record such expenses, a different book known as a petty cash book is maintained. It may be maintained by ordinary or by the imprest system.

Q10) What are subsidiary books? [Dec. - 2017], [Dec. - 2015]

(or)

Explain about subsidiary books. [Dec. - 2016]

Answer :

Subsidiary Books are those books of original entry in which transactions of similar nature are recorded at one place and in chronological order. In a big concern, recording of all transactions in one Journal and posting them into various ledger accounts will be very difficult and involve a lot of clerical work. So a subsidiary book is record in accounts.

Q11) Define financial accounting.

Answer :

Financial accounting is a specialized branch of accounting that keeps track of a company's financial transactions. Using standardized guidelines, the transactions are recorded, summarized, and presented in a financial report or financial statement such as an income statement or a balance sheet.

Q12) What do you mean by accounting cycle?

Answer :

The accounting cycle is a collective process of identifying, analyzing, and recording the accounting events of a company. The series of steps begin when a transaction occurs and end with its inclusion in the financial statements. Additional accounting records used during the accounting cycle include the general ledger and trial balance.

Q13) What are the different phases of accounting cycle?

Answer :

Different phases of accounting cycle are,

(1) Transactions.

(2) Journal Entries.

(3) Posting to the General Ledger (GL).

(4) Trial Balance.

(5) Worksheet.

(6) Adjusting Entries.

(7) Financial Statements.

Q14) What is cash book?

Answer :

A cash book is a type of subsidiary book where cash (or) bank receipts and cash (or) bank payments made during a period are recorded in a chronological order. Receipts are recorded on the debit i.e., the left hand side, and payments are recorded on the credit i.e., right hand side.

Q15) Define bank reconciliation statement.

Answer :

A bank reconciliation statement is a document that matches the cash balance on a company's balance sheet to the corresponding amount on its bank statement. Reconciling the two accounts helps determine if accounting changes are needed. Bank reconciliations are completed at regular intervals to ensure that the company's cash records are correct. They also help detect fraud and any cash manipulations.

Q16) Why BRS is needed?

Answer :

A Bank Reconciliation Statement is needed and is important because of the following reasons,

(1) It helps in knowing the actual Bank balance.

(2) It helps in discouraging the staff from embezzlement.

(3) Helps in identifying the reason for differences in the Cash Book and the Pass Book.

(4) It helps in identifying any undue delay in the clearance of cheques.

(5) Helps in detecting and preventing frauds and errors in recording the Banking transactions.

(6) It helps in incorporating certain expenditures/income debited/credited by Bank in the books of accounts.

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PART - B
ESSAY QUESTIONS WITH ANSWERS

1.1 FINANCIAL ACCOUNTING, DEFINITION, ACCOUNTING CYCLE

Q17) Define accountancy? Explain its features and objectives.

Answer :

Meaning of Accountancy

Accounting is a process of business transactions which is used to interpret the summarized data in a meaningful manner, which helps the end user to make an appropriate decisions.

According to the *American Institute of Certified Public Accountant (AICPA)*, "Accounting is an art of recording, classifying and summarizing in a significant manner and in terms of money, transactions and events which are in part, atleast of a financial character and interepreting the results thereof'.

Features of Accounting

Important features of accounting are,

(1) **Historical Nature :** Financial accounting considers only those transactions which are of historical nature i.e the transaction which have already taken place. No futuristic transactions find any place in financial accounting, howsoever important they may be from business point of view.

(2) **Legal Requirement :** Financial accounting is a legal requirement. It is necessary to maintain the financial accounting and prepare financial statements there from. It is also obligatory to get these financial statements audited.

(3) **External Use :** Financial accounting is for those people who are not part of decision making process regarding the organization like investors, customers, suppliers, financial institutions etc. Thus, it is for external use.

(4) **Disclosure of Financial Status :** It discloses the financial status and financial performance of the business as a whole.

(5) **Interim Reports :** Financial statements which are based on financial accounting are interim reports and cannot be the final ones.

(6) **Financial Accounting Process :** The process of financial accounting gets affected due to the different accounting policies followed by the accountants. These accounting policies differ mainly in two areas i.e., Valuation of inventory and Calculation of depreciation.

Objectives of Accounting

The main objectives of accounting are as follows,

(1) To have permanent record of all business transactions.

(2) To find out net profit or net loss of a business for a given period.

(3) To know the position of assets and liabilities on a particular date.

(4) Accounting communicates information to internal and external users i.e., at all levels of management and also creditors, bankers etc.

Q18) Define financial accounting. What are its objectives.

Answer :

Meaning of Financial Accounting

Financial accounting is a process of preparing financial statements that companies use to show their financial performance and position to people outside the company, including investors, creditors, suppliers and customers.

According to *Kohler*, financial accounting is the accounting for revenues, expenses, assets and liabilities that is commonly carried on in the general office of a business.

Objectives of Financial Accounting

Following are the objectives of financial accounting,

(1) To Keep Systematic Records : The primary objective of financial accounting is to maintain a systematic record of business transactions. There is a limit to human memory and, therfore, a systematic record of all transactions is essential for every business.

(2) To Calculate Income : Another objective of financial accounting is to ascertain profit or loss earned by the business during an accounting year. This is done by preparing profit and loss account or income statement.

(3) To Ascertain Financial Position : Every businessman desires to know about his finacial position i.e. where he stands, what he owns and what he owes. This is served by the balance sheet. Balance sheet is a statement of assets, liabilities and capital on a particular date.

(4) To Communicate the Information : The last but not the least objective of the financial accounting is to communicate the various information and facts to various interested groups viz owners, creditors, employees, investors, raxation authorities etc. Financial accounting facilitates rational decision making by providing relevant data

Q19) What is accounting cycle/process? Explain the various steps involved in it.

Answer :

Meaning of Accounting Cycle

The accounting process is a routine and cyclical activity that applies to all the business firm that intended to monitor or keep track of their business operation. Thus, it is called as accounting cycle or process.

Steps in Accounting Cycle

An accounting cycle consists of the following sequentially carried out steps,

(1) **Collecting and Analyzing the Information from Source Documents :** This is the first step where collecting, analyzing and recording of transaction will take place.

(2) **Journalizing the Transaction :** As the information is collected the next is to record the information as transaction in to the journal through double entry accounting system.

(3) **Post Transactions to Accounts in the Ledger :** The next is the transaction which are recorded in the journal entry are posted in account in which they occur in journal.

(4) **Prepare a Trial Balance :** After the posting a ledger then next is to prepare a trial balance. Trial balance is used to calculate and verify whether the sum of the debits are equal to the credits.

(5) **Adjusted Entries :** Adjusted entries are made for accrued and deferred items. These are done on the basis of entries which are journalize and posted to ledger account.

(6) **Adjusting Trail Balance :** A new trial balance are prepared after making the adjusted entries.

(7) **Financial Statement :** The next is to prepare a financial statement which include,

   (i) **Income Statement :** Prepared from revenue, expenses, gains and losses.

   (ii) **Balance Sheet :** Prepared from assets, liabilities and equity accounts.

   (iii) **Statement of Retained Earnings :** Prepared from net income and dividend information.

   (iv) **Cash Flow Statement :** Derived from other financial statements using either direct method or indirect method.

(8) **Closing the Entries :** As the financial statements are prepared, the balance of temporary accounts (example, revenues and expenses) are transferred to owner's equity.

(9) **Post Closing / After-Closing Trial Balance :** After the closing are made, an after closing trial balance is prepared to make sure that debit equals credit.

Q20) What is bookkeeping? What are the system of book keeping? Explain.

Answer :

Meaning of Bookkeeping

Book keeping is the first stage of accounting which mainly deals with recording of all the financial transaction of business.

According to *R.N. Carter*, "Bookkeeping as the science and art of correctly recording in books of accounts all those business transactions that result in the transfer of money or money's worth".

System of Bookkeeping

There are two systems of accounting. They are,

(1) **Single Entry System :** The single entry system means a system does not follow to tally double entry system of book keeping. The single entry system record each accounting transaction within a single accounting record.

According to *Kohler*, "Single entry system is a system which records each transaction and transactions related to personal account.

This system ignore two aspects of each transaction and merely personal aspects of transaction i.e., personal account are recorded.

Under this method, it does not take any note of the impersonal aspects of the transaction other than cash. It does not offer any check over the recording of cash transaction which lead to fraud and no accuracy.

(2) **Double Entry Book Keeping :** Every business transaction affects at least two accounts or two sides and accordingly records the transaction in two related head of account is known as double entry system.

Double entry system is based on the principle that every transaction has two aspects (i.e., debit and credit).

Thus, any changes in the recorded transaction both on the debit and credit side with an equal amount is said to be double entry system.

Q21) Explain the principle of double entry bookkeeping.

Answer :

The principles of double entry system are,

(1) **Every Transaction Affects Two Accounts :** There are two account involvement in business transaction account which receive a benefit and other account which yield a benefit.

(2) **Recording in Two Accounts :** Its purpose is to record each transaction in two related account. One is debit and other is credit.

(3) **Recording as per Specific Rules :** Under this system one account is debited and other is credited.

(4) **Preparation of Trial Balance :** There are three stage of recording transactions :

(i) Transaction are analyzed to find debit and credit and are recorded in accounts.

(ii) Posting are made from journal to the classified head (i.e., accounts) in ledger.

(iii) Trial balance is prepared with the balance of the ledger accounts to know the accuracy of the entries.

Q22) Discuss the rule for maintaining book of account.

Answer :

Accounting is classified on the basis of transaction. There are separate rules of the double entry system in respect of personal, real and nominal accounts which are as follows,

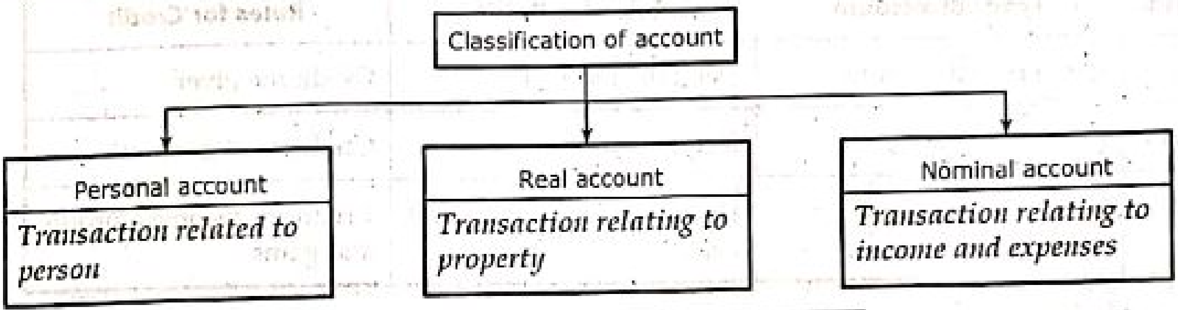

Figure Classification of Accounting

(1) **Personal Accounts :** These accounts record a business dealings with persons or firms. A person receiving something is given debit and the person giving something is given credit.

Rule

Debit	*The receiver*
Credit	*The giver*

Example : Suppose A solds goods worth ₹ 500 to B. B is a receiver and A is giver.

(2) **Real Accounts :** Real accounts are those which may be tangible real accounts and intangible real accounts. Tangible real accounts relate to things that can be touched, felt, physically measurable. Building account, furniture account, stock account, cash account etc., are tangible real accounts. Intangible real accounts are such that they cannot be seen or touched. They can be measured in terms of money such as goodwill, patent rights etc.

Rule

Debit	*What come in*
Credit	*What go out*

Example : Suppose ABC firm purchased plant worth ₹ 50,000 for cash. Plant comes in and cash going out.

(3) **Nominal Accounts :** Nominal accounts are also known as impersonal accounts. They are in the form of expenses or losses, incomes or gains. They do not really exist in physical from, but behind every nominal account cash is involved.

Example : Salary account is a nominal account and when salary is paid, cash goes out and there is nothing in physical form. Therefore, salary account is regarded as nominal account.

Rule

Debit	*All expense and losses*
Credit	*All income and gains*

Basic Accounting Rules or Conventional Rules

Table Accounting Rules

Sl.No.	Types of Account	Rules for Debit	Rules for Credit
(1)	For personal accounts	Debit the receiver.	Credit the giver.
(2)	For real accounts	Debit what comes in.	Credit what goes out.
(3)	For nominal accounts	Debit all expenses and losses.	Credit all incomes, profits and gains.

1.2 JOURNAL

Q23) Define the term journal. What are the various steps involved in journalizing the transaction.

Answer :

Meaning of Journal

The word journal has been derived from the *French* word *"Jour"* which means *"day"*. So, journal means daily. Journal is a book of original or primary entry because all the transactions are recorded first in this book.

A journal is a book in which transaction are recording in which they occur i.e., chronological order.

Journal Entry : Any entry made in a journal is called journal entry.

Journal Format

The format of journal is shown in Table,

Table Format of Journal Entry

Journal Entries in the Books of ________

Date	Particulars	L.F	Debit (₹)	Credit (₹)

(1) **Date Column :** Under this column, the date on which the transaction is entered is recorded.

(2) **Particulars Column :** Under this column, first debit accounts then credit accounts and lastly, the narration are entered.

(3) **L.F. (Ledger Folio Column) :** Under this column, the ledger page number containing the relevant account is entered at the time of posting.

(4) **Debit Amount Column :** Under this column, the amount to be debited is entered.

(5) **Credit Amount Column :** Under this column, the amount to be credited is entered.

JOURNALIZING AND ITS STEPS

The process of recording a transaction in the journal is called journalizing. The various steps to be followed in journalizing business transactions are as follows,

(1) First ascertain the two accounts involved in the transaction. It should be noted that the account of firm (in whose books the transaction is recorded) should not be taken into account, as the entry is passed in the books of that firm. Only the accounts of other persons with whom the firm deals should be taken into account.

(2) Then see the nature of the accounts involved.

(3) Then apply the corresponding or relevant rules for debit and credit and find out which account is to be debited and which account is to be credited. If one account is debited, the other account is credited. Both the accounts cannot be only debited or only credited.

(4) Record the date of transaction in the date column.

(5) Write the name of the account to be debited, very close to the left hand side along with the abbreviation "Dr" on the same line against the name of the account in the "particulars column" and the amount to be debited in the "debit amount column" against the name of the account.

(6) Write the name of the account to be credited in the next line preceded by the word to at a few spaces towards right in the "particulars column" and the amount to be credited in the "credit amount column" against the name of the account.

(7) Write "narration" (i.e., a brief description of the transaction) with in brackets in the next line in the "particulars column".

(8) Draw a line across the entire "particulars column" to separate one journal entry from the other. The "ledger folio column" is filled in at the time of posting into the ledger and not at the time of journalizing.

Problems on Journalization

Q24) Journalize the following transactions. Also state the nature of each account involved in the Journal entry.

(i) March 1, 2019,

Bhanu started business with cash ₹ 60,000.

(ii) March 3,

Deposit in bank ₹ 4,000.

(iii) March 5,

Purchased goods for cash ₹ 15,000.

(iv) March 8,

Sold goods for cash ₹ 8,000.

(v) March 10,

Purchased furniture and paid by cheque ₹ 5,000.

(vi) March 12,

Sold goods to Aravind ₹ 4,000.

(vii) March 14,

Purchased goods from Amanpreet ₹ 12,000.

(viii) March 15,

Returned goods to Amanpreet ₹ 6,000.

(ix) March 16,

Received from aravind ₹ 3,960 in full settlement.

(x) March 18,

Withdrew goods for personal use ₹ 2,000.

(xi) March 20,

Withdrew cash from business for personal use ₹ 4,000.

(xii) March 24,

Paid telephone charges ₹ 2,000.

(xiii) March 26,

Cash paid to Amanpreet in full settlement ₹ 5,900.

(xiv) March 31,

Paid for stationery ₹ 2,00, rent ₹ 5,00 and salaries to staff ₹ 2,000.

(Xv) March 31,

Goods distributed by way of free samples ₹ 1,000.

Answer :

Journal Entries in the Books of Bhanu

Date	Particulars		Nature of Account	L.F.	Debit (₹)	Credit (₹)
2019						
March 1	Cash A/c	Dr.	Real A/c		60,000	
	To Capital A/c		Personal A/c			60,000
	(Being the commencement of business)					
March 3	Bank A/c	Dr.	Personal A/c		4,000	
	To Cash A/c		Real A/c			4,000
	(Being cash deposit in the bank)					
March 5	Purchases A/c	Dr.	Real A/c		15,000	
	To Cash A/c		Real A/c			15,000
	(Being goods purchased for cash)					
March 8	Cash A/c	Dr.	Real A/c		8,000	
	To Sales A/c		Real A/c			8,000
	(Being goods sold as cash)					
March 10	Furniture A/c	Dr.	Real A/c		5,000	
	To Bank A/c		Personal A/c			5,000
	(Being purchase of furniture, paid by cheque)					
March 12	Arvind A/c	Dr.	Personal A/c		4,000	
	To Sales A/c		Real A/c			4,000
	(Being goods sold to Arvind on credit)					
March 14	Purchases A/c	Dr.	Real A/c		12,000	
	To Amanpreet A/c		Personal A/c			12,000
	(Being purchase of goods from Amanpreet on credit)					
March 15	Amanpreet A/c	Dr.	Personal A/c		6,000	
	To Purchase Returns A/c		Real A/c			6,000
	(Being goods returned to Amanpreet)					

March 18	Drawings A/c Dr.	Personal A/c		2,000	
	To Purchases A/c	Real A/c			2,000
	(Being withdrawal of goods for personal use)				
March 20	Drawings A/c Dr.	Personal A/c		4,000	
	To Cash A/c	Real A/c			4,000
	(Being cash withdrawn from business for personal use)				
March 24	Telephone Expenses A/c Dr.	Nominal A/c		2,000	
	To Cash A/c	Real A/c			2,000
	(Being telephone expenses paid)				
March 26	Amanpreet A/c Dr.	Personal A/c		6,000	
	To Cash A/c	Real A/c			5,900
	To Discount A/c	Nominal A/c			100
	(Being cash paid to Amanpreet and he allowed ₹100 as discount)				
March 31	Stationery Expenses A/c Dr.	Nominal A/c		200	
	Rent A/c	Nominal A/c		500	
	Salaries A/c	Nominal A/c		2,000	
	To Cash A/c	Real A/c			2,700
	(Being expenses Paid)				
March 31	Advertisement Expenses A/c Dr.	Nominal A/c		1,000	
	To purchases A/c	Real A/c			1,000
	(Being distribution of goods by way of free samples)				
	Total			1,35,700	1,35,700

Q25) Journalize the following transaction,

1997

Jan.1	**Pankaj commenced business with a capital of**	50,000
Jan.2	**Deposited in bank**	40,000
Jan.5	**Purchased goods to Krishna on Credit**	10,000
Jan.7	**Sold goods to Rama on credit**	8,000
Jan.9	**Purchased goods from Manish for Cash**	5,000
Jan.12	**Sold goods for Cash to Sailesh**	8,500
Jan.15	**Purchased machinery from Ajay Engineering Company, Payment made by Cheque**	20,000
Jan.18	**Issued cheque to Krishna**	7,500
Jan.20	**Received interest from Ashok**	500
Jan.22	**Cash withdrawn from Bank for Office use**	2,000
Jan.24	**Amount withdrawn from bank for Personal use**	800
Jan.27	**Took loan from Rajiv Varma**	15,000

Jan.29	Cash Withdrawn from office for personal use	1,000
Jan.30	Goods withdrawn for personal use	2,000
Jan.31	Paid rent to landlord by cheque	600

Answer :

Journal Entries in the Books of Pankaj

Date	Particulars		L.F.	Debit (₹)	Credit (₹)
1997					
Jan 1	Cash A/c	Dr.		50,000	
	To Capital A/c				50,000
	(Being the invested in business)				
Jan 2	Bank A/c	Dr.		40,000	
	To Cash A/c				40,000
	(Being cash deposited in bank)				
Jan 5	Purchase A/c	Dr.		10,000	
	To Krishna A/c				10,000
	(Being goods purchased from Krishna on credit)				
Jan 7	Rama A/c	Dr.		8,000	
	To Sales A/c				8,000
	(Being goods sold to Rama on credit)				
Jan 9	Purchases A/c	Dr.		5,000	
	To Cash A/c				5,000
	(Being goods purchased for cash)				
Jan 12	Cash A/c	Dr.		8,500	
	To Sales A/c				8,500
	(Being goods sold for cash)				
Jan 15	Machinery A/c	Dr.		20,000	
	To Bank A/c				20,000
	(Being machinery purchased payment made by cheque)				
Jan 18	Krishna A/c			7,500	
	To Bank A/c				7,500
	(Being interest received)				
Jan 20	Cash A/c	Dr.		500	
	To Interest A/c				500
	(Being interest received)				
Jan 22	Cash A/c	Dr.		2,000	
	To Bank A/c				2,000
	(Being cash withdrawn from bank for office use)				
Jan 24	Drawings A/c	Dr.		800	
	To Bank A/c				800
	(Being amount withdrawn from bank for personal use)				

Jan 27	Cash A/c Dr. To Rajiv Varma Loan A/c (Being loan taken from Rajiv Varma)		15,000	15,000
Jan 29	Drawing A/c Dr. To Cash A/c (Being cash taken for personal use)		1,000	1,000
Jan 30	Drawings A/c Dr. To Purchases A/c (Being goods withdrawn for Personal use)		2,000	2,000
Jan 31	Rent A/c Dr. To Bank A/c (Being rent paid by cheque)		600	600
	Total		1,70,900	1,70,900

1.3 LEDGER AND TRIAL BALANCES - CASH BOOK

Q26) What is ledger? What are the rules of posting journal into ledger account?

Answer :

Meaning of Ledger

Ledger is also known as book of final entry or principal book of accounts. Ledger is a main book of account in which various accounts of personal, real and nominal nature are opened and maintained. It is a set of account.

Ledger is a book which contains various accounts with similar transactions relating to a particular persons or things that are recorded.

According to *L.C. Cropper,* "The book which contains a classified and permanent record of all the transaction of business is called the ledger".

Format of Ledger

A ledger account can be prepared in the following format as shown in Table,

Dr. Name of the Account __________ Ledger Folicy Number__________ Cr.

Date	Particulars	JF	Amount (₹)	Date	Particular	IF	Amount (₹)

The process of transferring of the debits and credits from the journal to the ledger accounts is called posting.

The various rules are identified while positing into a journal,

(1) Separate account should be opened in the ledger for posting of transaction relating to different accounts recorded in the journal.

(2) All transaction relating to particular account should be posted at one place. In other words, an accounts is opened only once in the ledger.

(3) In the particular column, the word 'TO' is used with the accounts, which appear on 'debit' side of the ledger account while the word 'By' is used with accounts, which appear on 'credit' side of the ledger account.

(4) The concern account which is debited in journal, should also be credited in ledger, but in particular column a reference should be made of the other account which has been debited in the journal with concern account.

(5) Same amount will be written in debit and credit column of amount from journal.

Q27) Distinguish between journal and ledger.

Answer :

Table Difference between Journal and Ledger

S.No.	Basis	Journal	Ledger
(1)	Meaning	Journal is a primary book wherein all the business transactions are recorded on a daily basis in a systematic manner.	Ledger is a book where the journalized transactions are being classified.
(2)	Type of book	It is a book of primary record.	It is a book of final entry.
(3)	Process	The process of recording transactions in a journal is called as 'Journalizing'.	The process of recording transaction in a ledger is called as posting.
(4)	Organization of data	The organizing of each of the data within journal is known as the transaction.	The organizing of each of the data within ledger is known as the account.
(5)	Nature	Journal is not balanced except for the cash book.	Every account in the ledger is balanced.
(6)	Accuracy	It is very difficult to test the accuracy of the books.	The availability of lists of balances ensures easy accuracy testing.
(7)	Narration	Narration is required for each entry.	Narration is not required.
(8)	Record	It maintains the record in sequential manner.	It maintains the record in conclusive manner.

Problems on Ledger Accounts

Q28) Pass journal entries and make ledger accounts for the following transactions.

(i) Started business with cash (assume owner's name as Mr. S) ₹ 3,50,000

(ii) Deposited cash into bank ₹ 1,10,000.

(iii) Purchased machinery for ₹ 33,000 in cash.

(iv) Paid rent by cheque ₹ 5,500.

(v) Purchased goods from Ashok ₹ 45,000.

(vi) Paid wages in cash ₹ 3,500.

(vii) Paid electricity bill by cheque ₹ 1,200.

(viii) Sold goods to Neeraj ₹ 98,000.

(ix) Paid advertising expenses by cheque ₹ 10,000.

(x) Issued a cheque of ₹ 40,000 to Ashok.

(xi) Received a cheque of ₹ 70,000 from Neeraj.

(xii) Paid salary ₹ 12,000 for the month by cheque.

(xiii) Purchased goods for ₹ 25,000 and issued cheque.

(xiv) Sold goods of ₹ 42,000 and received cheque.

Answer :

Dr. **Journal Entries** Cr.

Date	Particulars		L.F.	Debit (₹)	Credit (₹)
	Cash A/c	Dr.		3,50,000	
	To Capital A/c				3,50,000
	(Being commencement of business)				
	Bank A/c	Dr.		1,10,000	
	To Cash A/c				1,10,000
	(Being cash deposited into bank)				
	Machinery A/c	Dr.		33,000	
	To Cash A/c				33,000
	(Being machinery purchased)				
	Rent A/c	Dr.		5,500	
	To Bank A/c				5,500
	(Being rent paid through cheque)				
	Purchase A/c	Dr.		45,000	
	To Ashok A/c				45,000
	(Being goods purchase on credit)				
	Wages A/c	Dr.		3,500	
	To Cash A/c				3,500
	(Being wages paid)				
	Electricity bill A/c	Dr.		1,200	
	To Bank A/c				1,200
	(Being electricity bill paid by cheque)				

	Neeraj A/c Dr.		98,000	
	To Sales A/c			98,000
	(Being goods sold on credit)			
	Advertising expenses A/c Dr.		10,000	
	To bank A/c			10,000
	(Being Advertising expenses paid by cheque)			
	Ashok A/c Dr.		40,000	
	To Bank A/c			40,000
	(Being payment made to Ashok by cheque)			
	Bank A/c Dr.		70,000	
	To Neeraj A/c			70,000
	(Being salary paid by cheque)			
	Salary A/c Dr.		12,000	
	To Bank A/c			12,000
	(Being salary paid by cheque)			
	Purchase A/c Dr.		25,000	
	To Bank A/c			25,000
	(By good purchased and payment made by cheque)			
	Bank A/c Dr.		42,000	
	To Sales A/c			42,000
	(Being good sold and received a cheque)			

Dr. **Cash A/c** **Cr.**

Date	Particulars	J.F.	Amount (₹)	Date	Particulars	J.F.	Amount (₹)
	To capital A/c		3,50,000		By bank A/c		1,10,000
					By machinery A/c		33,000
					By wages A/c		3,500
					By balance c/d		2,03,500
			3,50,000				**3,50,000**
	To balance b/d		2,03,500				

Dr. **Capital A/c** Cr.

Date	Particulars	J.F.	Amount (₹)	Date	Particulars	J.F.	Amount (₹)
	To balance A/c		3,50,000		By cash A/c		3,50,000
			3,50,000				**3,50,000**
					By balance c/d		3,50,000

Dr. **Machinery A/c** Cr.

Date	Particulars	J.F.	Amount (₹)	Date	Particulars	J.F.	Amount (₹)
	To cash A/c		33,000		By balance A/c		33,000
			33,000				**33,000**
	To balance A/c		33,000				

Dr. **Bank A/c** Cr.

Date	Particulars	J.F.	Amount (₹)	Date	Particulars	J.F.	Amount (₹)
	To cash A/c		1,10,000		By rent A/c		5,500
	To Neeraj A/c		70,000		By electricity bill A/c		1,200
	To sales A/c		42,000		By advertising expenditure A/c		10,000
					By Ashok A/c		40,000
					By salary A/c		12,000
					By purchases A/c		25,000
					By balance c/d		1,28,300
			2,22,000				**2,22,000**
	To balance b/d		1,28,300				

Dr. **Rent A/c** Cr.

Date	Particulars	J.F.	Amount (₹)	Date	Particulars	J.F.	Amount (₹)
	To bank A/c		5,500		By balance c/d		5,500
			5,500				**5,500**
	To balance b/d		5,500				

Dr. **Ashok A/c** Cr.

Date	Particulars	J.F.	Amount (₹)	Date	Particulars	J.F.	Amount (₹)
	To bank A/c		40,000		By purchases A/c		45,000
	To balance A/c		5,000				
			45,000				**45,000**
					To balance b/d		50,000

Dr. **Purchases A/c** Cr.

Date	Particulars	J.F.	Amount (₹)	Date	Particulars	J.F.	Amount (₹)
	To Ashok A/c		45,000		By balance c/d		70,000
	To bank A/c		25,000				
			70,000				**70,000**
	To balance b/d		70,000				

Dr. **Wages A/c** Cr.

Date	Particulars	J.F.	Amount (₹)	Date	Particulars	J.F.	Amount (₹)
	To cash A/c		3,500		By balance c/d		3,500
			3,500				**3,500**
	To balance b/d		3,500				

Dr. **Electricity Bill A/c** Cr.

Date	Particulars	J.F.	Amount (₹)	Date	Particulars	J.F.	Amount (₹)
	To bank A/c		1,200		By balance c/d		1,200
			1,200				**1,200**
	To balance b/d		1,200				

Dr. **Advertising Expenses A/c** Cr.

Date	Particulars	J.F.	Amount (₹)	Date	Particulars	J.F.	Amount (₹)
	To bank A/c		10,000		By balance A/c		10,000
			10,000				**10,000**
	To balance b/d		10,000				

Dr. **Neeraj A/c** Cr.

Date	Particulars	J.F.	Amount (₹)	Date	Particulars	J.F.	Amount (₹)
	To sales A/c		98,000		By bank A/c		70,000
					By balance c/d		28,000
			98,000				**98,000**
	To balance b/d		28,000				

Dr. **Sales A/c** Cr.

Date	Particulars	J.F.	Amount (₹)	Date	Particulars	J.F.	Amount (₹)
	To bank A/c		1,40,000		By Neeraj A/c		98,000
					By bank A/c		42,000
			1,40,000				**1,40,000**
					To balance b/d		1,40,000

Dr. **Salary A/c** Cr.

Date	Particulars	J.F.	Amount (₹)	Date	Particulars	J.F.	Amount (₹)
	To bank A/c		12,000		By balance c/d		12,000
			12,000				**12,000**
	To balance b/d		12,000				

Q29) Journalize the following transactions and post them to ledger,

2019

Jan. 1, Commenced business with a capital of ₹10,000

Jan. 1, Bought furniture for cash ₹3,000

Jan. 2, Bought goods for cash from B ₹500

Jan. 3, Sold goods for cash to A ₹1,000

Jan. 4, Purchased goods from C on credit ₹2,000

Jan. 5, Credit sales to D ₹1,500

Jan. 8, Bought machinery for ₹3,000 paying cash

Jan. 12, Paid trade expenses ₹50

Jan. 18, Paid for advertising to Apple Advertising Ltd., ₹1,000

Jan. 19, Cash deposited into Bank ₹500

Jan. 20, Received interest ₹500

Jan. 24, Paid insurance premium ₹200

Jan. 30, Paid rent ₹500

Jan. 30 Paid salary to P ₹1,000.

Answer :

Journal Entries

Date	Particulars	L.F.	Debits (₹)	Credit (₹)
2019 Jan. 1	Cash A/c Dr. To capital A/c (Being business started with cash)		10,000	10,000
Jan. 1	Furniture A/c Dr. To cash A/c (Being furniture bought with cash)		3,000	3,000
Jan. 2	Purchases A/c Dr. To cash A/c (Being goods bought for cash)		500	500

Jan. 3	Cash A/c Dr. To sales A/c (Being goods sold for cash)		1,000	1,000
Jan. 4	Purchases A/c Dr. To C A/c (Being goods purchased from Con Credit)		2,000	2,000
Jan. 5	D A/c Dr. To sales A/c (Being credit sales made)		1,500	1,500
Jan. 8	Machinery A/c Dr. To cash A/c (Being machinery bought for cash)		3,000	3,000
Jan. 12	Trade expenses A/c Dr. To cash A/c (Being paid trade expenses)		50	50
Jan. 18	Advertising A/c Dr. To cash A/c (Being paid for advertising)		1,000	1,000
Jan. 19	Bank A/c Dr. To cash A/c (Being cash paid into bank)		500	500
Jan. 20	Cash A/c Dr. To interest A/c (Being interest received)		500	500
Jan. 24	Insurance premium A/c Dr. To cash A/c (Being insurance premium paid)		200	200
Jan. 30	Rent A/c Dr. To cash A/c (Being rend paid)		500	500
Jan. 30	Salary A/c Dr. To cash A/c (Being salary paid)		1,000	1,000
	Total		**24,750**	**24,750**

Preparation of Ledger Accounts

Dr. **Cash Account** **Cr.**

Date	Particulars	J.F.	Amount (₹)	Date	Particulars	J.F.	Amount (₹)
Jan. 1	To capital A/c		10,000	Jan. 1	By furniture A/c		3,000
Jan. 3	To sales A/c		1,000	Jan. 2	By purchases A/c		500
Jan. 20	To interest A/c		500	Jan. 8	By machinery A/c		3,000
				Jan. 12	By trade expenses A/c		50
				Jan. 18	By advertising A/c		1,500
				Jan. 19	By bank A/c		500
				Jan. 24	By insurance premium A/c		200
				Jan. 30	By rent A/c		500
				Jan. 30	By salary A/c		1,000
				Jan. 31	By balance c/d		1,250
			11,500				**11,500**
Feb. 1	To balance b/d		1,250				

Dr. **Capital Account** **Cr.**

Date	Particulars	J.F.	Amount (₹)	Date	Particulars	J.F.	Amount (₹)
Jan. 31	To balance c/d		10,000	Jan. 1	By cash A/c		10,000
			10,000				**10,000**
				Feb. 1	By balance b/d		10,000

Dr. **Furniture Account** **Cr.**

Date	Particulars	J.F.	Amount (₹)	Date	Particulars	J.F.	Amount (₹)
Jan. 1	To cash A/c		3,000	Jan. 31	By balance c/d		3,000
			3,000				3,000
Feb. 1	To balance b/d		3,000				

Dr. **Purchases Account** Cr.

Date	Particulars	J.F.	Amount (₹)	Date	Particulars	J.F.	Amount (₹)
Jan. 2	To cash A/c		500	Jan. 31	By balance c/d		2,500
Jan. 4	To C A/c		2,000				
			2,500				**2,500**
Feb. 1	To balance b/d		2,500				

Dr. **Sales Account** Cr.

Date	Particulars	J.F.	Amount (₹)	Date	Particulars	J.F.	Amount (₹)
Jan. 31	To balance c/d		2,500	Jan. 3	By cash A/c		1,000
				Jan. 5	By D A/c		1,500
			2,500				**2,500**
				Feb. 1	By balance b/d		2,500

Dr. **C Account** Cr.

Date	Particulars	J.F.	Amount (₹)	Date	Particulars	J.F.	Amount (₹)
Jan. 31	To balance c/d		2,000	Jan. 4	By purchases A/c		2,000
			2,000				**2,000**
				Feb. 1	By balance b/d		2,000

Dr. **D Account** Cr.

Date	Particulars	J.F.	Amount (₹)	Date	Particulars	J.F.	Amount (₹)
Jan. 5	To sales A/c		1,500	Jan. 31	By balance c/d		1,500
			1,500				**1,500**
Feb. 1	To balance b/d		1,500				

Dr. Machinery Account Cr.

Date	Particulars	J.F.	Amount (₹)	Date	Particulars	J.F.	Amount (₹)
Jan. 8	To cash A/c		3,000	Jan. 31	By balance c/d		3,000
			3,000				**30,000**
Feb. 1	To balance b/d		3,000				

Dr. Trade Expenses Account Cr.

Date	Particulars	J.F.	Amount (₹)	Date	Particulars	J.F.	Amount (₹)
Jan. 12	To cash A/c		50	Jan. 31	By balance b/d		50
			50				**50**
Feb. 1	To balance b/d		50				

Dr. Advertising Account Cr.

Date	Particulars	J.F.	Amount (₹)	Date	Particulars	J.F.	Amount (₹)
Jan. 18	To cash A/c		1,000	Jan. 31	By balance c/d		1,000
			1,000				**1,000**
Feb. 1	To balance b/d		1,000				

Dr. Bank Account Cr.

Date	Particulars	J.F.	Amount (₹)	Date	Particulars	J.F.	Amount (₹)
Jan. 19	To cash A/c		500	Jan. 31	By balance c/d		500
			500				**500**
Feb. 1	To balance b/d		500				

Dr. Interest Account Cr.

Date	Particulars	J.F.	Amount (₹)	Date	Particulars	J.F.	Amount (₹)
Jan. 31	To balance c/d		500	Jan. 20	By cash A/c		500
			500				**500**
				Feb. 1	By balance b/d		500

Dr. **Insurance Premium Account** Cr.

Date	Particulars	J.F.	Amount (₹)	Date	Particulars	J.F.	Amount (₹)
Jan. 24	To cash A/c		200	Jan. 31	By balance c/d		200
			200				**200**
Feb. 1	To balance b/d		200				

Dr. **Rent Account** Cr.

Date	Particulars	J.F.	Amount (₹)	Date	Particulars	J.F.	Amount (₹)
Jan. 30	To cash A/c		500	Jan. 31	By balance c/d		500
			500				**500**
Feb. 1	By balance b/d		500				

Dr. **Salary Account** Cr.

Date	Particulars	J.F.	Amount (₹)	Date	Particulars	J.F.	Amount (₹)
Jan. 30	To cash A/c		1,000	Jan. 31	By balance c/d		1,000
			1,000				**1,000**
Feb 1	By balance b/d		1,000				

Q30) Journalize the following transactions and post them to Ledger.

2019

Jan. 1, Ram Invests ₹10,000 in cash.

Jan. 2, He bought goods worth ₹2,000 from Shyam.

Jan. 3, He bought a machine for ₹5,000 from Lakshman on account.

Jan. 4, He paid to Lakshman ₹2,000.

Jan. 5, He sold goods for cash ₹3,000.

Jan. 6, He sold goods to A on account ₹4,000.

Jan. 7, He paid to Shyam ₹1,000.

Jan. 8, He received amount from A ₹2,000.

Answer :

Journal Entries in the Books of Ram

Date	Particulars		L.F.	Debits (₹)	Credit (₹)
2019 Jan. 1	Cash A/c To capital A/c (Being business started with cash)	Dr.		10,000	10,000
Jan. 2	Purchases A/c To Shyam A/c (Being goods purchased from Shyam)	Dr.		2,000	2,000
Jan. 3	Machinery A/c To Lakshman A/c (Being machinery purchased from Lakshman on account)	Dr.		5,000	5,000
Jan. 4	Lakshman A/c To Cash A/c (Being cash paid to Lakshman)	Dr.		2,000	2,000
Jan. 5	Cash A/c To Sales A/c (Being goods sold for cash)	Dr.		3,000	3,000
Jan. 6	A A/c To Sales A/c (Being goods sold to A on account)	Dr.		4,000	4,000
Jan. 7	Shyam A/c To cash A/c (Being cash paid to shyam)	Dr.		1,000	1,000
Jan. 8	Cash A/c To A A/c (Being cash received from A)	Dr.		2,000	2,000
	Total			**29,000**	**29,000**

Preparation of Ledger Accounts

Dr. **Cash A/c** Cr.

Date	Particulars	J.F.	Amount (₹)	Date	Particulars	J.F.	Amount (₹)
Jan. 1	To capital A/c		10,000	Jan. 4	By Lakshman A/c		2,000
Jan. 5	To Sales A/c		3,000	Jan. 7	By Shyam A/c		1,000
Jan. 8	To A A/c		2,000	Jan. 31	By balance c/d		12,000
			15,000				**15,000**
Feb. 1	To balance b/d		12,000				

Dr. **Sales A/c** Cr.

Date	Particulars	J.F.	Amount (₹)	Date	Particulars	J.F.	Amount (₹)
Jan. 31	To balance c/d		7,000	Jan. 5	By cash A/c		3,000
				Jan. 6	By A A/c		4,000
			7,000				**7,000**
				Feb. 1	By balance b/d		7,000

Dr. **Purchases A/c** Cr.

Date	Particulars	J.F.	Amount (₹)	Date	Particulars	J.F.	Amount (₹)
Jan. 2	To Shyam A/c		2,000	Jan. 31	By balance c/d		2,000
			2,000				**2,000**
Feb. 1	To balance b/d		2,000				

Dr. **Machinery A/c** Cr.

Date	Particulars	J.F.	Amount (₹)	Date	Particulars	J.F.	Amount (₹)
Jan. 3	To Lakshman A/c		5,000	Jan. 31	By balance c/d		5,000
			5,000				**5,000**
Feb. 1	To balance b/d		5,000				

Dr. **Lakshman A/c** Cr.

Date	Particulars	J.F.	Amount	Date	Particulars	J.F.	Amount (₹)
Jan. 4	To cash A/c		2,000	Jan. 3	By Machinery A/c		5,000
Jan. 31	To balance c/d		3,000				
			5,000				**5,000**
				Feb. 1	By balance b/d		3,000

Dr. **Shyam A/c** Cr.

Date	Particulars	J.F.	Amount (₹)	Date	Particulars	J.F.	Amount (₹)
Jan. 7	To cash A/c		1,000	Jan. 2	By purchases A/c		2,000
Jan. 31	To balance c/d		1,000				
			2,000				**2,000**
				Feb. 1	By balance b/d		1000

A A/c

Dr. Date	Particulars	J.F.	Amount (₹)	Date	Particulars	J.F.	Cr. Amount (₹)
Jan. 6	To sales A/c		4,000	Jan. 8	By cash A/c		2,000
				Jan. 31	By balance c/d		2,000
			4,000				**4,000**
Feb. 1	To balance b/d		2,000				

Capital A/c

Dr. Date	Particulars	J.F.	Amount (₹)	Date	Particulars	J.F.	Cr. Amount (₹)
Jan. 31	To balance c/d		10,000	Jan. 1	By cash A/c		10,000
			10,000				**10,000**
				Feb. 1	By balance b/d		10,000

Q31) What is trial balances? Explain the methods of preparating trial balance.

Answer :

Meaning of Trial Balance

Trial balance is an act of totalling debit balances and credit balances to confirm that total debit is equal to total credit, this means the ledger posting is arithmetically correct. This statement is called trial balance.

Trial balance may be define as an statement which contain balances of all ledger accounts on a particular date.

Preparation of Trial Balance

(1) Accounts dealing with assets, expenses and losses will show debit balance.

(2) Accounts dealing with liabilities, incomes and gains will show credit balance.

(3) "Sundry debtors" is the total amount due from various debtors and "sundry creditors" is the total amount due to various creditors.

(4) Opening stock will show debit balance, generally closing stock will not appear in trial balance.

(5) Reserve and provisions such as general reserve, provision for doubtful debts, reserve for discount on debtors will show credit balance. However, reserve for discount on creditors will show debit balance.

A table of the accounts appearing in trial balance on debit and credit side is given in Table,

Table Trial Balance on Debit and Credit Side

Debit Balance	Credit Balance
Personal accounts. Sundry debtors. Bank balance. Loan or advance given. Drawings A/c. Prepaid expenses.	**Personal accounts.** Sundry creditors. Bank overdraft. Loan taken or mortgage loan. Capital A/c. Outstanding expenses.
Real Accounts (1) Dealing with goods. Purchases account. Opening stock. Returns inwards. (2) Assets Land and building Plant and machinery furniture Investments. Goodwill	**Real Accounts** (1) Dealing with goods. Sales account Return outwards account.
Nominal Accounts All expenses and losses such as salaries, rent and taxes, carriage, advertising, bad debts etc.	**Nominal Accounts** All incomes and gains such as interest received, rent received, commission received, discount received. Reserves and provisions. Provision for doubtful debts. Provision for discount on debtors. General reserve etc.

Q32) **How do you know that the given trial balances is correct or wrong?**

Answer :

Errors were identified though the following consideration while preparing a trial balances,

(1) **Errors which are Disclosed by Trial Balance :** Following are the errors which may not be noted in trial balance,

(i) **Wrong Posting :** Posting of wrong amount in ledger and posting on the wrong side of the account will cause disagreement in trial balance.

(ii) **Error in Balancing :** If any error arise as a result of balancing of an account, which may lead to disagreement.

(iii) **Error in Totaling :** Error in totaling of accounts will cause disagreement.

(iv) **Double Posting :** If any item are posted twice in a ledger account from subsidiary book, may lead to disagreement.

(v) **Incomplete Double Entry :** If any double entry principle is not completed i.e., either debit or credit side of account may lead to disagreement.

(2) **Errors which are not Disclosed by a Trial Balance :** The following errors cannot be detected by a trial balance,

(i) **Errors of Omission :** When the transaction is not at all recorded in the books of account i.e., neither in the debit side nor in the credit side of the account trial balance will agree.

(ii) **Errors of Commission :** Where there is any variation in figure/amount, for example, instead of 800 either 80 or 8,000 is recorded, in both sides of ledger accounts trial balance will agree.

(iii) **Errors of Principle :** Where wrong posting is made in the books of account, i.e., accounts are prepared not according to double entry principle, example, purchased a plant wrongly debited to purchase account trial balance will agree.

(iv) **Errors of Wrong Posting :** When wrong posting is made to a wrong account instead of a correct one, although amount is correctly recorded, example, sold goods to B but wrongly debited to D's account-trial balance will agree.

(v) **Compensating Errors :** When one error is compensated by another error, example, discount allowed 100 not debited to discount allowed account, whereas interest received 100 but not credited to interest account trial balance will agree.

PROBLEMS ON TRAIL BALANCE

Q33) Prepare a trial balance from the following data for the year 2008.

Particulars	Amount (₹)	Particulars	Amount (₹)
Freehold property	10,800	Discount received	150
Capital	40,000	Returns inward	1,590
Return outwards	2,520	Office expenses	5,100
Sales	80,410	Bad debts	1,310
Purchases	67,350	Carriage outwards	1,590
Depreciation on furniture	1,200	Salaries	1,450
Insurance	3,300	Book debts	4,950
Stock (1-1-2008)	14,360	Book debts	11,070
Creditors for expenses	400	Cash at bank	2,610
Creditors	4,700		

Nov.-2010, Set-4, Q1

Answer :

Note : Book debts was given twice in the problem and therefore it was taken twice in the solution.

Dr. **Trial Balance as on 31st Dec. 2020** **Cr.**

Particulars	Amount (₹)	Particulars	Amount (₹)
Freehold property	10,800	Capital	40,000
Purchases	67,350	Return outwards	2,520
Depreciation on furniture	1,200	Sales	80,410
Insurance	3,300	Creditors	4,700
Stock (1.1.2020)	14,360	Creditors for expenses	400
Returns inward	1,590	Discount received	150
Office expenses	5,100		
Bad debts	1,310		
Carriage outwards	1,590		
Salaries	1,450		
Cash at bank	2,610		
Book debts	4,950		
Book debts	11,070		
Suspense account (b/f)	1500		
	1,28,180		**1,28,180**

Q30) From the following list of balances prepare a Trial Balance as on 30-6-2019.

(i)	Opening Stock	₹1,800
(ii)	Wages	₹1,000
(iii)	Sales	₹12,000
(iv)	Bank loan	₹440
(v)	Coal and coke	₹300
(vi)	Purchases	₹7,500
(vii)	Repairs	₹200
(viii)	Carriage	₹150
(ix)	Income tax	₹150
(x)	Debtors	₹2,000
(xi)	Leasehold premises	₹600
(xii)	Cash in hand	₹20
(xiii)	Plant	₹750
(xiv)	Machinery tools	₹180
(xv)	Lighting	₹230
(xvi)	Creditors	₹800
(xvii)	Capital	₹4,000
(xviii)	Miscellaneous receipts	₹60
(xix)	Office salaries	₹250
(xx)	Office furniture	₹60
(xxi)	Patents	₹100
(xxii)	Goodwill	₹1,500
(xxiii)	Cash at bank	₹510

nswer :

Trial Balance as on 30-6-2019

Particulars	Debit (₹)	Credit (₹)
Opening stock	1,800	
Wages	1,000	
Sales		12,000
Bank loan		440
Coal and coke	300	
Purchases	7,500	
Repairs	200	
Carriage	150	
Income tax	150	
Debtors	2,000	
Leasehold premises	600	
Cash in hand	20	
Plant	750	
Machinery tools	180	
Lighting	230	
Creditors		800
Capital		4,000
Miscellaneous Receipts		60
Office Furniture	60	
Patents	100	
Good will	1,500	
Cash at Bank	510	
Office Salaries	250	
	17,300	**17,300**

Q35) The following are the ledger accounts of Mr. X as on 30th April, 2019. Prepare a trial balance.

Dr. **Cash Account** Cr.

Date	Particulars	J.F.	Amount (₹)	Date	Particulars	J.F.	Amount (₹)
1-4-19	To balance b/d		50,000	6-4-19	By Bank A/c		5,000
2-4-19	To Sales A/c		45,000	10-4-19	By Kumar A/c		29,000
16-4-19	To Mohan A/c		35,000	14-4-19	By Purchases A/c		50,000
26-4-19	To Sales A/c		10,000	18-4-19	By Creditors A/c		20,000
				20-4-19	By Furniture A/c		5,000
				22-4-19	By Wages A/c		500
				22-4-19	By Printing A/c		1,000
				22-4-19	By Comm A/c		2,000
				30-4-19	By Electricity A/c		500
				30-4-19	By Telephone A/c		1,000
				30-4-19	By Salaries A/c		4,000
				30-4-16	By balance c/d		22,000
			1,40,000				1,40,000
1-5-16	To balance b/d		22,000				

Answer :

Working Notes

Dr. **Building Account** Cr.

Date	Particulars	J.F.	Amount (₹)	Date	Particulars	J.F.	Amount (₹)
1-4-16	To balance b/d		2,00,000	30-4-16	By balance c/d		2,00,000
			2,00,000				2,00,000
1-5-16	To balance b/d		2,00,000				

Dr. Furniture Account Cr.

Date	Particulars	J.F.	Amount (₹)	Date	Particulars	J.F.	Amount (₹)
1-4-16	To balance b/d		10,000	30-4-16	By balance c/d		15,000
20-4-16	To Cash A/c		5,000				
			15,000				**15,000**
1-5-16	To balance b/d		**15,000**				

Dr. Bank Fixed Deposit Account Cr.

Date	Particulars	J.F.	Amount (₹)	Date	Particulars	J.F.	Amount (₹)
1-4-16	To balance b/d		1,00,000	30-4-16	By balance c/d		1,07,000
12-4-16	To Interest A/c		7,000				
			1,07,000				**1,07,000**
1-5-16	To balance b/d		**1,07,000**				

Dr. Stock Account Cr.

Date	Particulars	J.F.	Amount (₹)	Date	Particulars	J.F.	Amount (₹)
1-4-16	To balance b/d		25,000	30-4-16	By balance c/d		25,000
			25,000				**25,000**
1-5-16	To balance b/d		**25,000**				

Dr. Creditor's Account Cr.

Date	Particulars	J.F.	Amount (₹)	Date	Particulars	J.F.	Amount (₹)
18-4-16	To Cash		20,000	1-4-16	By balance b/d		35,000
30-4-16	To balance c/d		15,000				
			35,000				**35,000**
				1-5-04	To balance b/d		**15,000**

Dr. Capital Account Cr.

Date	Particulars	J.F.	Amount (₹)	Date	Particulars	J.F.	Amount (₹)
30-4-16	To balance c/d		3,50,000	1-4-16	By balance b/d		3,50,000
			3,50,000				**3,50,000**
				1-5-16	To balance b/d		**3,50,000**

Purchases Account

Dr. Cr.

Date	Particulars	J.F.	Amount (₹)	Date	Particulars	J.F.	Amount (₹)
4-4-16	To Kumar A/c		30,000	30-4-16	By balance c/d		95,000
14-4-16	To Cash A/c		50,000				
28-4-16	To Sarin A/c		15,000				
			95,000				**95,000**
1-5-16	To balance b/d		**95,000**				

Sales Account

Dr. Cr.

Date	Particulars	J.F.	Amount (₹)	Date	Particulars	J.F.	Amount (₹)
30-4-16	To balance c/d		95,000	2-4-16	By Cash A/c		45,000
				8-4-16	By Mohan A/c		40,000
				26-4-16	By Cash A/c		10,000
			95,000				**95,000**
				1-5-16	By balance c/d		**95,000**

Kumar Account

Dr. Cr.

Date	Particulars	J.F.	Amount (₹)	Date	Particulars	J.F.	Amount (₹)
10-4-16	To Cash A/c		29,000	4-4-16	By Purchases		30,000
10-4-16	To Discount A/c		1,000				
			30,000				**30,000**

Note : There is no balance and hence his account will not appear in trial balance.

Repairs Account

Dr. Cr.

Date	Particulars	J.F.	Amount (₹)	Date	Particulars	J.F.	Amount (₹)
6-4-16	To cash A/c		5,000	30-4-16	By balance c/d		5,000
			5,000				**5,000**
1-5-16	To balance b/d		**5,000**				

Mohan Account

Dr. Cr.

Date	Particulars	J.F.	Amount (₹)	Date	Particulars	J.F.	Amount (₹)
8-4-16	To Sales A/c		40,000	16-4-16	By Cash A/c		35,000
				30-4-16	By balance c/d		5,000
			40,000				**40,000**
1-5-16	To balance b/d		**5,000**				

Dr. **Discount Received Account** Cr.

Date	Particulars	J.F.	Amount (₹)	Date	Particulars	J.F.	Amount (₹)
30-4-16	To balance c/d		1,000	10-4-16	By Kumar A/c		1,000
			1,000				**1,000**
				1-5-16	To balance b/d		**1,000**

Dr. **Interest on Fixed Deposit Account** Cr.

Date	Particulars	J.F	Amount (₹)	Date	Particulars	J.F	Amount (₹)
30-4-16	To balance c/d		7,000	12-4-16	By Bank FD A/c		7,000
			7,000				**7,000**
				1-5-16	To balance b/d		**7,000**

Dr. **Wages Account** Cr.

Date	Particulars	J.F.	Amount (₹)	Date	Particulars	J.F.	Amount (₹)
22-4-16	To Cash A/c		500	30-4-16	By balance c/d		500
			500				**500**
1-5-16	To balance b/d		**500**				

Dr. **Printing Account** Cr.

Date	Particulars	J.F.	Amount (₹)	Date	Particulars	J.F.	Amount (₹)
22-4-16	To cash A/c		1,000	30-4-16	By balance c/d		1,000
			1,000				**1,000**
1-5-16	To balance b/d		**1,000**				

Dr. **Commission Account** Cr.

Date	Particulars	J.F.	Amount (₹)	Date	Particulars	J.F.	Amount (₹)
22-4-16	To cash A/c		2,000	30-4-16	By balance c/d		2,000
			2,000				**2,000**
1-5-16	To balance b/d		**2,000**				

Dr. **Electricity Account** Cr.

Date	Particulars	J.F.	Amount (₹)	Date	Particulars	J.F.	Amount (₹)
30-4-16	To cash A/c		500	30-4-16	By balance c/d		500
			500				**500**
1-5-16	To balance b/d		**500**				

Dr. **Telephone Account** Cr.

Date	Particulars	J.F.	Amount (₹)	Date	Particulars	J.F.	Amount (₹)
30-4-16	To cash A/c		1,000	30-4-16	By balance c/d		1,000
			1,000				**1,000**
1-5-16	To balance b/d		**1,000**				

Dr. **Salaries Account** Cr.

Date	Particulars	J.F.	Amount (₹)	Date	Particulars	J.F.	Amount (₹)
30-4-16	To cash A/c		4,000	30-4-16	By balance c/d		4,000
			4,000				**4,000**
1-5-16	To balance b/d		**4,000**				

Dr. **Sarin's Account** Cr.

Date	Particulars	J.F.	Amount (₹)	Date	Particulars	J.F.	Amount (₹)
30-4-16	To balance b/d		15,000	28-4-16	By purchases A/c		15,000
			15,000				**15,000**
				1-5-16	To balance b/d		**15,000**

Trial Balance As on 30th April 2019

Debit Balance	Amount (₹)	Credit Balance	Amount (₹)
Cash	22,000	Creditors	15,000
Building	2,00,000	Capital	3,50,000
Furniture	15,000	Sales	95,000
Bank FD	1,07,000	Discount received	1,000
Stock	25,000	Interest on FD	7,000
Purchases	95,000	Sarin	15,000
Repairs	5,000		
Mohan	5,000		
Wages	500		
Printing	1,000		
Commission	2,000		
Salaries	4,000		
Telephone	1,000		
Electricity	500		
Total	**4,83,000**	**Total**	**4,83,000**

Q36) Write about cash book with different types used in business transaction.

Answer :

In every business there will be a large number of cash transaction i.e., receipts and payments of cash. So, it is necessary to maintain a separate subsidiary book for recording the cash transactions. The separate subsidiary book maintained for recording cash transactions is called the cash book.

Thus, cash book is used to record all transaction to cash receipt and cash payments.

Types of Cash Book :

Every business differs from others as regards to its size, nature and requirements. The business can use the following cash books,

(1) **Simple (or) Single Column Cash Book :** This is the simplest form of cash book and it is used to make a record of only cash transactions i.e., payment and receipt cash and usually no cash or discount is allowed or received. But, when transaction involving discount are affected, it is recorded in a separate ledger account. The ruling of single column cash book is shown in Table 1,

Table 1 Format of Simple or Single Column Cash Book

Dr. **Cash Book** Cr.

Date	Particulars	Ledger Folio	Amount (₹)	Date	Particulars	Ledger Folio	Amount (₹)

(2) **Two Column Cash Book or Cash Book with Cash and Discount Columns :** This type of cash book is used when cash transactions involving discount allowed or received are effected. Usually, discount is allowed when payments are promptly made by the customers and discount is enjoyed when payments are promptly made by the business. In this two column cash book, one additional column is introduced viz., 'Discount Column'. The discounts allowed by the business are entered on the debit side and discounts received are entered on the credit side of the Cash book. The discount columns cannot be balanced. The ruling of a two column Cash Book is shown in Table 2;

Table 2 Format of Double Column Cash Book

Dr. **Double Column Cash Book** Cr.

Date	Particulars	L.F.	Discount (₹)	Cash (₹)	Date	Particulars	L.F.	Discount (₹)	Cash (₹)

(3) **Three Columnar Cash Book or Cash Book with Cash, Bank and Discount Columns :** This book are also known as cash book with cash discount and bank columns. It contains three columns on both the sides. Three column cash book is used by big trading organizations, to record large number of cash and bank transactions of different nature.

The ruling of a three columnar cash book is shown at Table 3,

Table 3 Format of Three Column Cash Book

Dr. **Three Column Cash Book** Cr.

Date	Particulars	L.F.	Discount (₹)	Cash (₹)	Bank (₹)	Date	Particulars	L.F.	Discount (₹)	Cash (₹)	Bank (₹)

(4) **Petty Cash Book :** The word 'Petty' has been derived from French word 'petit' which means 'small'. Petty cashier will record the petty payments in a book called "Petty Cash Book". The petty cash book is maintained just like the cash book. Money received from head cashier is recorded on debit side and payments are recorded on credit side. The petty cash payments/expenses such as postage and telegrams, printing and stationary, carriage and cartage, travelling, entertainment, sundry expenses etc.

Table 4 Format of Petty Cash Book

Cr. **Analytical Petty Cash Book** Dr.

Receipts (₹)	Date	Particulars	L.F.	Voucher No.	Total (₹)	Analysis of Payments			
						Postage and Telegram (₹)	Cartage (₹)	Stationery (₹)	Sundries (₹)

ILLUSTRATED PROBLEM ON SIMPLE/SINGLE COLUMN CASH BOOK

Q37) Enter the following transactions of Abhishek in single column cash book :

2019		
Jan.		**₹**
1	**Commenced Business with Cash**	**25,000**
2	**Paid into Bank**	**20,000**
4	**Purchased Goods for Cash**	**1.200**

6	Sold goods for cash	2,000
7	Paid stationery	75
9	Received from Shashikant	1,125
13	Paid to Gopal	525
15	Purchased Office Furniture	625
17	Paid for Advertisement	400
21	Received cash from Prasad Rao	1,500
23	Purchased goods from Malhotra	900
27	Cash withdrawn for personal use	350
29	Paid Salary to Office Staff	450
30	Received cash from Sandeep	2,200
31	Paid Rent to Land Lord	300

Answer :

Dr. Cash Book Cr.

Date	Particulars	L.F.	Amount (₹)	Date	Particulars	L.F.	Amount (₹)
Jan. - 2019				Jan. - 2019			
1	To Capital A/c		25,000	2	By Bank A/c		20,000
6	To Sales A/c		2,000	4	By Purchases A/c		1,200
9	To Shashikant A/c		1,125	7	By Stationery A/c		75
21	To Prasad Rao A/c		1,500	13	By Gopal A/c		525
30	To Sandeep A/c		2,200	15	By Office – Furnitures A/c		625
					By Advertisement A/c		400
					By Drawings A/c		350
					By Salary A/c		450
					By Rent A/c		300
					By Balance C/d		7,900
			31,825				31,825
Feb. 1	To Balance b/d		7,900				

Illustrated Problem on Two Column Cash Book

Q38) Enter the following transactions in a Two column cash book,

2019		₹
June 1	Cash in band	9,900
June 3	Bought goods for cash	5,300
June 5	Paid for wages	5,100
June 7	Withdraw from bank for expenses	8,500
June 7	Cash paid to Jeevan	2,950
	Discount allowed	50
June 10	Cash sales	14,500
June 13	Received cash flow manoj	4,900
	allowed him discount	100
June 15	Purchased stationery from Ram on crédit	200
June 16	Paid for postage stamps	150
June 18	Amount indroduced as capital	6,000
June 21	Received cash from vijay	8,840
	allowed him discount	160
June 24	Paid cash for travelling expenses	120
June 26	Amount paid into bank	2,500
June 27	Cash paid to D.D. Sharma	875
	discount allowed by him	25
June 28	Credit purchases from bharth	4,000
June 30	Cash purchases	2,500
June 30	Paid salaries	3,800

Answer :

Cash Book with Discount and Cash

Dr. Date	Particulars	L.F.	Discount (₹)	Cash (₹)	Date	Particulars	L.F.	Discount (₹)	Cash (₹) Cr.
2019					2019				
June 1	To Balance b/d			9,900	June 3	By Purchase A/c			5,300
June 7	To Bank A/c			8,500	June 5	By Wages A/c			5,100
June 10	To Sales A/c			14,500	June 7	By Jeevan A/c		50	2,950
June 13	To Manoj A/c		100	4,900	June 16	By Postage A/c			150
June 18	To Capital A/c			6,000	June 24	By Traveling Exp A/c			120
June 21	To Vijay A/c		160	8,840	June 26	By Bank A/c			2,500
					June 27	By D.D. Sharma		25	875
					June 30	By Purchases A/c			2,500
					June 30	By Salaries A/c			3,800
					June 30	By Balance c/d			29,345
			260	52,640				75	52,640
July 1	To Balance b/d			29,345					

Illustrated Problem on Three Column Cash Book

Q39) Enter the following transactions in a Three Column Cash Book,

Jan. - 2020		₹
1	Cash in hand	410
1	Balance at bank	8,920
2	Cash sales	4,500
3	Paid into bank	4,000
5	Purchased stationery	100
8	Paid mahesh by cheque	280
	discount received	20
12	Gave a cheque for cash purchases	1,500
15	Drew for personal use	500
18	Received from suresh, a cheque for in full settlement of account for ₹ 2,000	1,970
20	Drew from Bank	1,000
21	Paid wages	100
25	Bank returns cheque of Suresh dishonoured	
31	Bank charges as per Pass book	10

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Answer :

Three Column Cash Book

Dr. Date	Particular	L.F.	Dis.	Cash (₹)	Bank (₹)	Date	Particular	L.F.	Dis.	Cash (₹)	Bank (₹) Cr.
Jan. 2020						Jan. 2020					
1	To Balance b/d			410	8,920	3	By Bank A/c	C		4,000	
2	To Sales A/c			4,500		5	By Stationery A/c			100	
3	To Cash A/c	C			4,000	8	By Mahesh A/c		20		280
18	To Suresh A/c		30		1,970	12	By Purchases A/c				1,500
20	To Bank A/c	C		1,000		15	By Drawings A/c			500	
						20	By Cash A/c	C			1,000
						21	By Wages A/c			100	
						25	By Suresh A/c (Chq dishonor)				1,970
						31	By Bank Charges A/c				10
						31	By Balance c/d			1,210	10,130
			30	5,910	14,890				20	5,910	14,890
1 Feb.	To Balance b/d			1,210	10,130						

1.4 BANK RECONCILIATION STATEMENT (INCLUDING PROBLEMS)

Q40) What is bank reconciliation statement? Why it is important to prepare?

Answer :

A bank reconciliation statement is a summary of business activity that reconciles financial details. It ensures that payments have been processed and money has been deposited on the same date. An accountant prepares the reconciliation statement once a month.

According to *JR Batilboi,* "Bank reconciliation statement is prepared at periodical intervals with a view to indicate the items which causes disagreement between the balance as per the bank columns of the cash book and the bank pass book on the given date".

Objectives of Bank Reconciliation Statement

The need or importance of bank reconciliation statement can be summarized with the help of the following points,

(1) Bank reconciliation statement ensures the accuracy of balances shown by the pass book and cash book.

(2) Bank reconciliation statement provides a check on the accuracy of entries made in both pass book and cash book.

(3) Bank reconciliation statement helps to rectify and detect any error committed in both the books.

(4) Bank reconciliation statement helps to update the cash book by discovering some entries not yet recorded.

(5) Bank reconciliation statement indlactes any update delay in the collection and clearance of some cheques.

Q41) State the causes of difference between cash book and passbook balances.

Answer :

Table Causes of Difference between Cash Book and Pass Book

S.No.	Causes	Cash Book	Pass Book
(1)	Cheques issues but not yet presented for payment.	Entry is made. Balance = Decreased	No entry is made till the cheques are presented for payment. Balance = Same as before
(2)	Cheques paid into the bank but not cleared.	Entry is made. Balance = increased	No entry is made till the cheques are cleared. Balance = Same
(3)	Interest allowed by the bank.	No entry is made till the pass book is checked. Balance = Same	Entry is made. Balanced = Increased
(4)	Interest and expenses charged by the bank.	No entry is made till the pass book is checked. Balance = Same	Entry is made. Balanced =Decreased
(5)	Interest and dividents collected by bank.	No entry is made till the pass book is checked. Balance = Same	Entry is made. Balanced = Increased
(6)	Direct payments by the bank.	No entry is made till the pass book is checked. Balance = Same	Entry is made. Balanced =Decreased
(7)	Direct payments into the bank by a customer.	No entry is made till the pass book is checked. Balance = Same	Entry is made. Balanced = Increased
(8)	Dishonor of a bill discounted with the bank.	No entry is made till the pass book is checked. Balance = Same	Entry is made. Balanced =Decreased
(9)	Bills committed either in cash back or pass book.	No entry is made till the pass book is checked. Balance = Same	Entry is made. Balanced = Increased
(10)	Errors committed either in cash back or pass book.		

PROBLEMS ON BRS

Q42) Prepare a bank reconciliation statement of M/s. Hussain and Co. as on 31-03-2010.

(i) Bank balance as per cash book ₹12,500.

(ii) Cheque paid into bank but not credited ₹1,600.

(iii) Cheuqe issued but not presented for of payment ₹900.

(iv) Interest on fixed deposit collected and credited in pass book ₹1,200.

(v) Bank charge debited in pass book ₹50. **[Dec. - 2015]**

Answer :

Bank Reconciliation Statement of M/s. Hussain & Co. as on 31-03-2010.

	Particulars	Amount (₹)	Amount (₹)
	Bank balance as per Cash book		12,500
Add:	Cheque issued but not presented for payment	900	
	Interest on fixed deposit collected and credited in Pass book	1,200	2,100
			14,600
Less:	Cheques paid into bank but not credited	1,600	
	Bank charges debited in Pass book	50	1,650
	Bank balance as per Pass Book		12,950

Q43) From the following particulars, prepare BRS as on 31 March, 2007.

(i) Balances as per bank book ₹12,300.

(ii) Cheques sent for collection but not collected ₹3,300.

(iii) Cheques issued but not presented by payment ₹2,300.

(iv) The bank had debited the firm's account by ₹70 on account of bank charges.

[July - 2014]

Answer :

Bank Reconciliation Statement as on 31-03-2007.

	Particulars	Amount (₹)	Amount (₹)
	Bank balance as per bank book or pass book		12,300
Add:	Cheques sent for collection but not collected	3,300	
	Bank charges debited	70	3,370
Less:	Cheques issued but not presented for payment	2,300	15,670
	Bank balance as per Cash Book		13,370

Q44) Prepare bank reconciliation statement as on 31-12-2012.

(i) Balance as per cash book ₹1,580.

(ii) Cheques paid into bank but not collected and credited before closing date ₹430.

(iii) Cheque issued but not presented for payment of ₹510.

(iv) Bank charges debited in the passbook ₹10.

(v) Internet charged by the bank debited in passbook ₹20.

(vi) Amount collected as interest by bank and credited in passbook ₹300.

[June/July - 2015]

Answer :

Bank Reconciliation Statement as on 31-12-2012.

	Particulars	Amount (₹)	Amount (₹)
	Balance as per Cash book		1,580
Add:	Cheque issued but not presented for payment	510	810
	Interest collected by bank and credited in passbook	300	
Less:	Cheques paid into bank but not credited and credited	430	2,390
	Bank charges debited in Pass book	10	
	Interest charges by bank debited in Pass book	20	460
	Bank balance as per Pass Book		1,930

UNIT 2

FINAL ACCOUNTS

PROFESSIONAL'S
The Destination Towards Knowledge & Success

SYLLABUS

Trading Account, Concept of Gross Profit, Profit and Loss Account, Concept of Net Profit, Balance Sheet (Including Problems with Minor Adjustments).

PART - A
SHORT QUESTIONS WITH ANSWERS

Q1) What is trading account?

Answer :

The account which is prepared to determine the gross profit or gross loss of a business concern is called ***trading account.***

Q2) What is the purpose of trading account?

Answer :

The purpose of trading account are,

(1) Gross profit of a business is very important data, since all business expenses are met out of it. So the amount of gross profit should be adequate to meet the indirect expenses of a business concern.

(2) The amount of net sales can be determined through this account. Gross sales can be ascertained from sales account in the ledger, but net sales cannot be so obtained. The true sales of a business is net sales, not gross sales. Net sales are determined by deducting sales returns from gross sales in trading account.

Q3) What do you mean by gross profit?

Answer :

Gross profit is the profit a company makes after deducting the costs associated with making and selling its products, or the costs associated with providing its services. Gross profit will appear on a company's income statement and can be calculated by subtracting the cost of goods sold (COGS) from revenue (sales). These figures can be found on a company's income statement.

Q4) State the formulae for determining gross profit.

Answer :

The formulae for determining gross profit are,

Gross Profit = Revenue - Cost of Goods Sold.

Q5) What are the contents of trading account?

Answer :

The contents of trading account are,

(1) **Opening Stock :** In the case of trading concern, the opening stock means the finished goods only. It take the amount of opening stock from Trial Balance.

(2) **Purchases :** The amount of purchases during the year includes cash as well as credit purchases. The deductions from purchases are purchase return, drawings of goods by the proprietor, distribution of goods as free samples, etc.

(3) **Direct Expenses :** It means all those expenses which are incurred from the time of purchases to making the goods in suitable condition. This expense includes freight inward, octroi, wages etc.

(4) **Gross Profit :** If the credit side of Trading A/c is greater than the debit side of Trading A/c gross profit will arise.

Q6) Define profit and loss account.

Answer :

A profit and loss account shows a company's revenue and expenses over a particular period of time, typically either one month or consolidated months over a year. These figures show whether your business has made a profit or a loss over that time period.

Profit and loss accounts show the total income and expenses, and also shows whether the business has earned more income than it has spent on its running costs. If that is the case, then the business has made a profit.

Q7) What does profit and loss account include?

Answer :

A profit and loss account will include the credits (which includes turnover and other income) and deduct debits (which includes allowances, cost of sales and overheads). These are used to find the bottom line figure - either your net profit or your net loss.

Q8) What is a profit and loss account used for?

Answer :

The uses of profit and loss account are,

(1) The profits shown in your profit and loss account are used to calculate both income tax and corporation tax. Failure to file either of these correctly can result in you paying added interest and penalties, so it's important to get this report right.

(2) The P and L account takes revenues into account for a specific period. It also records any expenses or costs incurred by these revenues, such as depreciation and taxes.

(3) This can be used show investors and other interested parties whether or not the company made money during the period being reported.

Q9) What is net profit?

Answer :

The net profit margin is equal to how much net income or profit is generated as a percentage of revenue. Net profit margin is the ratio of net profits to revenues for a company or business segment. Net profit margin is typically expressed as a percentage but can also be represented in decimal form. The net profit margin illustrates how much of each dollar in revenue collected by a company translates into profit.

Q10) How do you calculate net profit?

Answer :

Following are the way to calculate net profit,

(1) Deduct discounts and allowances from gross income (excluding VAT) to get net income.

(2) Deduct the cost of sales from net incomes to find gross profit.

(3) Deduct overheads from gross profit to get the operating profit.

(4) Deduct any other expenses from operating profit (plus any other income) to find your profit before tax.

(5) Deduct tax to reach net profit or net loss.

Q11) State the structure of P&L statement?

Answer :

A company's statement of profit and loss is portrayed over a period of time, typically a month, quarter, or fiscal year.

The main categories that can be found on the P&L include,

(1) Revenue (or Sales).

(2) Cost of Goods Sold (or Cost of Sales).

(3) Selling, General & Administrative (SG&A) Expenses.

(4) Marketing and Advertising.

(5) Technology.

(6) Interest Expense.

(7) Taxes.

(8) Net Income.

Q12) What is balancesheet?

Answer :

Balance Sheet is the financial statement of a company which includes assets, liabilities, equity capital, total debt etc. at a point in time. Balance sheet includes assets on one side, and liabilities on the other.

For the balance sheet to reflect the true picture, both heads (liabilities & assets) should tally (Assets = Liabilities + Equity).

Q13) What are the three important section of balancesheet?

Answer :

The three important sections of any balance sheet are,

(1) **Assets :** Anything that has value and owned by a company.

(2) **Liabilities :** This provides a list of debts a company owes to others.

(3) **Capital or Equity :** This is the amount invested by the Sharehold.

Q14) What are the importance of balancesheet?

Answer :

Importance of balance sheet is listed below,

(1) It is an important tool used by the investors, creditors and other stakeholders to understand the financial health of an entity.

(2) The growth of an organization can be known by comparing the balance sheet of different years.

(3) It is an essential document required to be submitted to the bank to obtain a business loan.

(4) Stakeholders can understand the business performance and liquidity position of the entity.

Q15) Define the term assets and liabilities?

Answer :

Assets

An asset is anything of value that a company owns. This includes cash, property and equipment, inventory, accounts receivables and more. An asset is something that can be converted to cash value.

Liabilities

A liability is an amount that a company owes. Typically, a liability involves money borrowed in order to support business activities, so can also include accounts payable and general debt.

Q16) Distinguish between trading and profit and loss account.

Answer :

Basis	Trading Account	Profit and Loss Account
Meaning	Trading account is prepared to find out the gross profit of the business for the particular accounting period.	Profit and loss account or Income statement is prepared to find out the Net Profit/loss of the business for the particular accounting period.
Timing	Trading Account is prepared before the P&L account.	Profit/Loss Account is prepared after the Trading account
Purpose	To get know Gross profit or loss of the business.	To get know Net profit or loss of the business
Stage	It is the first stage of the final account.	it is the second stage of the final account.
Dependency	it is a first statement or final account so it is not dependent on Trial balance.	It is dependent on Trading account.

Q17) State the difference between balancesheet and profit and loss account.

Answer :

Basic for Comparison	Balance Sheet	Profit and Loss Account
Meaning	A statement that shows company's assets, liabilities and equity at a specific date.	Account that shows the company's revenue and expenses over a period of time.
What is it?	It is a statement	It is an account
Represents	Financial position of the business on a particular date.	Profit earned or loss suffered by business for the accounting period
Preparation	Prepared on the last day of financial year.	Prepared for the financial year.
Information Disclosed	Assets, liabilities, and capital of shareholders.	Income, expenses, gains and losses.

Q18) Difference between gross profit and net profit.

Answer :

S.No.	Gross Profit	Net Profit
(1)	It is the excess of net sales over cost of purchase or manufacture (all expense relating to purchase or manufacture of goods) of goods.	It is the excess of gross profit over all indirect expenses.
(2)	It is not true profit of the business	It is true profit of the business.
(3)	It shows credit balance of the trading account	It shows credit balance of the profit and loss account
(4)	The progress of the business can be judged by the comparison of gross profit with net sales	The profitability of the business can be measured by the comparison of net profit with net sales.

PART - B
ESSAY QUESTIONS WITH ANSWERS

2.1 FINAL ACCOUNT

Q19) Write a note on final accounts.

Answer :

Final Accounts are the accounts, which are prepared at the end of a fiscal year. It gives a precise idea of the financial position of the business/organization to the owners, management, or other interested parties. Financial statements are primarily recorded in a journal; then transferred to a ledger, and thereafter, the final account is prepared. Usually, a final account includes the following components,

(1) Trading Account.

(2) Profit and Loss Account.

(3) Balance Sheet.

2.2 TRADING ACCOUNT, CONCEPT OF GROSS PROFIT

Q20) What is trading account? Discuss the concept of gross profit under trading account.

Answer :

Trading account is prepared to ascertain the gross profit and loss of a firm, where gross profit is the excess of total revenue over cost of goods sold. The gross loss is the excess of cost of goods over net revenue.

Gross profit = Net sales – Cost of goods sold

Gross loss = –(Net sales – Cost of goods sold)

Trading account is generally prepared in "T" form. The following are the various steps are involve in preparing an trading account,

(1) Identify the items of expenses relating to trading and show them on the debit side of Trading account.

(2) Show the sales less returns and closing stock on the credit side of trading account.

(3) The difference is gross profit if credit total is more than debit and gross loss if debit total is more than credit.

(4) Transfer the gross profit or gross loss to profit and loss account.

The format of trading account is shown in Table,

Table Format of Trading Account

Particulars		(₹)	Particulars		(₹)
To opening stock		xxx	By sales	xxx	
To Purchases	xxx		Less : returns inwards/sales returns	xx	xxx
Less: Purchase returns/returns outwards	xx	xxx	By closing stock		xxx
To carriage inwards		xxx	By gross loss (if any)		xxx
To freight and octroi		xxx	(Transfer to profit and loss account)		
To wages		xxx			
To fuel and power		xxx			
To gas, coal, electricity for production		xxx			
To import duty and clearing charges		xxx			
To stores consumed		xxx			
To factory rent, insurance, factory expenses		xxx			
To royalty paid		xxx			
To gross profit (transfer to profit and loss account)		xxx			
		xxx			xxx

PROBLEMS ON TRADING ACCOUNT

Q21) From the following balance extracted from Trial balance for the year ending December 31, prepare Trading Account. The closing stock at the end of the period ₹56000.

Particulars	Amount (₹)
Stock on 1-1-2019	70,700
Returns inwards	3,000
Returns outwards	3,000
Purchases	1,02,000
Debtors	56,000
Creditors	45,000
Carriage inwards	5,000
Carriage outwards	4,000
Import duty on material received from abroad	6,000
Clearing charges	7,000
Rent of business shop	12,000
Royalty paid to extract materials	10,000
Fire insurance on stock	2,000
Wages paid to workers	8,000
Office salaries	10,000
Cash discount	1,000
Gas, electricity and water	4,000
Sales	2,50,000

Answer :

Dr. **Trading Account for the Year Ending 31-12-2020** Cr.

Particulars		Amount (₹)	Particulars		Amount (₹)
To opening stock		70,700			
To purchases	1,02,000		By Sales	2,50,000	
Less : Returns			**Less:** Returns		
Outwards	3,000	99,000	Inwards	3,000	2,47,000
To a carriage inwards		5,000	By Closing stock		56,000
To import duty		6,000			
To clearing charges		7,000			
To royalty		10,000			
To fire insurance		2,000			
To wages		8,000			
To gas, electricity and water		4,000			
To gross profit c/d (transfer to profit and loss A/c)		91,300			
		3,03,000			**3,03,000**

Note : Office expenses being indirect expenses have not been debited to trading account. These expenses are debited to the profit and loss account.

Q22) Prepare a trading account for the year ending 30th June, 2020 of Mr. Arun Sharma from the following balances,

	Amount (₹)
Stock on 1st July, 2019	**4,80,000**
Cash purchases	**3,60,000**
Credit purchases	**8,40,000**
Cash sales	**7,60,000**
Credit sales	**14,20,000**

Direct expenses incurred,

Freight	27,500
Carriage	2,500
Octroi duty	12,000
Import duty and dock charges	1,30,000
Clearing charges	40,000
Manufacturing expenses	1,20,000
Indirect expenses incurred,	
Office salaries	50,000
Office lighting	5,000
Printing and stationery	4,000
Goods destroyed by fire	10,000
Subsidies on purchase of goods	30,000
Excise Duty on Finished goods	35,000
Duty drawbacks (modvatable excise duty)	15,000
Stock on 30th June, 2020 at cost (market value ₹3,00,000)	3,10,000

***Answer* :**

Trading Account of Mr. Arun Sharma

Dr. **For the Year Ending 30th June, 2020** Cr.

Particulars	Amount (₹)	Amount (₹)	Particulars	Amount (₹)	Amount (₹)
To opening stock		4,80,000	**By Sales :** Cash	7,60,000	
To Purchases			Credit	14,20,000	21,80,000
Cash	3,60,000				
Credit	8,40,000		By closing stock		3,00,000
	12,00,000		By stock destroyed by fire		10,000
Less : Subsidies on,					
Purchase of goods 30,000					
Duty draw-back 15,000	45,000	11,55,000			
To freight		27,500			
To carriage		2,500			
To octroi duty		12,000			
To import duty and dock charges		1,30,000			
To clearing charges		40,000			
To manufacturing expenses		1,20,000			
To excise duty on finished goods		35,000			
To gross profit c/d (transfer to profit and loss A/c)		4,88,000			
		24,90,000			**24,90,000**

NOTE

(1) Office expenses being indirect expenses have not been debited to the Trading Account. These expenses are debited to the Profit and Loss Account.

(2) Closing stock has been valued on the principle of cost or market value, whichever is lower. Market value of ₹3,00,000 being lower than the cost of ₹3,10,000 has been considered for the valuation of closing stock.

(3) Stock destroyed by fire has been credited to the Trading Account so that correct gross profit may be shown. If there had been no stock destroyed by fire, closing stock value would have been more.

2.3 PROFIT AN LOSS ACCOUNT, CONCEPT OF NET PROFIT

Q23) What is profit and loss account? What are the steps imvolved in its preparation? State the format on basic of net profit or loss.

Answer :

Profit and loss account is prepared in order to know whether the firm has made net profit or suffered net loss for a given accounting period. All revenue receipts are those which are received regularly arising out of day to day activities of the business and all revenue payments, which are known as expenses are incurred regularly are recorded in profit and loss account. Any capital receipts or capital payments are not considered while preparing profit and loss account.

PURPOSE

The profit and loss account is prepared to ascertain the net profit earned or net loss incurred by the business entity as a result of business operations during an accounting period.

CONTENTS

All the indirect revenue expenses and losses (i.e., other than those show on the debit side of the trading account) are shown on the debit side of the profit and loss account, whereas all indirect revenue incomes (i.e., other than those shown on the credit side of the trading account) are shown on the credit side of the profit and loss account.

PREPARATION

The following steps may help to prepare profit and loss account,

(1) Identify the expenses and bring them to debit side of P & L account.

(2) Identify the revenue incomes and put them on the credit side of P & L account.

(3) Check the transfer of reserves to the relevant sides of the account.

(4) Transfer the net profit/net loss to the capital account.

The format of profit and loss account is shown in Table,

Table Format of Profit and Loss Account

Profit and Loss Account for the Year Ending.....

Dr. Cr.

Particulars	(Amount) ₹	Particulars	(Amount) ₹
To gross loss b/d	xxx	By gross profit b/d	xxx
To salaries	xxx	By interest earned/received	xxx
To rent of the premises	xxx	By commission earned/received	xxx
To traveling expenses	xxx	By discount earned/received	xxx
To rates and taxes	xxx	By rent received	xxx
To printing and stationery	xxx		
To postage and telegram	xxx		
To telephone charges	xxx		
To insurance	xxx	By dividends received	xxx
To interest paid	xxx	By royalty received	xxx
To discount allowed	xxx	By net loss (transferred to capital A/c)	xxx
To sundry expenses	xxx		
To advertisement	xxx		
To carriage outwards	xxx		
To commission paid	xxx		
To bad debts	xxx		
To legal charges	xxx		
To audit fee	xxx		
To net profit (transferred to capital A/c)	xxx		
	xxx		xxx

PROBLEMS ON PROFIT AND LOSS ACCOUNT

Q24) The following Trail balance is extracted from the books of a Rahul on 31-12-2020, prepare trading and profit and loss account.

Particulars	Amount (₹)	Particulars	Amount (₹)
Furniture and fittings	640	Sales Returns	200
Motor vehicles	6,250	Purchase Returns	125
Buildings	7,500	Advertising	450
Capital Account	12,500	Commission Received	375
Bad Debts	125	Cash	650
Sundry Debtors	3,800	Taxes and Insurance	1,250
Sundry Creditors	2,500	General Expenses	782
Stock on 1-1-2004	3,460	Salaries	3,300
Purchases	5,475		
Sales	15,450		

Answer :

Stock in Hand on 31-12-2020 was ₹ 3,250

Dr. Trading and profit and Loss Account of Rahul for the Year Ending 31-12-2020 Cr.

Particulars	Amount (₹)	₹	Particulars	Amount (₹)	Amount (₹)
To Opening stock		3,460	By Sales	15,450	
To Purchases	5,475		Less : Returns	200	15,250
Less : Returns	125	5,350			
To Gross Profit c/d		9,690	By Closing Stock		3,250
		18,500			18,500
To Salaries		3,300	By Gross Profit b/d		9,690
To Advertising		450	By Commission received		375
To Taxes and Insurance		1,250			
To General expenses		782			
To Bad debts		125			
To Net Profit (Transfer to Capital A/c)		4,158			
		10,065			10,065

Q25) The following figures from the books of Icon Ltd., prepare trading and profit and loss A/c on 31-3-2019.

Capital	60,000	Machinery	23,000
Loan	10,000	Preminary expenses	12,000
Bills payable	8,000	Land	10,000
Purchases	16,000	Purchase returns	1,000
Sales	25,000	Salaries	7,000
Trade expenses	2,000	Insurance paid	1,500
Wages	14,000	Dividend income	4,000
Printing	3,000	Advertising	3,000
Rent, rates	2,000	Furniture	5,000
Opening stock	9,000	Bad debts	3,000
Debtors	30,000	Closing stock was ₹ 20000	
Audit fees	500		
Creditors	25,000		
Transfer fees	7,000		
Cash	5,000		

Answer :

Dr. **Trading and Profit and Loss A/c of Icon Ltd., as on 31-3-2019** Cr.

Particulars		Amount (₹)	Particulars	Amount (₹)
To Opening Stock		9,000	By Sales	25,000
To Purchases	16,000			
Less : Purchases Returns	1,000	15,000		
To Wages		14,000	By Closing Stock	20,000
To Gross profit c/d (Transfer to P and L A/c)		7,000		
		45,000		45,000
To Trade Expenses		2,000	By Gross Profit b/d	7,000
To Printing		3,000	By Transfer Fees	7,000
To Rent Rates		2,000	By Dividend Income	4,000
To Audit Fees		500	By Net Loss (Transfer to Capital A/c)	4,000
To Salaries		7,000		
To Insurance Paid		1,500		
To Advertising		3,000		
To Bad Debts		3,000		
		22000		22,000

2.4 BALANCE SHEET (INCLUDING PROBLEMS WITH MINOR ADJUSTMENTS)

Q26) Define balance sheet? What are the minor adjustment entries associated with it?

Answer :

Balence sheet is prepared to know the financial position of business on a particular date. It is a statement which shows the assets and liabilities of a business as on a particular date. It shows what a business owns and what it owes.

Balance sheet is a "Statement" and not an "Account". It does not have "Debit" and "Credit" sides.It is divdend into two sides i.e., left hand side and right hand side. The left hand side is called the liabilities side and the right hand side is called the assets side. All the liabilities and capital are entered on the liabilities side and all property and assets are entered on the assets side. If all liabilities and the capital of the proprietor and all assets are property recorded then the two sides of the balance sheet must tally or agree.

According to "*Amercan Institute of Certified Public Accountants*, "Balance sheet is a list of balances in the assets and liabilities accounts. This list depicts the position of assets and liabilities of a specific business at a specific point of time".

Table Format of A Balance Sheet

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

Liabilities		Amount (₹)	Assets		Amount (₹)
Capital			Fixed Assets		
Opening Balance	xxx		Goodwill		xxx
Add : Net Profit	xxx		Land		xxx
(less net loss)	xxx		Building		xxx
Less : Drawings	xxx	xxx	Plant and Machinery		xxx
Long Term Liabilities			Furniture and Fixtures		xxx
Loan		xxx	Investment		xxx
Current Liabilities			Current Assets		
Sundry Creditors		xxx	Closing Stock		xxx
Outstanding Expenses		xxx	Prepaid Expenses		xxx
Bills Payable		xxx	Sundry Debtors		xxx
Bank Overdraft		xxx	Bill Receivable		xxx
		xxx	Cash at Bank		xxx
			Cash in Hand		xxx
		xxx			xxx

MINOR ADJUSTMENTS

If any item of adjustment appears outside the trial balance, it will be shown at two places in the final accounts i.e., once in trading or profit and loss account and balance sheet. The treatment of such item as shown in Table,

Table Adjustment and Treatment of Entry

S.No.	Item of Adjustment	Adjustment Entry	Treatment in Trading A/c	Treatment in Profit and Loss A/c	Treatment in Balance Sheet
(1)	Closing Stock	Closing Stock A/c Dr. To Trading A/c	Shown on the credit side.	Not shown	Shown on the assets side as a current asset.
(2)	Outstanding Exp	Respective Exp A/c Dr. To Outstanding Exp A/c	Added to the respective expense on the debit side.	Added to the respective expense on the debit side	Shown on the liabilities side as a current liability.
(3)	Prepaid Exp (Unexpired Exp)	Prepaid Exp A/c Dr. To Respective Exp A/c	Deducted from the respective expense on the debit side.	Deducted from the respective expense on the debit side	Shown on the assets side as a current asset.
(4)	Accrued Income (income earned but not received) or outstanding income	Accrued Income A/c Dr. To Respective Income A/c	Not shown	Added to the respective income on credit side	Shown on the assets side as a current asset.
(5)	Unearned income (income received in advance)	Respective Income A/c Dr. To Unearned Income A/c	Not shown	Deducted from respective income on the credit item	Shown on the liabilities side.
(6)	Depreciation	Depreciation A/c Dr. To Respective Assets A/c	Not shown	Shown on the debit side as a separate item	Shown on the assets side by deducting from concerned fixed asset amount.
(7)	Additional Bad Debts	Bad Debts A/c Dr. To Sundry Debtors A/c	Not shown	Income the debit side by way or addition to bad debts (inside the trial balance) (if no provision for doubtful debts is maintained) or shown on the debit side of provision for doubtful debts (provision account is maintained)	Shown on the assets side by way of deduction from sundry debtors.
(8)	Provision for Bad and Doubtful debts	P&L A/c Dr. To Provision for Bad & doubtful debts A/c	Not shown	Shown on the debit side as a separate item.	Shown on the assets side by way of deduction from sundry debtors.
(9)	Provision for Discount on Debtors	P&L A/c Dr. To Provision for Discount A/c	Not shown	Shown on the debit side as a separate item.	Shown on the asset side by way of deduction from the amount of sundry debtors (Net of addition bad debts and provision for bad and doubtful debts).
(10)	Reserve for Discount on Creditors	Reserve for Discount on Creditors A/c Dr. To P&L A/c	Not shown	Shown on the credit side as a separate item.	Shown on the liabilities side by deducting from sundry creditors.
(11)	Interest on Capital	Interest Capital A/c Dr. To Capital A/c	Not shown	Shown on the debit side as a separate item.	Shown on the liabilities side by adding to the capital.

PROBLEMS ON BALANCE SHEET

Q27) From the following particulars prepare trading and profit and loss account and balance sheet as on 30-06-2012.

TRIAL BALANCE

Particulars	Debit (₹)	Credit (₹)
Capital		37,000
Cash in hand	4,000	
Purchases and Sales	45,000	95,000
Returns	500	600
Wages	8,500	
Power and Fuel	3,500	
Salaries	6,500	
Carriage inwards	1,800	
Opening stock	7,200	
Buildings	25,000	
Machinery	15,000	
Furniture	5,000	
Debtors and Creditors	12,000	9,000
General expenses	2,600	
Drawings	5,000	
Total ₹	1,41,600	1,41,600

Adjustments:

(i) Closing stock ₹ 14,000

(ii) Machinery and Furniture to be depreciated by ₹ 750 and ₹ 250

(iii) Outstanding wages ₹ 500

(iv) Write off bad debts ₹ 600

(v) Charge interest on drawings @ 5%

[June - 2016]

Answer :

Dr. **Trading and Profit and Loss Account for the Year Ending 30-06-2012** Cr.

Particulars		Amount (₹)	Particulars		Amount (₹)
To Opening stock		7,200	By Sales	95,000	
To Purchases	45,000		Less : Returns	500	94,500
Less : Returns	600	44,400	By Closing stock		14,000
To Wages	8500				
Add : Outstanding wages	500	9,000			
To Power and Fuel		3,500			
To Carriage inwards		1,800			
To Gross Profit c/d		42,600			
		1,08,500			1,08,500
To Salaries		6,500	By Gross Profit b/d		42600
To General expenses		2,600	By Interest on drawings		250
To Bad debts		600	(5,000 x 5%)		
To Depreciation					
Machinery	750				
Furniture	+250	1,000			
To Net Profit c/d		32,150			
		42,850			42,850

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Particulars	Amount (₹)	Amount (₹)	Amount (₹)
I. Sources of Funds:			
1. Shareholder's funds			
(a) Share capital			
Capital		37,000	
Less: Drawing		5,000	
		32,000	
Less: Interest on Drawing		2,50	
		31,750	
(b) Reserves and surpluses			
Profit and Loss a/c (Net Profit)		32,150	63,900
2. Loan funds:			
(a) Secured loans		–	–
(b) Unsecured loans		–	–
Total Sources of Funds			63,900
II. Applications of Funds:			
1. Fixed Assets			
Buildings		25,000	
Machinery		15,000	
Furniture		5,000	
		45,000	
Less: Depreciation			
Depreciation on machinery	750		
Depreciation on furniture	250	1000	
Net Fixed Assets		44,000	
2. Investments	–	–	
3. Current assets, loans and advances:			
(a) Debtors	12,000		
(b) Closing stock	14,000		
(c) Cash in hand	4,000	30,000	
Less: Current liabilities and provisions			
Provision of Bad debtors on debtors	600		
Creditors	9,000		
Outstanding wages	500	10,100	
Net Current Assets			19,900
Total Application of funds			63,900

Q28) From the following particulars prepare trading and profit and loss account for the year ending 31-12-2006 and balance sheet as on date.

Particulars	Debit (₹)	Credit (₹)
Sales		1,28,000
Duty and clearing charges	3,500	
Purchases	50,000	
Bank overdraft		6,000
Capital		30,000
Sundry creditors		43,000
Drawings	6,000	
Bills payable		4,000
Sundry debtors	51,000	
Bills receivable	8,000	
Loan given to Vijay and Co.	10,000	
Fixtures and fittings	7,500	
Opening stock	47,000	
Cash in hand	900	
Machinery	12,500	
Commission received		4,000
Salaries	9,500	
Sales returns	1,000	
Purchase returns		1,100
Commission and travelling expenses	4,700	
General expenses	2,500	
Rent paid	2,000	
Total ₹	2,16,100	2,16,100

Adjustments :

(i) Closing stock ₹ 60,000

(ii) Outstanding salaries ₹ 300, Rent ₹ 400

(iii) Depreciate plant and machinery by 10%, fixtures and fittings by 5%

(iv) Commision received in advance ₹ 500

(v) Allow interest on capital at 8% P.A. [Dec. - 2015]

Answer :

Trading and profit and Loss Account for the Year Ending 31-12-2006

Dr. Cr.

Particulars		Amount (₹)	Particulars		Amount (₹)
To Opening Stock		47,000	By Sales	1,28,000	
To Purchase	50,000		Less : Sales returns	1,000	1,27,000
Less : Purchase returns	1,100	48,900	By Closing Stock		60,000
To duty and clearing charges		3,500			
To Gross Profit c/d		87,600			
		1,87,000			1,87,000
To Salaries	9,500		By Gross Profit b/d		87,600
Add : O/s salaries	300	9,800	By commission received	4,000	
To Rent	2,000		Less : Commission received in advance	500	3,500
Add : O/s Rent	400	2,400			
To Commission and traveling expenses		4,700			
To general expenses		2,500			
To interest on capital @8%		2,400			
To depreciation on machinery		1,250			
To depreciation on fixtures and fittings		375			
To Net profit c/d		67,675			
		91,100			91,100

Particulars	Amount (₹)	Amount (₹)	Amount (₹)
I. Sources of Funds:			
1. Shareholder's funds			
(a) Share capital			
Capital	30,000		
Add: Interest on capital	2,400		
	32,400		
Less: Drawings	6,000	26,400	
(b) Reserves and surplus			
Profit and Loss a/c (Net Profit)		67,675	94,075
2. Loan funds			
(a) Secured loans		–	–
(b) Unsecured loans		–	–
Total Sources of Funds			94,075
II. Applications of Funds:			
1. Fixed Assets			
Machinery	12,500		
Fixtures and fittings	7,500	20,000	
Less: Depreciation on machinery	1,250		
Depreciation on furniture and fitting	375	1,625	18,375
2. Investments			
3. Current assets, loans and advances:			
Cash in hand	900		
Sundry debtors	51,000		
Bills receivable	8,000		
Loan to Vijay & Co.	10,000		
Closing stock	60,000	1,29,900	
Less: Current liabilities and provisions			
Sundry creditors	43,000		
Bill payable	4,000		
Bank overdraft	6,000		
Outstanding salaries	300		
Outstanding rent	400		
Commission received in advance	500	54,200	75,700
Total Application of funds			94,075

Q29) From the following particulars prepare trading and profit abnd loss account of Surya for the year ending 31-12-2008.

Particulars	Debit (₹)	Credit (₹)
Sury's Capital		25,000
Opening stock	6,200	
Cash	1,700	
Sundry Debtors	9,100	
Purchases	61,300	
Sales		93,600
Ruturn out words		1,800
Return in words	500	
Carriage In words	3,700	
Carriage out words	7,200	
Salaries	7,200	
Rent	6,000	
Sundry Credits		4,000
Discounts Received		100
Drawings	6,300	
Furniture and Fittings	10,800	
Printing and stationary	1,200	
Total	1,24,500	1,24,500

Adjustments : Closing stock pm 31-12-2008 was valued at ₹ 7,800. [Dec. - 2017]

Answer :

Note : In the given trial balance, the debit side showing deficit balance of ₹ 3300.

Dr. Trading and Profit and Loss account for the year ending 31-12-2008 Cr.

Particulars		Amount (₹)	Particulars		Amount (₹)
To Opening Stock		6,200	By Sales	93,600	
To purchases	61,300		Less: Return inwards	500	93,100
Less: Returns outwords	1,800	59,500	By Closing Stock		7,800
To carriage inwards		3,700			
To Gross Profit c/d		31,500			
		1,00,900			1,00,900
To Salaries		7,200	By Gross Profit b/d		31,500
To Rent		6,000	By Discount received		100
To Carriage outwards		7,200			
To Printing and stationary		1,200			
To Net Profit c/d (Transferred to capital A/C)		10,000			
		31,600			31,600

Balance Sheet as on 31-12-2008

Particulars	Amount (₹)	Amount (₹)	Amount (₹)
I. Sources of Funds:			
1. Shareholder's funds			
(a) Share capital			
Capital	25,000		
Less: Drawings	6,300		
	18,700		
(b) Reserves and surpluses			
Profit and Loss a/c (Net Profit)	10,000		28,700
2. Loan funds:			
(a) Secured loans	-	-	-
(b) Unsecured loans	-	-	-
Total Sources of Funds		-	28,700
II. Applications of Funds:			
1. Fixed Assets			
Furniture and fittings	10,800		
Net fixed assets			10,800
2. Investments			
3. Current assets, loans and advances:			
Sundry debtors	9,100		
Cash	1,700		
Closing stock	7,800	18,600	
Less: Current liabilities and provisions			
Sundry creditors		4,000	14,600
Suspense account (Dificit balance of trial balance)			3,300
Total Applications of Funds			28,700

Q30) Prepare trading and profit and loss account and balance sheet as on 31-12-2012 from the following particulars.

	₹		₹
Captial	30,000	Drawings	6,000
Sundry Creditors	43,000	Bills payable	4,000
Sundry Debtors	51,000	Bills receivable	17,000
Furniture	8,500	Opening stock	47,000
Cash in hand	900	Cash in bank	12,500
Bank overdraft	6,000	Purchases	48,900
Duty & clearing charges	3,500	Sales	1,27,000
Salaries	9,500	Travelling expenses	4,700
General expenses	2,500	Rent paid	2,000
Commission received	4,000		

Adjustments

(1) Closing stock ₹ 50,000. **[June/July - 2015]**

Answer :

Dr. **Trading and profit and Loss A/c for the Year ending 31-12-2013** Cr.

Particulars	Amount	Particulars	Amount
To Opening stock	47,000	By Sales	1,27,000
To Purchases	48,900	By Closing stock	50,000
To Duty and clearing charges	3,500		
To Gross Profit c/d	77,600		
	1,77,000		**1,77,000**
To Salaries	9,500	By Gross profit b/d	77,600
To General expenses	2,500	By Commission received	4,000
To Travelling expenses	4,700		
To Rent paid	2,000		
To Net profit c/d	62,900		
	81,600		**81,600**

Balance Sheet as on 31-12-2012

Particulars	Amount (₹)	Amount (₹)	Amount (₹)
I. Sources of Funds:			
1. Shareholder's funds			
(a) Share capital			
Capital		30,000	
Less: Drawings		6,000	
		24,000	
(b) Reserves and surpluses			
Profit and Loss a/c (Net Profit)		62,900	86,900
2. Loan funds:			
(a) Secured loans	–	–	–
(b) Unsecured loans	–	–	–
Total Sources of Funds			86,900
II. Applications of Funds:			
1. Fixed Assets			
Furniture		8,500	
Net fixed assets			8,500
2. Investments			
3. Current assets, loans and advances:			
(a) Sundry debtors	51,000		
(b) Cash in hand	900		
(c) Bills receivable	17,000		
(d) Cash in bank	12,500		
(e) Closing stock	50,000	1,31,400	
Less: Current liabilities and provisions			
(a) Sundry creditors	43,000		
(b) BOD	6,000		
(c) Bills payable	4,000	53,000	78,400
Total Application of funds			86,900

UNIT

3

FINANCIAL SYSTEM AND MARKETS

PROFESSIONAL'S
The Destination Towards Knowledge & Success

SYLLABUS

Financial System, Components, Role, Considerations of the investors and issuers, Role of Financial Intermediaries, Financial Markets, Players, Regulators and Instruments, Money Markets, Credit Market, Capital Market (Basics only).

PART - A
SHORT QUESTIONS WITH ANSWERS

Q1) What is financial system?

Answer :

Financial system is a set of markets and Institution to facilitate the exchange of assets and risks.

Q2) What are the functions of financial system?

Answer :

Following are the functions of financial system,

(1) It works as an effective conduit for optimum allocation of financial resources in an economy.

(2) It helps in establishing a link between the savers and the investors.

(3) It allows asset-liability transformation. Banks create claims (liabilities) against themselves when they accept deposits from customers but also create assets when they provide loans to clients.

Q3) State the importance of financial system.

Answer :

Following are the importance of financial system,

(1) Facilitate economic / industrial activity and growth.

(2) Helps accelerate the volume and rate of savings.

(3) Monitors the management of companies (corporate sector).

(4) Facilitates execution of monetary policy by the central bank.

(5) Facilitates evaluation of assets.

Q4) What are the key components of financial system?

Answer :

Following are the key components of financial system,

(1) Financial institutions.

(2) Financial markets.

(3) Financial services.

(4) Financial instruments (Assets of securities).

Q5) Briefly mention the role of financial system.

Answer :

The role of financial system are,

(1) It play a role in allocating of score resources.

(2) Provides efficient flow of funds from lenders to borrowers finance real investment or consumption.

(3) Facilitates trades in goods and services via an efficient pay system.

Q6) Define financial intermediaries.

Answer :

Financial intermediary is the organization which acts as a link between the investor and the borrower, to meet the financial objectives of both the parties. These can be seen as business entities which accept deposits from the depositors or investors (lenders) by allowing them low interest on their sum. Further, these organizations, lend this amount to the individuals and firms (borrowers) at a comparatively high rate of interest to make their margin.

Q7) State the role of financial intermediaries.

Answer :

Following are the role of finacial intermediaries,

(1) It convert savings into investments.

(2) Intermediaries like commercial banks provide storage facilities for cash and other liquid assets, like precious metals.

(3) To assist clients to grow their money via investment. Intermediaries like mutual funds and investment banks use their experience to offer investment products to help their clients maximize returns and reduce risks.

Q8) What are the types of financial intermediaries?

Answer :

Following are the types of finacial intermediaries,

(1) **Banks :** The central and commercial banks are the most well known financial intermediaries simplifying the lending and borrowing process, along with providing various other services to its customers on a large scale.

(2) **Credit Unions :** These are the cooperative financial units which facilitate lending and borrowing of funds to provide financial assistance to its members.

(3) **Non-Banking Finance Companies :** A NBFC is a financial company engaged in activities such as advancing loans to its clients at a very high rate of interest.

(4) **Stock Exchanges :** The stock exchange facilitate the trading of securities and stocks, and in every trading activity, it charges the brokerage from each party which is its profit.

Q9) Briefly mention the advantages of financial intermediaries.

Answer :

Following are the advantages of finacial intermediaries,

(1) It help in lowering the risk of an individual with surplus cash by spreading the risk via lending to several people. Also, they thoroughly screen the borrower, thus, lowering the default risk.

(2) It help in saving time and cost. Since these intermediaries deal with a large number of customers, they enjoy economies of scale

(3) It accumulate and process information, thus lowering the problem of asymmetric information.

Q10) What do you understand by financial market?

Answer :

A ***financial market*** is a market where buyers and sellers trade commodities, financial securities, foreign exchange, and other freely exchangeable items (fungible items) and derivatives of value at low transaction costs and at prices that are determined by market forces.

Q11) State the role of financial market in India.

Answer :

Following are the role of finacial maret in India,

(1) It facilitates *mobilization of savings* and puts it to the most productive uses.

(2) It helps in *determining the price of the securities*. The frequent interaction between investors helps in fixing the price of securities, on the basis of their demand and supply in the market.

(3) It provides *liquidity to tradable assets*, by facilitating the exchange, as the investors can readily sell their securities and convert assets into cash.

Q12) What are the key players of financial market?

Answer :

The key players of financial market,

(1) **Primary Market :** In the primary market, there are four key players: corporations, institutions, investment banks, and public accounting firms,

(2) **Secondary Market :** While issuance of new bonds and new shares in exchange for capital occurs in the primary market, the secondary market is for the sale and trade of previously issued bonds and shares.

Q13) Mention the regulation of financial market.

Answer :

Following are the regulations operate by the financial market,

(1) Reserve Bank of India (RBI).

(2) Security Exchange Board of India (SEBI.

(3) Forward Market Commission of India (FMC).

(4). Pension Fund Regulatory and Development Authority (PFRDA).

Q14) What is money market?

Answer :

Money Market can be understood as the market for short term funds, wherein lending and borrowing of funds varies from overnight to a year. It is an important part of the financial system that helps in fulfilling the short term and very short term requirements of the companies, banks, financial institution, government agencies and so forth.

Q15) What is the role of money market?

Answer :

Following are the role of money market.

(1) It provides a balancing tool for equating the demand for and supply of short term funds.

(2) It provides a centre for the intervention of central bank, for controlling liquidity and general interest rate level.

(3) It provides a proper reach to the suppliers and users of the short term funds, to fulfil their requirements, at a reasonable market clearing price.

Q16) What are the instruments of money market?

Answer :

In money market, only those financial instruments are traded which are immediate substitutes for money, which includes,

(1) Call/Notice Money.

(2) Treasury Bills.

(3) Commercial Bills.

(4) Commercial Paper.

(5) Certificate of Deposit.

Q17) Define credit market.

Answer :

Credit market refers to the market through which companies and governments issue debt to investors, such as investment-grade bonds, junk bonds, and short-term commercial paper. Sometimes called the debt market, the credit market also includes debt offerings, such as notes, and securitized obligations, including Collateralized Debt Obligations (CDOs), Mortgage-Backed Securities, and Credit Default Swaps (CDS).

Q18) What is capital market?

Answer :

Capital market refers to the institutional arrangement for facilitating the borrowing and lending of long-term funds. It is the organized mechanism for efficient and effective transfer of capital or financial resources from the investing parties.

Q19) What are the role of capital market?

Answer :

Following are the role of capital market,

(1) Facilitates transaction settlement, as per the definite time schedules.

(2) Offering insurance against market or price risk, through derivative trading.

(3) Improvement in the effectiveness of capital allocation, with the help of competitive price mechanism.

Q20) What are the types of capital market?

Answer :

Following are the role of capital market,

(1) **Primary Market :** Primary markets are those types of capital market instruments where new securities are issues on the exchange. Governments, organizations, companies obtain funding through equity or debt securities.

(2) **Secondary Market :** Secondary markets are those types of capital market instruments where investors choose to buy securities or even assets from other investors rather than buying from the issuing company.

Q21) Who are the participants in capital market?

Answer :

There are a range of participants in capital markets,

(1) Individual investors.

(2) Institutional investors.

(3) Municipality and other government investors.

(4) Companies and other organizational investors.

(5) Banks and other financial institution investors.

❖ ❖ ❖

PART - B
ESSAY QUESTIONS WITH ANSWERS

3.1 FINANCIAL SYSTEM, COMPONENTS, ROLE, CONSIDERATION OF THE INVESTORS AND ISSUES

Q22) What do you understand by financial system? What are its features?

Answer :

Meaning of Financial System

A financial system refers to a system which enables the transfer of money between investors and borrowers. A financial system could be defined at an international, regional or organizational level.

Financial system is a set of complex and closely connected or interlinked financial institutions or organized and unorganized financial markets, financial instruments and services which facilitates the transfer of funds.

According to *Christy,* the objective of the financial system is to, "Supply funds to various sectors and activities of the economy in ways that promote the fullest possible utilization of resources without the destabilizing consequence of price level changes or unnecessary interference with individual desires".

Features of Financial System

Following are the important features of financial system,

(1) Financial system provides an ideal linkage between depositors and investors, thus encouraging both savings and investments.

(2) Financial system facilitates expansion of financial markets over space and time.

(3) Financial system promotes efficient allocation of financial resources for socially desirable and economically productive purposes.

Financial system influences both the quality and the pace of economic development.

Q23) Discuss the components of Indian Financial System.

Answer :

There are five components of Financial System which is discussed below,

(1) **Financial Institutions :** It ensures smooth working of the financial system by making investors and borrowers meet. They mobilize the savings of investors either directly or indirectly via financial markets by making use of different financial instruments as well as in the process using the services of numerous financial services providers. They could be categorized into Regulatory, Intermediaries, Non-intermediaries and Others.

They offer services to organizations looking for advises on different problems including restructuring to diversification strategies. They offer complete series of services to the organizations who want to raise funds from the markets and take care of financial assets, for example deposits, securities, loans, etc.

(2) **Financial Markets :** A Financial Market can be defined as the market in which financial assets are created or transferred. As against a real transaction that involves exchange of money for real goods or services, a financial transaction involves creation or transfer of a financial asset. Financial Assets or Financial Instruments represent a claim to the payment of a sum of money sometime in the future and or periodic payment in the form of interest or dividend. There are four componen of financial market are given below,

(i) **Money Market :** The money market is a wholesale debt market for low-risk, highly-liquid, short-term instrument. Funds are available in this market for periods ranging from a single day up to a year. This market is dominated mostly by government, banks and financial institutions.

(ii) **Capital Market :** The capital market is designed to finance the long-term investments. The transactions taking place in this market will be for periods over a year.

(iii) **Foreign Exchange Market :** The Foreign Exchange market deals with the multicurrency requirements which are met by the exchange of currencies. Depending on the exchange rate that is applicable, the transfer of funds takes place in this market. This is one of the most developed and integrated markets across the globe.

(iv) **Credit Market :** Credit market is a place where banks, Financial Institutions (FIs) and Non Bank Financial Institutions (NBFCs) purvey short, medium and long-term loans to corporate and individuals.

(3) **Financial Instruments :** This is an important component of financial system. The products which are traded in a financial market are financial assets, securities or other types of financial instruments. There are a wide range of securities in the markets since the needs of investors and credit seekers are different. They indicate a claim on the settlement of principal down the road or payment of a regular amount by means of interest or dividend. Equity shares, debentures, bonds, etc. are some examples.

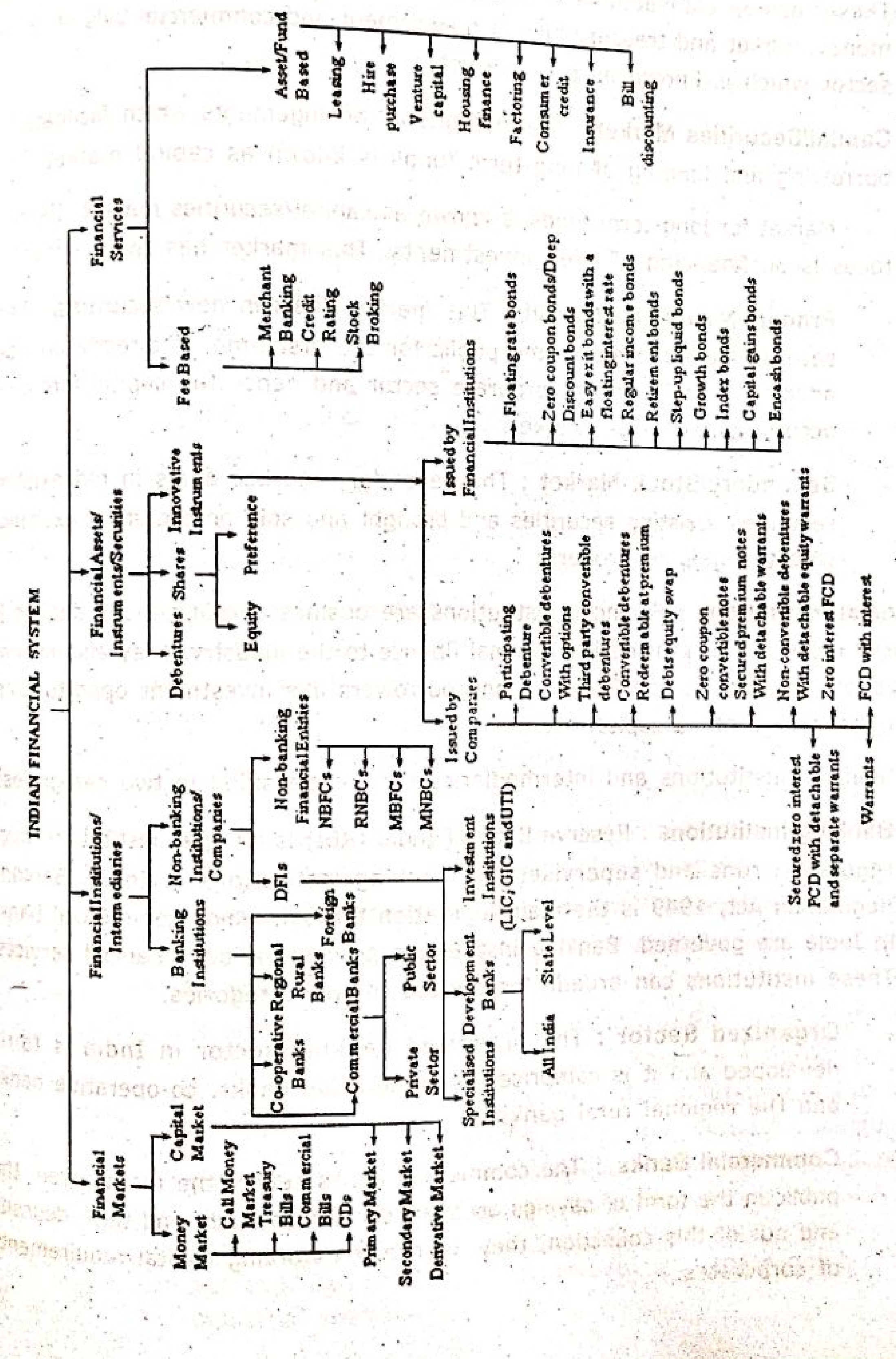
(4) **Financial Services :** It consists of services provided by Asset Management and Liability Management Companies. They help to get the required funds and also make sure that they are efficiently invested. They assist to determine the financing combination and extend their professional services up to the stage of servicing of lenders. They help with borrowing, selling and purchasing securities, lending and investing, making and allowing payments and settlements and taking care of risk exposures in financial markets.

(5) **Money :** It is understood to be anything that is accepted for payment of products and services or for the repayment of debt. It is a medium of exchange and acts as a store of value. It eases the exchange of different goods and services for money.

Q24) Explain the structure of Indian Financial System.

Answer :

The detailed organization structure is given below,



(1) **Financial Markets :** A financial market is a merket in which people and entities can trade financial securities, commodotities and other financial stock at low transaction cost and at prices that reflect supply and demand.

The financial markets can be classified into,

(i) **Money Market :** Money market is a market for dealing in short-term monetary assets or claims on money which are generally for less than one year.

These include transactions in inter-bank call money which is known as call money market and treasury bills of government and commercial bills of private sector which is known as bills market.

(ii) **Capital/Securities Market :** The institutional arrangements which facilitate the borrowing and lending of long-term funds is known as capital market.

Market for long-term funds is known as capital/securities market. Its main focus is on financing of fixed investments. This market has two segments.

- **Primary/New Issue Market :** This market deals in new securities. These securities are offered to the public for the first time. It directly provides additional funds to the corporate sector and hence the capital formation occurs in new issue market.
- **Secondary/Stock Market :** The secondary market deals in old existing securities. Existing securities and brought and sold on the stock exchange with the help of brokers.

(2) **Financial Institutions :** Financial institutions are business organizations dealing in financial resources. It provide institutional finance to the industry. They also provide the various services to the investors and borrowers like investment opportunities, house finance, venture capital etc.

The financial institutions and intermediaries can be classified in two categories:

(i) **Banking Institutions :** Reserve Bank of India (RBI) is an apex institution which regulates, runs and supervises the banking institutions in India. Banking Regulation Act, 1949 is the main legislation through which commercial banks in India are governed. Banking institutions provide various financial services. These institutions can broadly be divided in two categories.

- **Organized Sector :** The organized banking sector in India is fairly developed and it is comprised of commercial banks, co-operative banks and the regional rural banks.
- **Commercial Banks :** The commercial banks collect the money from the public in the form of savings account, current accounts and term deposits and out of this collection, they finance the working capital requirements of corporates.

- **Co-operative Banks :** Besides the commercial banks, co-operative banks also exist in India. Co-operative banks are working in rural as well as urban areas of the country. These banks come under the purview of State Governments.
- **Regional Rural Banks :** Regional Rural Banks are working in India since October, 1975. These banks have been set up under the Regional Rural Banks Act, 1976. These banks were set up to supplement the commercial banks and co-operative banks in catering the credit requirements of the rural sector.

  Regional Rural Banks were set up with an objective to provide credit facilities to weaker sections of the society.
- **Foreign Banks :** Foreign banks are working in India since British rule. The RBI has allowed the entry of foreign banks in India. Foreign equity in new Indian private sector banks is allowed. Foreign banks were permitted to enter in the Indian banking sector with a ceiling of 49% of equity.

• **Unorganized Sector :** The unorganized sector is consisted of indigenous bankers, moneylenders or Sahukars or Seths etc. These persons are carrying out the function of banking in the unorganized manner.

- **Indigenous Bankers :** The activities of indigenous bankers are not at all regulated. These are the individuals or private firms which act like a bank as they receive deposits and give loans to public. These bankers were very active in the ancient and medieval periods. But with the growth of banking system in India, these bankers received a setback.
- **Moneylenders :** Moneylenders are the persons who give loans to small borrowers, like small farmers, artisans, agricultural labourers, factory and mine workers, etc. They depend entirely on their own funds for the working capital.

(ii) **Non-banking Financial Companies (NBFCs) :** The NBFCs raise their most of the funds in the form of public deposits. They accept the deposits for one to five years maturity period. They provides a variety of funds/asset based/advisory services. These institutions can be divided into two parts:

- **Development Financial Institutions (DFIs) :** These development or financial companies have come into existence due to state ownership. These DFIs can be subdivided in three parts:
  - **Specialized Financial Institutions :** The Government of India soon after independence, set up various financial institutions to provide the special help to the private sector industries in the matter of finance. These institutions have been doing wonderful work in subscribing to the shares and debentures of new and old companies, in giving loan assistance, in underwriting new issues, etc. The role assigned to them was that of a gap-filler which means that it was not expected from them to compete with the existing channels of industrial finance.

- **Indian Development Banks :** After the independence, the Government of India think of increasing the industrial base of the country. To provide the funds for all this, the usual agencies were found inadequate and hence the Government of India established a number of financial institutions to provide funds to industrial sector.

  These banks are consisted of two types,

  All India Development Banks : Industrial Finance Corporation of India (IFCI), Industrial Development Bank of India (IDBI), Industrial Credit and Investment Bank of India Ltd. (ICICI), Small Industries Development Bank of India (SIDBI) and Industrial Investment Bank of India (IIBI), etc. are the examples of this type.

  State Level Development Banks : These banks provide industrial finance in a particular state. State Financial Corporations and State Industrial Development Corporations (SIDCs) are examples of it. In Haryana, HSIDC and HFC are working to provide finance to industrial sector.

- **Investment Institutions :** The investment institutions mobilize the savings of the public to specifically invest in the industrial securities. UTI, LIC and GIC are the major investment organizations. UTI collects the funds from the public by issuing its units of various schemes and invests that fund in the corporate securities. LIC and GIC are the insurance organizations.

- **Non-banking Financial Entities :** The Indian financial system has another part which comprises a large number of privately owned, decentralized and relatively small-sized intermediaries, which are engaged either in fund-based activities or in financial services. For the purpose of division, the former may be called non-banking financial companies and latter non-banking financial services companies. This part is related to first type only.

  These are as follows,

  - **Non-banking Financial Companies (NBFCs) :** The RBI business (Amendment) Act, 1997 defines NBFC as an institution or company whose principal is to accept deposits under any scheme or arrangement or in any other manner and to lend in any manner. NBFCs are providing the finance to help in bridging the credit gaps in various sectors which financial institutions are unable to fulfil.

  - **Residuary Non-banking Companies (RNBCs) :** Residuary non-banking company (RNBC) means a company which receives any deposit under any scheme or arrangement in one lump sum or in installments by way of contributions or by sale of units or certificates or other instruments or in any other manner and which according to the definitions contained in the NBFC (RBI) Directions, 1977, the miscellaneous non-banking companies (RBI) directions, 1977 and by whatever name called, but is not an insurance company or equipment leasing company or hire purchase finance company or housing finance company or investment company or loan company or mutual benefit financial company or a miscellaneous non-banking company.

- **Mutual Benefit Financial Companies (MBFCs) :** Mutual benefit financial company means any company which is notified by the Government under Section 620 A of the Companies Act, 1956. They are also known as nidhis.
- **Miscellaneous Non-banking Companies (MNBCs) :** MNBC is such type of company which carries on all or any of the following types of business,
  - Managing, conducting or supervising as a promoter, foreman or agent of any transaction of arrangement by which the company enters into an agreement with a specified number of subscribers that every one of them shall subscribe a certain sum of instillments over a definite period and that everyone of such subscribers shall in his turn, as determined by lot or by auction or by tender or such other manner as may be provided for in the agreement by entitled to the prize amount.
  - Conducting any other form of chit or Kuri which is different from the type of business referred to above. Undertaking or carrying on or engaging in or executing any other business similar to the business referred to above.

(3) **Financial Assets/Instruments/Securities :** It is the third component of the financial system. These comprise a variety of securities to suit the investment requirements of various investors. The financial system also promote financial product innovation. The maturity and sophistication of financial system depends on the variety of securities. The different types of securities may be listed as below,

(i) **Debentures :** A debenture is a type of loan acknowledgment which is taken by the company from the public.

(ii) **Shares :** The capital of the company can be divided in several parts with a definite value. Each part is called a share.

- **Preference Shares :** Preference shares are those shares on which shareholders enjoy two preferences over the equity shareholders.
- **Equity Shares :** Equity or ordinary shareholders are the real owners of the company. It represents risk capital. The shareholders can participate in the management of the company.

(iii) **Innovative Instruments :** Innovative instruments are the new instruments which are issued by the companies and financial institutions in the recent years. For the purpose of study, these may be divided in two parts :

- **Issued by Companies :** A variety of instruments have been issued by companies. These are :
  - Participating Debentures
  - Convertible Debentures with Options
  - Third Party Convertible Debentures

- Secured Zero Interest Partly Convertible Debentures with Detachable and Separately Tradeable Warrants
- Convertible Debentures Redeemable at Premium
- Debt Equity Swaps
- Zero-coupon Convertible Notes

Secured Premium Notes with Detachable Warrants

- Non-Convertible Debentures with Detachable Equity Warrants
- Zero Interest Fully Convertible Debentures
- Fully Convertible Debentures (FCDs) with Interest
- Warrants

(ii) **Issued by Financial Institutions :** Financial institutions in India have also issued innovative securities. These may be listed as below,

- Floating Rate Bonds (FRBs)
- Zero-coupon Bonds/Deep Discount Bonds
- Easy Exit Bonds with a Floating Interest Rate
- Regular Income Bonds
- Retirement Bonds
- Setup Liquidity Bonds
- Growth Bonds
- Index Bonds
- Capital Gain Bonds
- Encash Bonds

(4) **Financial Services :** Financial services means the activities, benefits and satisfaction that are offered to users and customers. The variety of financial services in the country determines the efficiency of financial system. The services provided by them can be broadly categorized into two parts,

(i) **Assets/Fund Based Activities**

These activities include the following,

- **Equipment Leasing/Lease Financing :** A lease transaction is a commercial arrangement, where an equipment owner or manufacturer gives the right to use the equipment in return for a rental. It may be of two types, namely,

- **Finance Lease :** In Finance Lease, lessor transfers the risk and rewards incidental to the ownership of the asset to the lessee. Title remains with the owner.

- **Operating Lease :** In operating lease, the risk, rewards and title remains with the lessor. Lessee has to pay rentals.

- **Hire Purchase and Consumer Credit :** Hire purchase means a transaction where goods are sold to the buyer on the terms that he will make the payment in installments.

  Consumer credit means the transaction through which consumer goods are sold to consumers on credit. For example, consumer goods like car, bike, TV. washingmachine etc.

- **Venture Capital :** The term venture capital is an investment in a highly risky project with the objective of earning a high rate of return. Venture capital is a risky money which is invested in risky enterprises either as equity or debt capital.

- **Bill Discounting :** Finance companies undertake this service. It is an attractive fund based activity. The development of bill discounting as a financial service depends upon the existence of a bill market. These bills are drawn by the drawer (seller) on the drawee (buyer) for the value of goods delivered to him.

- **Housing Finance :** In India, the scope and need for the development of arrangement for supplying loans for housing. The RBI established the National Housing Banks. It provide housing finance as a fund based activity.

- **Insurance Services :** Insurance is a contract between the insurer and the insured where the insurer gives an assurance to the person to pay him a certain sum of money in consideration of annual premium, against a specified risk such as fire or compensate the beneficiaries on the happening of a specified event such as accident or death. The insurance services are of two types such as life and general insurance.

- **Factoring :** Factoring is a financial transaction and a type of debtor finance in which a business sells its account receivable (i.e invoices) to a third party (factor) at a discount. Thus, factoring implies a financial arrangement between the factor and client in the firm (client get advances in return for receivable.

(ii) Fee Based/Advisory Services

These services include the following,

- **Merchant Banking :** Mechant banking is an institution which covers a wide range of activities such as understanding of shares, portfolio management, project counseling, insurance etc. They render all these services for a free.
- **Stock Broking and Depository Services :** St0ck broking is the professional activity of buying and selling stocks and shares for client.

  Stock broker is a member of stock exchange who deals in securities and purchases and sell the securities on behalf of customers.
- **Credit Rating :** Credit rating is grading service to investors which helps them in reducing their risk. It is a technique which provide relivent ranking to different instruments of a company on the basis of strength and weakness of them.

Q25) Describe the role of financial system.

Answer :

The financial system of a country performs certain valuable functions for the economic growth of that country. The main functions of a financial system are,

(1) Saving Function : An important function of a financial system is to mobilize savings and channelize them into productive activities. It is through financial system the savings are transformed into investments.

(2) Liquidity Function : The most important function of a financial system is to provide money and monetary assets for the production of goods and services. Monetary assets are those assets which can be converted into cash or money easily without loss of value. All activities in a financial system are related to liquidity-either provision of liquidity or trading in liquidity.

(3) Payment Function : The financial system offers a very convenient mode of payment for goods and services. The cheque system and credit card system are the easiest methods of payment in the economy. The cost and time of transactions are considerably reduced.

(4) Risk Function : The financial markets provide protection against life, helath and income risks. These guarantees are accomplishes through the sale of life, health insurance and property insurance policies.

(5) Information Function : A financial system makes available price related information. This is a valuable help to those who need to take economic and financial decisions. Financial markets disseminate information for enabling participants to develop an informed opinion about investment, disinvestment, reinvestment or holding a particular asset.

(6) Transfer Function : A financial system provides a mechanism for the transfer of the resources across geographic boundaries.

Q26) Discuss the consideration of the Investors and Issuers.

Answer :

The consideration of the investors and issuers are,

(1) **Planned Carefully :** Financial system architecture should be carefully planned. Different stages of financial development require adequate institutional processes to be in place.

(2) **Strong Micro Supervision :** A solid micro supervision of the financial sector and individual institutions should be in place.

(3) **Exchange of Information :** Close cooperation and exchange of information between the central bank and supervisory authorities is warranted at all times and especially in periods of financial stress.

(4) **Public Policies :** There are several, complementary public policies that are typically needed to sustain or build up confidence in financial institutions.

(i) **Fiscal Policy :** If fiscal authorities, as in the Dollar area, are restricted in their ability to run deficits or accumulate large debts, an important source of financial market stress and financial instability is removed.

(ii) **Monetary Policy :** As is now widely accepted, monetary authorities should in the first place try to guarantee price stability, being the best possible contribution it can make to growth in the medium to long-term. Indirectly, this should also be conducive to supporting financial stability, as the economy will have less macro uncertainties to deal with, when allocating resources.

(iii) **Financial Supervision :** An adequate supervisory framework, helps to enhance financial stability and maintain overall confidence in the financial system.

(iv) **Maintaining Confidence :** A financial safety net is in place in most countries with a view to protecting small depositors in case of a bank failure. This system seems to work relatively will in maintaining confidence in financial institutions.

3.2 ROLE OF FINANCIAL INTERMEDIARIES

Q27) What are financial intermediaries? Discuss its role?

Answer :

Meaning of Financial Intermediary

A financial intermediary is an entity that facilitates a financial transaction between two parties. Such an intermediary or a middleman could be a firm or an institution. Some examples of financial intermediaries are banks, insurance companies, pension funds, investment banks and more.

Financial intermediaries have emerged as a useful tool for the efficient market system as they help channelize savings into investment. However, they can also be a cause of concern, as the sub-prime crisis shows. Often, there is a need to regulate the activities of these intermediaries.

ROLE OF FINANCIAL INTERMEDIARIES

A financial intermediary performs the following role,

(1) The biggest function of these intermediaries is to convert savings into investments.

(2) Intermediaries like commercial banks provide storage facilities for cash and other liquid assets, like precious metals.

(3) Giving short and long term loans is a primary function of the financial intermediaries. These intermediaries accept deposits from the entities with surplus cash and then loan them to entities in need of funds. Intermediaries give the loan at interest, part of which is given to the depositors, while the balance is retained as profits.

(4) To assist clients to grow their money via investment. Intermediaries like mutual funds and investment banks use their experience to offer investment products to help their clients maximize returns and reduce risks.

3.3 FINANCIAL MARKETS, PLAYERS, REGULATORS AND INSTRUMENTS

Q28) What is financial markets? What are its features and functions?

Answer :

MEANING AND DEFINITION OF FINANCIAL MARKET

A market where in financial instruments such as bond, equity, currencies, assets, derivative are traded is known as financial market.

Financial market is markets for sale and purchase of stocks (shares), bonds bills of exchange, commodities, futures and options, foreign currency etc., which work as exchanges for capital and credit.

According to *Brigham, Eugene F*, "The place where people and organizations wanting to borrow money are brought together with those having surplus funds is called a financial market."

FEATURES OF FINANCIAL MARKET

Following are the features of financial market,

(1) **Government Rules and Regulations :** The government controls the operations of a financial market in the country by imposing different rules and regulations.

(2) **Involves Financial Intermediaries :** These markets require financial intermediaries such as a bank, non-banking financial companies, stock exchanges, mutual fund companies, insurance companies, brokers, etc. to function.

(3) **Deals in Long and Short-Term Investment** : For the investors, financial markets provide an opportunity of putting in their funds into various securities or schemes for short or long-term investing benefits.

(4) **Acts as a Link** : Financial markets connect the investors to the borrowers and bridge the gap between the two for mutual benefits.

(5) **Easy Accessibility** : These markets are readily available anytime for both the investors and the borrowers.

Functions of Financial Market

A financial market perform following functions,

(1) **Sale Mechanism** : Financial markets provide a mechanism for selling of a financial asset by an investor so as to offer the benefits of marketability and liquidity of such assets.

(2) **Transfer of Resources** : Financial markets facilitate the transfer of real economic resources from lenders to ultimate borrowers.

(3) **Enhancing Income** : Financial markets allow lenders earn interest/dividend on their surplus investible funds, thus contributing to the enhancement of the individual and the national income.

(4) **Productive Usage** : Financial markets allow for the productive use of the funds borrowed, thus enhancing the income and the gross national production.

(5) **Capital Formation** : Financial markets provide a channel through which new savings flow to aid capital formation of a country.

Q29) Explain the various types of financial market in India.

Answer :

The classification of financial markets in India can be as following :

(1) **Unorganized Markets** : In unorganized markets, there are a number of money lenders, indigenous bankers, traders etc., who lend money to the public. Indigenous bankers also collect deposits from the public. There are also private finance companies, chit funds etc., whose activities are not controlled by the RBI. The RBI has already taken some steps to bring unorganized sector under the organized fold.

(2) **Organized Markets** : In the organized markets, there are standardized rules and regulations governing their financial dealings. There is also a high degree of institutionalization and instrumentalisation. These markets are subject to strict supervision and control by the RBI or other regulatory bodies.

These organized markets can be further classified into two,

(i) **Capital Market :** The term capital market indicates that it is a market which deals with capital. When we refer to the term capital we refer to long term funds. The capital market has nothing to do with the capital goods but it is concerned with the raising of money capital. It can be said that the capital market is a market where transactions of borrowing and lending of long term funds take place. With a maturity period above one year. Mutual funds, insurance firms, develop financial institutions, etc., are the major players of this market.

(ii) **Money Market :** The money market is a market for overnight to short-term funds and for short-term money and financial assets that are close substitutes for money. Short-term in the Indian context means a period of up to one-year. Close substitute for money means any financial asset, which can be quickly converted into money. RBI and commercial banks are important constituents of this market.

Q30) Discuss the key players participants in financial market.

Answer :

The key players in participants in financial markets,

(1) **Banks :** Banks participate in the capital market and money market. Within the capital market, banks take active part in bond markets. Banks may invest in equity and mutual funds as a part of their fund management. Banks take active trading interest in the bond market and have certain exposures to the equity market also. Banks also participate in the market as clearing houses.

(2) **Primary Dealers (PDs) :** PDs deal in government securities both in primary and secondary markets. Their basic responsibility is to provide two-way quotes and act as market makers for government securities and strengthen the government securities market.

(3) **Financial Institutions (FIs) :** FIs provide/lend long term funds for industry and agriculture. FIs raise their resources through long-term bonds from financial system and borrowings from international financial institutions like International Finance Corporation (IFC), Asian Development Bank (ADB) Inter-national Development Association (IDA), International Bank for Reconstruction and Development (IBRD), etc.

(4) **Stock Exchanges :** A Stock exchange is duly approved by the Regulators to provide sale and purchase of securities by "open cry" or "on-line" on behalf of investors through brokers. The stock exchanges provide clearing house facilities for netting of pay-ments and securities delivery. Such clearing houses guarantee all payments and deliveries. Securities traded in stock exchanges include equities, debt, and derivatives.

(5) **Brokers :** Only brokers approved by Capital Market Regulator can operate on stock exchange. Brokers perform the job of intermediating between buyers and seller of securities. They help build up order book, price discovery, and are responsible for a contract being honoured. For their services brokers earn a fee known as brokerage.

(6) **Investment Bankers (Merchant Bankers) :** These are agencies/organisations regulated and licensed by SEBI, the Capital Markets Regulator. They arrange raising of funds through equity and debt route and assist companies in completing various for-malities like filing of the prescribed document and other compliances with the Regulator and Regulators.

They advise the issuing company on book building, pricing of issue, arranging registrars, bankers to the issue and other support services. They can under-write the issue and also function as issue managers. They may also buy and sell on their account.

As per regulatory stipulations, such own account business should be separately booked and confined to scrip's where insider information is not available to the invest-ment/merchant banker. Investment/Merchant banking can be an exclusive business. A bank can also undertake these activities.

(7) **Foreign Institutional Investors (FIIs) :** FIIs are foreign based funds authorized by Capital Market Regulator to invest in countries equity and debt market through stock exchanges. They are allowed to repatriate sale proceeds of their holdings, provided sales have been made through an authorized stock exchange and taxes have been paid. FIIs enjoy defacto capital account convertibility.

Q31) Explain about regulation and instruments of financial market.

Answer :

Regulations of Financial Market

The following are the five major financial regulations bodies in India,

(1) **Statutory Bodies via Parliamentary Enactments**

(i) **Reserve Bank of India (RBI) :** Reserve bank of India is the apex monetary institution of India. It is also as the Central Bank of the country. The Reserve bank of India was established on April 1, 1935 in accordance with the provisions of the Reserve Bank of India Act, 1934. The central office of the Reserve Bank was initially establishes in Calcutta but was permanently moved to Mumbai in 1937. The Central office is where the Governor sits and where politics are formulated. Though originally privately owned, since nationalization in 1949, the Reserve bank is fully owned by the Government of India. It acts as the apex monetary authority of the country.

(ii) **Securities and Exchange Board of India (SEBI) :** Securities and Exchange Board of India was first established in the year 1988 as a non-statutory body for regulating the securities market. It became an autonomous body in 1992 and more powers were given through an ordinance. Since then it regulates the market through its independent powers.

(iii) **Insurance Regulatory and Development Authority (IRDA) :** The insurance Regulatory and Development Authority is a national agency of the Government of India and is based in Hyderabad (Telangana). It was formed by an Act of Indian Parliament Known as IRDA act 1999, which was amended in 2002 to incorporate some emerging requirements. Mission of IRDA as stated in the act "to protect the interests of the policyholders, to regulate, promote and ensure orderly growth of the insurance industry and for matters connected therewith or incidental thereto".

(2) **Part of Ministries of The Government of India**

(i) **Forward Market Commission India (FMC) :** Forward Markets Commission headquartered at Mumbai, is a regulatory authority which is overseen by the Ministry of consumer Affairs, Food and Public Distribution, Govt. of India. It is a statutory body set up in 1953 under the Forward Contracts (Regulation) Act, 1952. This commission allows commodity trading in 22 exchanges in India, out of which there are national level.

(ii) **PDRDA under Finance Ministry :** Pension Fund Regulatory and Development Authority. PFRDA was establishes by Government of India on 23rd August, 2003. The Government has, through an executive order dated 10th October 2003, mandated PFRDA to act as a regular for the pension sector. The mandate of PFRDA is development and regulation of pension sector in India.

INSTRUMENTS OF FINANCIAL MARKET

Following are the instruments of financial market,

(1) **Preference Shares :** These carry a fixed dividend rate and a special right to dividends over the private equity holders. Currently, all the preference shares in the Indian market are redeemable, that is, they have a fixed period of maturity. Therefore, sometimes they are termed as hybrid variety'.

(2) **Commercial Papers (CP) :** These are issued mainly by the corporate businessmen to fund their working capital needs. Commercial Papers are issued generally for short-term maturities. Commercial papers are not secure and subject to market risks, so those corporate bodies that have a good credit history will only be able to use this financial instrument.

(3) **Equity Shares :** It is a "high return risk" instrument. Equity shares don't have any fixed return rate and thereby, no period of maturity.

(4) **Certificate of Deposits (CD) :** These are very similar to the Commercial papers. But the CDs are issued mainly by the commercial banks.

(5) **Call Money Market :** The loans made in the call money market are mainly short term in nature. Call money market mainly deals with the interbank markets. Those banks that are suffering from a short-term cash deficit borrow cap from the call money market. The interest rate varies with the market rate and depends upon the banking system.

(6) **Industrial Securities :** Normally the big corporate bodies are used to issue this to fulfill their long-term requirements regarding working capital. The debentures, equity shares fall under this category.

3.3 MONEY MARKET

Q32) Define money market. What are its functions?

Answer :

Meaning of Money Market

Money market refers to the market where money and highly liquid marketable securities are bought and sold having a maturity period of one or less than one year. The money market constitutes a very important segment of the Indian financial system.

Functions of Money Market

The important functions of money market are,

(1) **Financing Trade :** Money plays crucial role in fina· ·ing both internal as well as international trade. A commercial finance is made available to the traders through bills of exchange, which are discounted by the bill market. The acceptance houses and discount markets helps in financing foreign trade.

(2) **Financing Industry :** Money market contributes to the growth of industries in two ways,

( ) Money market helps the industries in securing short-term loans to meet their working capital requirements through the system of finance bills, commercial papers, etc.

(ii) Industries generally need long-term loans, which are provided in the capital market. However, capital market depends upon the nature of and the conditions in the money market. The short-term interest rates of the money market influence the long-term interest rates of the capital market. Thus, money market indirectly helps the industries through its link with and influence on long-term capital market.

(3) **Profitable Investment :** Money market enables the commercial banks to use their excess reserves in profitable investment. The main objective of the commercial banks is to earn income from its reserves as well as maintain liquidity to meet the uncertain cash demand of the depositors. In the money market, the excess reserves of the commercial banks are invested in near money assets (example: short-term bills of exchange) which are highly liquid and can be easily converted into cash. Thus, the commercial banks earn profits without losing liquidity.

(4) **Self-Sufficiency of Commercial Bank :** Developed money market helps the commercial banks to become self-sufficient. In the situation of emergency, when the commercial banks have scarcity of funds, they need not approach the central bank and borrow at a higher interest rate. On the other hand, they can meet their requirements by recalling their old short-run loans from the money market.

(5) **Help to Central Bank :** Though the central bank can function and influence the banking system in the absence of a money, the existence of a developed money market smoothens the functioning and increases the efficiency of Central Bank.

Money Market helps the Central Bank in two ways,

(i) The short-term rates of the money market serves as an indicator of the monetary and banking conditions in the country and, in this way, guide the central bank to adopt an appropriate banking policy.

(ii) The sensitive and integrated money market helps the central bank to secure quick and widespread influence on the sub-markets and thus achieve effective implements of its policy.

Q33) Discuss the key players/participants in financial market.

Answer :

The key players in financial markets are,

(1) **Reserve Bank of India :** The Reserve Bank of India is the most important player in the Indian Money Market. The organized money market is to ensure that the levels of liquidity and short-term interest rates are maintained at an optimum level so as to facilitate economic growth and price stability. RBI also plays the role of a merchant banker to the government. It is issues Treasury Bills and the other Government Securities to raise funds for the government.

(2) **Government :** The government is the most active player and the largest borrower in the money market. It raises funds to make up the budget deficit. The funds may be raised through the issue of Treasure Bills (with a maturity period of 91 day/ 182 day/ 364 days) and government securities.

(3) **Commercial Banks :** Commercial Banks play an important role in the money market. They undertake lending and borrowing of short term funds. The collective operations of the banks on a day to day basis are very predominant and hence have a major import and influence on the interest rate rate structure and the liquidity position.

(4) **Financial Institutions :** Financial institutions also deal in the money market. They undertake lending and borrowing of short-term funds. They also lend money to banks rediscounting Bills Of Exchange. Since, they transact in large volumes, they have a significant impact on the money market.

(5) **Corporate Firms :** Corporate firms operate in the money market to raise short-term funds to meet their working capital requirements. They issue commercial papers with a maturity period of 7 days to 1 year. These papers are issued at a discount and redeemed at face value on maturity. These corporate firms use both organized and unorganized sectors of money market.

(6) **Discount Houses and Primary Dealers :** They are the intermediaries in the money market. Discount Houses discount and rediscount commercial bill and Treasury Bills. Primary Dealers were introduced by RBI for developing an active secondary market for Government securities. They also underwrite Government Securities.

(7) **Money Market Mutual Fund :** A money market fund is a mutual fund that invests solely in money market instruments. Money market funds are generally the safest and most secure of mutual fund investments, the goal of a money-market fund is to preserve principal while yielding a modest return, Money-market mutual fund is akin to a highyield bank account but is not entirely risk free. When investing in a money-market fund, attention should be paid to the interest rate that is being offered.

Q34) Explain about instruments of money market?

Answer :

The key instruments of money market are,

(1) **Treasury Bills :** Treasury bills are short-term instruments issued by the Reserve Bank on Behalf of the government to tide over short-term liquidity shortfalls. This instrument is used by the government to raise short term funds to bridge seasonal or temporary gaps between its receipt (revenue and capital) and expenditure. They form the most important segment of the money market not only in India but all over the world as well.

In other words, T-Bills are short term (up to one year) borrowing instruments of the Government of India which enable investors to park their short term surplus funds while reducing their market risk.

(2) **Commercial Papers :** A commercial paper is an unsecured short-term instrument issued by the large banks and corporations in the form of promissory note, negotiable and transferable by endorsement and delivery with a fixed maturity period to meet the short-term financial requirement. There are four basic kinds of commercial paper; promissory notes, drafts, checks and certificates of deposit.

(3) **Certificate of Deposits :** Certificates of deposit are unsecured, negotiable, short term instruments in bearer form, issued by commercial banks and development financial institutions

The scheme of certificates of Deposits (CD'S) was introduced by RBI as a step towards deregulation of interest rates on deposits. Under this scheme, any scheduled commercial banks, co-operative banks excluding land development banks, can issue certificate of deposits for a period of not less than three months up to a period of not less than three months and up to a period of not more than one year.

(4) **Repurchase Agreement (Repo) :** Repo is a money market instrument, which enables collateralized short term borrowing and lending through sale/purchase operations in debt instruments. Under a repo transaction, a holder of securities sells them to an investor with an agreement to repurchase at a predetermined date and rate. It is a temporary sale of debt involving full transfer of ownership of the securities, that is, the assignment of voting and financial rights.

(5) **Reserve Repos :** A reverse repo in the mirror image of repo. For, in a reverse repo, securities are acquired with a simultaneous commitment to resell. Hence whether a transaction is a repo or a reverse repo is determined only in terms of who initiated the first leg of the transaction. When the reverse repurchase transaction matures, the counter party returns the security to the entity concerned and receives its cash along with a profit spread. One factor which encourages an organization to enter into reverse repo is that it earns some extra income on it, otherwise idle cash.

(6) **Inter-Corporate Deposits (ICD) :** An Inter-Corporate (ICD) is an unsecured borrowing by corporate and FIs from other corporate entities registered under the Companies Act 1956. The corporate having surplus funds would lend to another corporate in need of funds. This lending would be an uncollateralized basis and hence a higher rate of interest would be demanded by the lender. The short term credit rating of the corporate would determine the rate at which the corporate would be able to borrow funds.

3.4 CREDIT MARKET, CAPITAL MARKET

Q35) What do you understand by credit market? What are its functions.

Answer :

Meaning of Credit Market

Credit market refers to the market through which companies and government issues debt to investors, such as bonds, short term comeercial papers etc.

Functions of Credit Market

Following are the functions of credit market,

(1) **Economy in the Use of Money :** The credit system economises the use of metallic money and paper notes. The credit instruments like promissory notes, bills of exchange, cheques, credit cards, etc. are used in the modern society as money-substitutes, and so they have reduced the cost of issuing metallic money and paper notes. Likewise they have minimized or eliminated the risks and inconveniences involved in cash transactions.

(2) **Easy Exchange and Remittance :** The credit instruments minimize the cash transactions and thereby make the scope of exchange wider and the remittance of funds easier. They permit wealth to be transferred to places where more economic use can be made of it.

(3) **Helpful to Production :** The credit system facilitates large scale production. It stimulates and finances production in anticipation of demand. Producers nowadays very often obtain credit from banks to begin and expand their operations. Even the farmers and the small artisans depend on bank credit for production. The wholesale and retail traders conduct their trading with bank credit.

(4) **Benefits to Consumers :** Bank credit to the consumers enables them to buy durable consumer goods, especially household goods on installment basis.

(5) **Credit to the Government Sector :** The credit to the government also helps them to meet both temporary necessities and growth requirements.

(6) **Stability :** If the issue of credit is properly regulated, it tends to stabilise trade and reduce fluctuations in prices.

Q36) Define capital market? What are its importance and function.

Answer :

Meaning of Capital Market

A capital market is a merket for securities (debt to equity) where business enterprises (companies) and governments can raise lon term funds.

It is defined as a market in which money is provided for periods longer than a year, as the raising of short term funds takes place an other markets (eg. the money market).

Importance of Capital Market

Following are the importance of capital market,

(1) With the help of capital market, long-term funds are raised by the business community.

(2) It provides opportunity for the public to invest their savings in attractive securities which provide a higher return.

(3) A well developed capital market is capable of attracting funds even from foreign country. Thus, foreign capital flows into the country through foreign investments.

(4) Capital market provides an opportunity for the investing public to know the trend of different securities and the conditions prevailing in the economy.

(5) It enables the country to achieve economic growth as capital formation is promoted through the capital market.

Functions of Capital Market

Following are the functions of capital market,

(1) Mobilization of savings to finance long term investments.

(2) Facilitates trading of securities.

(3) Minimization of transaction and information cost.

(4) Encourage wide range of ownership of productive assets.

(5) Quick valuation of financial instruments like shares and debentures.

(6) Facilitates transaction settlement, as per the definite time schedules.

(7) Offering insurance against market or price risk, through derivative trading.

(8) Improvement in the effectiveness of capital allocation, with the help of competitive price mechanism.

Q37) Explain the types of capital market.

Answer :

The capital market is divided in two segments,

(1) **Primary Market :** It is also called as New Issues Market. It is the market for the trading of new securities, for the first time. It embraces both initial public offering and further public offering. In the primary market, the mobilisation of funds takes place through prospectus, right issue and private placement of securities.

(2) **Secondary Market :** Secondary Market can be described as the market for old securities, in the sense that securities which are previously issued in the primary market are traded here. The trading takes place between investors, that follows the original issue in the primary market. It covers both stock exchange and over-the counter market.

UNIT 4

BASICS OF CAPITAL BUDGETING TECHNIQUES

PROFESSIONAL'S
The Destination Towards Knowledge & Success

SYLLABUS

Time Value of Money, Compounding, Discounting, Future Value of single and multiple flows, Present Value of Single and Multiple Flows, Present Value of Annuities, Financial Appraisal of Projects, Payback Period, ARR, NPV, Benefit Cost Ratio, IRR (simple ratios).

PART - A

SHORT QUESTIONS WITH ANSWERS

Q1) What is capital budgeting?

Answer :

Capital budgeting correlates the planning of available financial resources and their long-term investment with a view to maximize the profitability of the firm.

Q2) Define time value of money.

Answer :

"Time value of money" is the value of a unit of money at different time intervals. The value of the money received today is more than its value received at a later date.

In other words, the value of money changes over a period of time. Since, a rupee received today has more value, rational investors would prefer current receipts over future receipts. This phenomena is also referred to as, "Time preference of money".

Q3) Write a note on compounding technique.

Answer :

In the compounding technique, the future values of all cash inflows at the end of the time horizon at a particular rate of interest are calculated. The amount earned on an initial deposit becomes part of the principal at the end of the first compounding period.

The compounding of interest can be calculated by the following equation,

$$A = P(1 + i)^n$$

Q4) Briefly mention about future value of single flows.

Answer :

The process of calculating future value will become very cumbersome if they have to be calculated over long maturity periods of 10 or 20 years. A generalized procedure of calculating the future value of a single cash flow compounded annually is as follows,

$$FV_n = PV(1 + i)^n$$

Q5) What is compound interest?

Answer :

Compound interest is the interest earned on a given deposit/principal that has become a part of the principal at the end of the specific period.

Q6) What is annuity?

Answer :

An annuity is a stream of equal cash flows it involves calculation based upon the regular periodic contribution or receipt of a fixed sum of money.

Q7) What is discounting technique?

Answer :

It is also known as present value. It is the current value of a future amount. The amount to be invested today at a given interest rate over a specified period to equal the future amount.

Q8) Write a note on discount cashflow technique.

Answer :

DCF technique is a technique used for evaluating the capital budgeting decision. These techniques consider time value of money to make effective capital budgeting decision.

Following are the different types of DCF techniques,

(1) Net present value method.

(2) Internal rate of returns.

(3) Profitability index.

(4) Terminal value method.

Q9) What do you mean by payback period?

Answer :

The payback period refers to the amount of time it takes to recover the cost of an investment. Simply put, the payback period is the length of time an investment reaches a breakeven point.

Under *payback method*, an investment project is accepted or rejected on the basis of payback period. Payback period means the period of time that a project requires to recover the money invested in it. It is mostly expressed in years.

Q10) Write about accounting rate of return.

Answer :

The accounting Rate of Return (ARR), is also called the simple or average rate of return. It is an investment formula used to measure the annual earnings or profit an investment is expected to make. In other words, it calculates how much money or return as an investor will make on investment.

Q11) Briefly write about net present value.

Answer :

Net Present Value (NPV) is the difference between the present value of cash inflows and the present value of cash outflows over a period of time. NPV is used in capital budgeting and investment planning to analyze the profitability of a projected investment or project.

Q12) What is benefit cost ratio?

Answer :

Benefit cost ratio is also known as profitability index. It is an index that attempts to identify the relationship between the costs and benefits of a proposed project through the use of a ratio.

Benefit Cost Ratio is the ratio of the present value of future cash flows of the project to the initial investments in the project. This index helps in cost-benefit analysis of investment projects and helps them rank in order of the best return on initial investments.

Q13) What do you mean by IRR?

Answer :

Internal Rate of Return (IRR) is the interest rate at which the net present value of all the cash flows (both positive and negative) from a project or investment equal zero.

Internal rate of return is used to evaluate the attractiveness of a project or investment. If the IRR of a new project exceeds a company at required rate of return, that project is desirable. If IRR falls below the required rate of return, the project should be rejected.

Q14) Distinguish between NPV and IRR.

Answer :

Basic for Comparison	NPV	IRR
Meaning	The total of all the present values of cash flows (both positive and negative) of a project is known as Net Present Value or NPV.	IRR is described as a rate at which the sum of discounted cash inflows equates discounted cash outflows.
Expressed in	Absolute terms	Percentage terms
What it represents?	Surplus from the project	Point of no profit no loss (Break even point)
Decision Making	It makes decision making easy.	It does not help in decision making
Rate for reinvestment of intermediate cash flows	Cost of capital rate	Internal rate of return

PART - B

ESSAY QUESTIONS WITH ANSWERS

4.1 BASICS OF CAPITAL BUDGETING TECHNIQUES

Q15) Define capital budgeting? Why are capital budgeting decision important?

Answer :

Meaning of Capital Budgeting

Capital budgeting is a technique used to evaluate those expenditure decisions the benefits of which occur for more than one year.

"Capital budgeting is the process of evaluating and selecting long-term investments that are consistent with the goal of shareholders (owners) wealth maximization".

According to *Charles T Horngren*, "Capital budgeting is long-term planning for making and financing proposed capital outlays".

Needs/Importance of Capital Budgeting

Capital budgeting decision must be given much importance, because of following reasons,

(1) **Long-Term Decisions :** Capital budgeting decisions are mainly concern for long-term period. So, the long-term may involve risk. To make the invested fund as risk free long-term with efficient decisions.

(2) **To Progress :** One of the important aim is firm's progress. The progress is mainly efficient with decision taken on the investment.

(3) **Responsible for Large Amount of Funds :** The important aim of capital budgeting is to take decision which is mainly focus on acquiring of fund. This decision criteria is only responsible for large amount of funds.

(4) **Carefully Take Care :** The capital budgeting decision is to take care about the whole analysis of invested funds in a projects.

(5) **Identify the Effective Proposal/Project :** Through analyzing the various capital budgeting technique, it helps the firm to identify the efficient and useful proposal or project.

Q16) What do you understand by capital budgeting process?

Answer :

The following procedure may be adopted in preparing capital budget,

(1) **Identification of Investment Opportunities :** The first step in capital budgeting process is the concept of a profit making idea. A finance manager identify the investment opportunities and prepare a document which include advantages and disadvantages of investment proposal.

(2) **Co-Ordinating Investment Proposal :** The finance manager must take the view about the different departments in the company about project evaluation. He should form a committee to find out whether the investment will be,

(i) To replace or purchase a new assets.

(ii) To expand an existing investment.

(3) **Evaluation/Analysis of Investment Proposal :** The next step in capital budgeting process is to evaluate the different proposals in term of the cost of capital, the expected returns from alternative investment opportunities and the life of the assets with any of the following evaluation techniques,

(i) Degree of urgency method (accounting rate of return method).

(ii) Pay-back method.

(iii) Return on investment method.

(iv) Discounted cash flow method.

(4) **Preparing a Capital Budgeting Programme :** The finance manager has to take right decision on project investment. He has to prepare a methodology to conduct the programme. He has to focus on different techniques, timing of investment, monitoring of a proposal.

(5) **Implementation of Investment Proposal :** The project has to be implemented in a good manner. To bring an efficiency in a project, a finance manager has to provide a guidelines to the different department which mainly focus on,

(i) Time management.

(ii) Cost limits.

(iii) Cost control.

Any delay may lead to loss. Thus, the project should be control by evaluating the review techniques.

(6) **Review and Feedback of Performance :** As the various project techniques are evaluated, the next is to review the project. The financial manager has to continuously compare the actual performance with the projected performance. This helps to get the feedback of the performance.

Q17) What are the advantages of capital budgeting?

Answer :

The importance of capital budgeting arises mainly due to the following reasons,

(1) **Large Investment :** Capital budgeting decision, generally involves large investment of funds. But, the funds available with the firm are scarce and the demand for funds exceeds resources. Hence, it is very important for a firm to plan and control its capital expenditure.

(2) **Long-Term Commitment of Funds :** Capital expenditure involves not only large amount of funds but, also funds for long-term or on permanent basis. The long-term commitment of funds increases the financial risk involved in the investment decision.

(3) **Irreversible Nature :** The capital expenditure decisions are of irreversible in nature. Once, the decision for acquiring a permanent asset is taken, it becomes very difficult to dispose of these assets without incurring heavy losses.

(4) **Long-Terms Effect on Profitability :** Capital budgeting decision has a long-term and significant effect on the profitability of a concern. Not only the present earnings of the firm are affected by the investments in capital assets but, also the future growth and profitability of the firm depends up to the investment decision taken today. Capital budgeting decision has utmost importance to avoid over or under investment in fixed assets.

4.2 TIME VALUE OF MONEY - COMPOUNDING, DISCOUNTING, FUTURE VALUE OF SINGLE AND MULTIPLE FLOWS

Q18) What is time value of money? What are the main reasons of it? Briefly state its method.

Answer :

Meaning of Time Value of Money

"Time value of money" is the value of a unit of money at different time intervals. The value of the money received today is more than its value received at a later date. In other words, the value of money changes over a period of time. Since, a rupee received today has more value, rational investors would prefer current receipts over future receipts. This phenomena is also referred to as, "Time preference of money".

Objectives of Time Value of Money

Time value of money is based on three aspects,

1) **Future Uncertainties :** One of the reason for preference for current money is that there is a certainty about it, whereas the future money has an uncertainty. There may be an apprehension that the other party may become insolvent or untraceable.

2) **Preference for Present Consumption :** Many people feel that money received today can provide the acquisition of goods and services, that they required for their needs. At a future date they may not be able to purchase goods, because of risk in the market or due to inflation.

3) **Re-investment Opportunities :** Both the individual and the firm have preference for present money, because they have reinvested opportunities available if the money is not invested now.

Methods of Time Value of Money

Time Value of Money (TVM) is applicable in equal strength to individual as well as to the business firm. It is an important consideration for any financial decisions.

These decision can be taken on the basis of two different conceptual model,

(1) Future/compounded value.

(2) Present/discounting value.

Q19) Explain the different techniques under future value of money.

Answer :

In the compounding technique, the future values of all cash inflows at the end of the time horizon at a particular rate of interest are calculated. The amount earned on an initial deposit becomes part of the principal at the end of the first compounding period.

The compounding of interest can be calculated by the following equation,

$$A = P(1 + i)^n$$

Where,

A → Amount at the end of the period.

P → Principle at the beginning of the year.

i → Rate of interest.

n → Number of years.

(1) **Future Value of a Single Flow (Lumpsum) :** The process of calculating future value will become very cumbersome if they have to be calculated over long maturity periods of 10 or 20 years. A generalized procedure of calculating the future value of a single cash flow compounded annually is as follows,

$$FV_n = PV(1 + i)^n$$

Where,

FV_n → Future value of the initial flow in n years.

PV → Initial cash flow.

i → Annual rate of interest.

n → Life of investment.

The expression $(1 + i)^n$ represents the future value of the initial investment of '1 at the end of n number of years. It is called as the Future Value Interest Factor (FVIF).

(i) **Doubling Period :** A very common question arising in the minds of an investor is, "how long will it take for the amount invested to double for a given rate of interest". There are two ways of answering this question,

- One is called 'rule of 72'. This rule states that the period within which the amount doubles is obtained by dividing 72 by the rate of interest.

  For example, if the given rate of interest is 10%, the doubling period is 72/10, that is, 7.2 years.

- A much accurate way of calculating doubling period is the 'rule of 69', which is expressed as 0.35 + 69/interest rate. Going by the same example given above, we get the number of years as 7.25 years [0.35 + 69/10 (0.35 + 6.9)].

(ii) **Increased Frequency of Compounding :** The effect of interest earned when compounding is done more frequently - half yearly or quarterly.

$$FV_n = PV(1 + i/m)^{m \times n}$$

Where :

FV_n → Future value after n years.

PV → Cash flow today.

i → Nominal interest rate per annum.

m → Number of times compounding is done during a year.

n → Number of years for which compounding is done.

(iii) **Effective Vs Nominal Rate of Interest :** The interest accumulation by frequent compounding is much more than the annual compounding. This means that the rate of interest given to us, that is 10% is the nominal rate of interest per annum.

If the compounding is done more frequently, say semi-annually, the principal amount grows at 10.25% per annum. 0.25% is known as the, "Effective Rate of Interest".

The general relationship between the effective and nominal rates of interest is as follows,

$$r = [(1 + i/m)^m] - 1$$

Where :

r → Effective rate of interest.

i → Nominal rate of interest.

m → Frequency of compounding per year.

(2) **Future Value of Series of Cash Flow :** An investor may be interested in investing money in installments and wish to know the value of his savings after n years.

(3) **Future Value of an Annuity :** Annuity refers to the periodic flows of equal amounts. These flows can be either termed as receipts or payments.

Example : If you have subscribed to the Recurring Deposit Scheme of a bank requiring you to pay '5000 annually for 10 years, this stream of pay-outs can be called "Annuities'. Annuities require calculations based on regular periodic contribution of a fixed sum of money.

The future value of a regular annuity for a period of n years at "i" rate of interest can be summed up as under,

$$FVA_n = A[(1 + i)^n - 1]/i$$

Where :

FVA_n → Accumulation at the end of n years.

i → Rate of interest.

n → Time horizon or number of years.

A → Amount invested at the end of every year for n years.

The expression $(1 + i)^n - 1)/i$ is called the Future Value Interest Factor for Annuity (FVIFA). This represents the accumulation of '1 invested at the end of every year for n number of years at "i" rate of interest.

We just have to multiply the relevant value with A and get the accumulation in the formula given above.

(4) **Sinking Fund :** Sinking fund is a fund which is created out of fixed payments each period, to accumulate for a future sum after a specified period.

The sinking fund factor is useful in determining the annual amount to be put in a fund, to repay bonds or debentures or to purchase a fixed asset or a property at the end of a specified period.

$$A = FVA \times i/[(1 + i)^n - 1]$$

$i/[(1 + i)^n - 1]$ is called the Sinking Fund Factor.

PROBLEM ON TIME VALUE OF MONEY

Q20) Mr. A invests ₹ 1,000 in a bank which offers him 5% interest compounded annually.

Answer :

Substituting the actual figures for the investment of ₹ 1000 in the formula A = P(1 + i)^n, we arrive at the values shown in Table below.

Interest Compounded Annually

Year	1	2	3
Beginning amount	₹ 1000	₹ 1050	₹ 1102.50
Interest rate	5%	5%	5%
Amount of interest	50	52.50	55.13
Beginning principal	₹ 1000	₹ 1050	₹ 1102.50
Ending principal	₹ 1050	₹ 1102.50	₹ 1157.63

From above Table Mr. A has ₹ 1050 in his account at the end of the first ye.. total of the interest and principle amount ₹ 1050 constitutes the principal for the next year. He thus, earns ₹ 1102.50 for the second year. This becomes the principal for the third year. This compounding procedure will continue ..r an indefinite number of years.

The values in above Table are arrived at,

Amount at the end of year 1 = ₹ 1000 (1 + 0.05) = ₹ 1050

Amount at the end of year 2 = ₹ 1050 (1 + 0.05) = ₹ 1102.50

Amount at the end of year 3 = ₹ 1102.50 (1 + 0.05) = ₹ 1157.63

The amount at the end of the second year can be ascertained by substituting ₹ 1000 (1 + 0.5) for ₹ 1050, that is,

₹ 1000 (1 + 0.05) (1 + 0.05) = ₹ 1102.50

Similarly, the amount at the end of the third year can be ascertained by substituting

₹ 1000 (1 + 0.05) for ₹ 1102.50, that is,

₹ 1000 (1 + 0.05) (1 + 0.05) (1 + 0.05) = ₹ 1157.63.

Q21) The fixed deposit scheme of a bank offers the interest rates, as shown in the below Table,

Fixed Deposit Scheme of a Bank

Period of Deposit	Rate Per Annum
< 45 days	9%
46 days to 179 days	10%
180 days to 365 days	10.5%
365 days and above	11%

What will be the status of ₹ 10,000 after three years, if it is invested at this point of time?

Answer :

FV_n = $PV(1 + i)^n$ or PV × FVIF (11%, 3y)

= 10000 × 1.368 (from the Tables of FVIF)

= ₹ 13,680

The status of ₹ 10,000 after three years, if it is invested at this point of time, would be ₹ 13,680.

Q22) Under the ABC Bank's Cash Multiplier Scheme, deposits can be made for periods ranging from 3 months to 5 years. Every quarter, interest is added to the principal. The applicable rate of interest is 9% for deposits less than 23 months and 10% for periods more than 24 months. What will the amount of ₹ 1000 today be after 2 years?

Answer :

FV_n = $PV(1 + i/m)^{mn}$

m = 12/3 = 4 (quarterly compounding)

FV_n = $1000\ (1 + 0.10/4)^{4\times2}$

= $1000\ (1 + 0.10/4)^{8}$

= ₹ 1218

The amount of ₹ 1000 after years would be ₹ 1218.

Q23) **Calculate the effective rate of interest if the nominal rate of interest is 12% and interest is compounded quarterly.**

Answer :

r = $[(1 + i/m)^m] - 1$

m = 12/3 = 4 (quarterly compounding)

r = $[(1 + 0.12/4)^4] - 1$

r = 0.125 or 12.6% p.a.

The effective rate of interest is 12.6% p.a.

Q24) **Mr. Madan invests ₹ 500, ₹ 1000, ₹ 1500, ₹ 2000 and ₹ 2500 at the end of each year for 5 years. Calculate the value at the end of 5 years compounded annually if the rate of interest is 5% p.a.**

Answer :

The value at the end of 5 years, compounded annually at a rate of interest of 5% per annum, is calculated in the below Table.

Future Value of Series of Cash Flows

End of Year (1)	Amount Invested (₹) (2)	Number of Years Compounded (3)	Compounded Interest Factors from Tables (4)	FV in ₹ (2 × 4) = 5
1	500	4	1.216	608
2	1000	3	1.158	1158
3	1500	2	1.103	1654
4	2000	1	1.050	2100
5	2500	0	1.000	2500
Amount at the end of the fifth year				**₹ 8020**

The value at the end of the fifth year is ₹ 8020.

Q25) Mr. Ram Kumar deposits ₹ 2000 at the end of every year for five years into his account. Interest is being compounded annually at a rate of 5%. Determine the amount of money he will have at the end of the fifth year.

Answer :

The amount of money Mr. Ram Kumar will have at the end of the fifth year is calculated in the below Table.

Computation of Future Value of Annuity

End of Year (1)	Amount Invested (₹) (2)	Number of Years Compounded (3)	Compounded interest Factors from Tables (4)	FV in ₹ (2 × 4 = 5)
1	2000	4	1.216	2432
2	2000	3	1.158	2316
3	2000	2	1.103	2206
4	2000	1	1.050	2100
5	2000	0	1.000	2000
Amount at the end of the fifth year				**₹ 11054**

(or)

Refer FVIFA Table to compute the value at the end of 5th year,

= 2000 × FVIFA (5%, 5)

= 2000 × 5.527

= ₹. 11054.

Q26) Calculate the value of an annuity flow of ₹ 5000 done on a yearly basis of five years, yielding at an interest of 8% p.a.

Answer :

$FAV_n = A[(1 + i)n - 1/i$

By using the formula and FVIFA Table we can find that,

= 5000 FVIFA (8%, 5)

= 5000 × 5.867

= ₹ 29335

The value of annuity flow is ₹ 29,335.

Q27) Manas Limited has an obligation to redeem ₹ 50,00,000 debentures 6 years hence. How much should the company deposit annually in the sinking fund account yielding 14% interest to cumulate ₹ 50,00,000 six years from now?

Answer :

n = 6 years

i = 14%

Accumulated sum = 50,00,000

Annual sinking fund deposit should be,

$$A = \frac{FVA}{[(1+i)^n - 1]/i}$$

$$A = \frac{50,00,000}{FVIFA(14\%, 6\,years)}$$

Referring FVIFA Table the factor is 8.536

$$= \frac{50,00,000}{8.536} = ₹\ 5,85,754$$

(or)

$$\frac{50,00,000}{[(1+0.14)^6 - 1]/i} = \frac{50,00,000}{8.536} = 5,85,754$$

4.2.1 Present Value of Single and Multiple Flows, Present Value of Annuities

Q28) What is present value? What are the different techniques of present value of technique?

Answer :

Present value is a technique used for the conversion of future sum of money into present value. It is exactly opposite to the compounding technique.

The "Present Value" (PV) of a future cash flow is the amount of the current cash that is equivalent to the investor. The process of determining present value of a future payment or a series of future payment is known as discounting.

(1) **Discounting or Present Value of a Single Flow :** We can determine the PV of a future cash flow or a stream of future cash flows using the formula,

$$PV = FV_n(1 + I)^n$$

Where,

PV → Present Value.

FV_n → Amount (or) Future value.

i → Interest rate.

n → Number of years.

(2) **Present Value of even Series of Cash Flows :** In a business scenario, the businessman will receive periodic amounts (annuity) for a certain number of years. An investment done today will fetch him returns, spread over a period of time. He would like to know if it is worthwhile to invest a certain sum now in anticipation of returns he expects after a certain number of years. He should therefore equate the anticipated future returns to the present sum he is willing to forego. The PV of a series of cash flows can be represented by the following formula,

$$PV = C1/(1 + i)^1 + C2/(1 + i)^1 + C3/(1 + i)^3 + C4/(1 + i)^4 + \dots + Ct/(1 + i)^n$$

$$PV = \sum_{t=1}^{n} \frac{Ct}{(1+i)^n}$$

The above formula or the equation reduces to,

$$PV\ A_n = A[(1 + i)^n - 1/i(1 + i)^n]$$

The expression $[(1 + i)^n - 1/i(1 + i)^n]$ is known as Present Value Interest Factor Annuity (PVIFA). It represents the PVIFA of ₹ 1 for the given values of i and n.

(3) **Present Value of Perpetuity :** An annuity for an infinite time period is perpetuity. It occurs indefinitely. A person may like to find out the present value of his investment assuming he will receive a constant return year after year. The PV of perpetuity is calculated as,

$$P = A/i$$

(4) **Present Value of Uneven Periodic Sum :** In some investment decisions of a firm, the returns may not be constant. In such cases, the PV is calculated as follows,

$$P = A_1/(1 + i)^1 + A_2/(1 + i)^2 + A_3/(1 + i)^3 + \dots + A_n/(1 + i)^n$$

(or)

$$PV = A_1\ PVIF\ (i, 1) + A_2\ PVIF\ (i, 2) + A_3\ PVIF\ (i, 3) + A_4\ PVIF\ (i, 4) + \dots + A_n\ PVIF\ (i, n)$$

(5) **Capital Recovery Factor :** Capital recovery factor is the annuity of an investment for a specified time at a given rate of interest.

The reciprocal of the present value annuity factor is called capital recovery factor.

$A = PV\ A_n\ [i(1 + i)^n/(1 + i)^n - 1]$

$[i(1 + i)^n/(1 + i)^n - 1]$ is known as the Capital Recovery Factor.

PROBLEMS ON PRESENT VALUE METHOD

Q29) If Ms. Swapna expects to have an amount of ₹ 1000 after one year what should be the amount she has to invest today, if the bank is offering 10% interest rate?

Answer :

$PV = FV_n/(1 + i)^n$

$= 1000/(1 + 0.10)1$

= ₹ 909.09

The same can be calculated with the help of Tables.

= 1000 × PVIF (10%, 1)

= 1000 × 0.909

= ₹ 909

The amount to be invested today to have an amount of ₹ 1000 after one year is ₹ 909.

Q30) An investor wants to find out the value of an amount of ₹ 1,00,000 to be received after 15 years. The interest offered by bank is 9%. Calculate the PV of this amount.

Answer :

$PV = FV_n/(1 + i)^n$ or 1,00,000 PVIF (9%, 15)

= 1,00,000 × 0.275

= ₹ 27500

The PV of ₹ 1,00,000 is ₹ 27,500.

Q31) Calculate the PV of an annuity of ₹ 500 received annually for four years, when discounting factor is 10%.

Answer :

The present value of annuity can be calculated from the below Table as shown under,

Computation of PV of Annuity

End of Year	Cash Inflows	PV Factor	PV in ₹
1	₹ 500	0.909	454.5
2	₹ 500	0.827	413.5
3	₹ 500	0.751	375.5
4	₹ 500	0.683	341.5
		3.170	**1585**

Present value of an annuity is ₹ 1585.

(or)

By directly looking at the table we can calculate :

= 500 × PVIFA (10%, 4)

= 500 × 3.170

= ₹ 1585

The present value of annuity ₹ 1585.

Q32) Find out the present value of an annuity of ₹ 10000 over 3 years when discounted at 5%.

Answer :

Present value of annuity

= 10000 × PVIFA (5%, 3)

= 10000 × 2.723

= ₹ 27230

Hence, the present value of annuity is ₹ 27,230.

Q33) **The principal of a college wants to institute a scholarship of ₹ 5000 for a meritorious student every year. Find out the PV of investment which would yield ₹ 5000 in perpetuity, discounted at 10%.**

Answer :

$$P = A/i$$
$$= 5000/0.10$$
$$= ₹\ 50000$$

This means he should invest ₹ 50000 to get an annual return of ₹ 5000.

Q34) **An investor will receive ₹ 10000, ₹ 15000, ₹ 8000, ₹ 11000 and ₹ 4000 respectively at the end of each of five years. Find out the present value of this stream of uneven cash flows, if the investors interest rate is 8%.**

Answer :

$$PV = 10000/(1 + 0.08) + 15000/(1 + 0.08)^2 + 8000/(1 + 0.08)^3 + 11000/(1 + 0.08)^4 + 4000/(1 + 0.08)^5$$

$$= 9259 + 12860 + 6350 + 8085 + 2722$$

$$= ₹\ 39276$$

(or)

By referring Table we can compute :

$$PV = 10000\ PVIF\ (8\%,\ 1yr) + 15000\ PVIF\ (8\%,\ 2yrs) + 8000\ PVIF\ (8\%,\ 3yrs) + 11000\ PVIF\ (8\%,\ 4yrs) + 4000\ PVIF\ (8\%,\ 5yrs)$$

$$= 10000 \times 0.926 + 15000 \times 0.857 + 8000 \times 0.794 + 11000 \times 0.735 + 4000 \times 0.681$$

$$= 9260 + 12855 + 6352 + 8085 + 2724 = ₹\ 39,276$$

The present value of this stream of uneven cash flows is ₹ 39,276.

Q35) **A loan of ₹ 1,00,000 is to be repaid in 5 equal annual installments. If the loan carries a rate of 14% p.a., what is the amount of each installment?**

Answer :

Instalment × PVIFA (14%, 5) = 1,00,000

Instalment = 1,00,000/3.433 = ₹ 29129.

The amount of each installment has been calculated.

4.3 FINANCIAL APPRAISAL OF PROJECTS - PAYBACK PERIOD, ARR, NPV, BENEFIT COST RATIO, IRR (SIMPLE RATIOS)

Q36) Show capital budgeting techniques diagrammatically.

Answer :

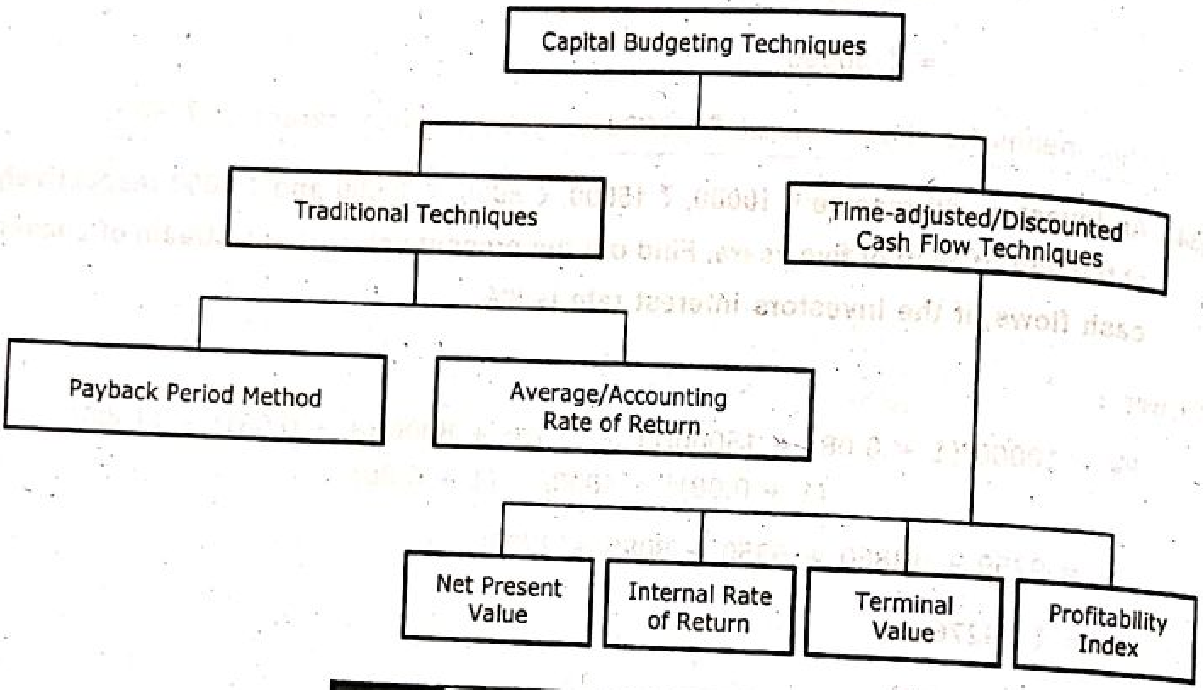


Figure Methods of Capital Budgeting

Q37) What is payback period? State its merits and demerits.

Answer :

Payback period is defined as the length of time required to recover the initial cash out lay.

$$\text{Payback period} = \frac{\text{Initial investment}}{\text{Annual cash inflows}}$$

Merits of PB Period

(1) **Simple :** It is simple in concept and application.

(2) **Risk of Obsolescence High :** It emphasis is on recovery of initial cash outlay. Payback period is the best method for evaluation of projects with very high uncertainty.

(3) **Favours with Ranking :** With respect to accept or reject criterion, payback method favours a project which is less than or equal to the standard payback set by the management. In this process, early cash flows get due recognition than later cash flows. Therefore, payback period could be used as a tool to deal with the ranking of projects on the basis of risk criterion.

(4) **Measures Liquidity :** The firms with shortage funds is preferred by this method because, it measures liquidity of the project.

Demerits of PB Period

(1) **Ignores Time Value of Money :** Payback period ignores time value of money.

(2) **Cash Flows Not Considered :** It does not consider the cash flows that occur after the payback period.

(3) **Not Measure the Profitability :** It does not measure the profitability of the project.

(4) **No Liquidity Position :** It does not throw any light on the firm's liquidity position but, just tells about the ability of the project to, return the cash outlay originally made.

(5) **Occurs Conflict :** Project selected on the basis of payback criterion may be in conflict with the wealth maximization goal of the firm.

Accept or Reject Criteria

(1) If projects are mutually exclusive, select the project which has the least payback period.

(2) In respect of other projects, select the project which have payback period less than or equal to the standard payback stipulated by the management.

Problems on Pay Back Method

Q38) Mr. Aman Ullah is intends to invest ₹ 1,00,000 on capital project. The annual net cash inflows @ ₹ 15,000 per year for a period of 8 years. Calculate the payback period.

Answer :

$$\text{Payback period} = \frac{\text{Initial investment}}{\text{Annual cash inflows}}$$

$$= \frac{1,00,000}{15,000} = 6.67 \text{ years (or) 6 years and 8 months.}$$

Q39) A project requires an initial investment of ₹ 20,000 with a useful life of 5 years. The projected profit and loss A/c of the project discloses a profit after tax ₹ 8000 every year. The project which has no salvage value is depreciated on straight line basis. What is the payback period?

Answer :

$$\text{Payback period} = \frac{\text{Initial investment}}{\text{Annual cash inflows}}$$

$$= \frac{₹\,20,000}{₹\,8,000}$$

= 2.5 years (or) 2 years and 5 months.

Q40) A project requires an initial investment of ₹ 20,000 and generates the following CFs for 5 years,

Year	1	2	3	4	5
CF's (₹000)	6	8	5	4	4

Calculate Payback Period of the Project.

Answer :

Calculation of PBP		
Year	**CFs**	**Cumulative CFs**
1	6000	6,000
2	8000	(6,000 + 8,000) = 14,000
3	5000	(14,000 + 5,000) = 19,000
4	4000	(19,000 + 4,000) = 23,000
5	4000	(23,000 + 4,000) = 27,000

From the cumulative cash flows column, project initial cash outlay of ₹20,000 lies between 3rd and 4th year.

$$\therefore \text{ Payback period} = 3\text{ years} + \frac{1000}{4000} = 3 + 0.25.$$

= 3.25 years (or) 3 years and 3 months

Q41) The following details shown in below Table, are in respect of the cash flows of two project A and B.

Year	Project A Cash Flows (₹)	Project B Cash Flows (₹)
0	(4,00,000)	(5,00,000)
1	2,00,000	1,00,000
2	1,75,000	2,00,000
3	25,000	3,00,000
4	2,00,000	4,00,000
5	1,50,000	2,00,000

Compute payback period for A and B.

Answer :

The cash flows and the cumulative cash flows of the projects A and B are shown below Table,

Year	Project A		Project B	
	Cash Flows (₹)	Cumulative Cash Flows (₹)	Cash Flows (₹)	Cumulative Cash Flows (₹)
1	2,00,000	2,00,000	1,00,000	1,00,000
2	1,75,000	3,75,000	2,00,000	3,00,000
3	25,000	4,00,000	3,00,000	6,00,000
4	2,00,000	6,00,000	4,00,000	10,00,000
5	1,50,000	7,50,000	2,00,000	12,00,000

From the cumulative cash flows column, project A recovers the initial cash outlay of ₹ 4,00,000 at the end of the third year. Therefore, payback period of project A is 3 years.

From the cumulative cash flows column the initial cash outlay of ₹ 5,00,000 lies between 2nd year and 3rd year in respect of project B.

Therefore, payback period for project B is,

$$= 2 + \frac{5,00,000 - 3,00,000}{3,00,000}$$

$$= 2 + \frac{2,00,000}{3,00,000}$$

= 2.67 years (or) 2 years

Payback period for project B is 2 years and 8 months.

Q42) Calculate the payback period of the following projects, each requiring a cash outlay of ₹ 1,00,000. Suggest which project are acceptable if the standard payback period is 5 years.

Year	Cash Flows		
	Project A	Project B	Project C
1	30,000	30,000	10,000
2	30,000	40,000	20,000
3	30,000	20,000	30,000
4	30,000	10,000	40,000
5	30,000	5,000	-

Answer :

Project A

$$\text{Payback period} = \frac{1,00,000}{30,000} = 3.3 \text{ years (or) 3 years and 4 months.}$$

Project B

Year	Annual Cash Inflows	Cumulative Cash Flows
1	30,000	30,000
2	40,000	70,000
3	20,000	90,000
4	10,000	1,00,000
5	5,000	1,05,000

From the cumulative cash flows column, project B recovers the initial cash outlays of ₹ 1,00,000 at the end of 4th year.

Therefore, payback period of project B is 4 years.

Project C

Year	Annual Cash Inflows	Cumulative Cash Flows
1	10,000	10,000
2	20,000	30,000
3	30,000	60,000
4	40,000	1,00,000
5	-	-

Thus, the payback period is 4 years as the ₹1,00,000 cash flow exist in that years.

Conclusion / Decision

The project A is acceptable as the payback period is less than other projects.

Q43) Describe briefly about average rate of return.

Answer :

Accounting Rate of Return (ARR) measures the profitability of investment (project) using information taken from financial statements,

ARR = Average income / Average investment (or)

$$\text{ARR} = \frac{\text{Average annual profit after tax (net earings)}}{\text{Average investment}}$$

$$\text{Average investment} = \frac{\text{Book Value of the investment in the beginning} + \text{Book Value of investment at the end of the life of the project or investment}}{2}$$

(or)

$$\text{Average investment} = \frac{1}{2}\ (\text{Initial cost} - \text{Salvage value}) + (\text{Salvage value})$$

Merits of ARR

(1) **Accounting Information :** It is based on accounting information.

(2) **Easy :** It is simple to understand.

(3) **Profits of Economic Life :** It considers the profits of entire economic life of the project.

(4) **Familiar to Executives :** The business executives familiar with the accounting information understand it.

Demerits of ARR

(1) **Not Based on Cash Flows :** ARR is based on accounting income not on cash flows, as the cash flow approach is considered superior to accounting information based approach.

(2) **Time Value is Considered :** ARR does not consider the time value of money.

(3) **Fails to Differentiate :** Different investment proposals which require different amounts of investment may have the same accounting rate of return. The ARR fails to differentiate projects on the basis of the amount required for investment.

(4) **Due to Diverse Approaches :** ARR is based on the investment required for the project. There are many approaches for the calculation of denominator of average investment. Existence of more than one basis for arriving at the denominator of average investment may result in adoption of many arbitrary bases.

Due to this the reliability of ARR as a technique of appraisal is reduced when two projects with the same ARR but, with differing investment amounts are to be evaluated.

Accept or Reject Criteria

(1) In any project, which has an excess ARR, the minimum rate fixed by the management is accepted.

(2) If actual ARR is less than the cut-off-rate (minimum rate specified by the management) then that project is rejected.

(3) When projects are to be ranked for deciding on the allocation of capital on account of the need for capital rationing, project with higher ARR are preferred to the ones with lower ARR.

Problems on Average Rate of Return

Q44) A project cost ₹ 25,000 and has a scrap value of ₹ 5000 after 5 years. The net profit before depreciation and taxes for the five years period are expected to be ₹ 5,000, ₹ 6,000, ₹ 7,000, ₹ 8,000, ₹ 10,000.

You are required to calculate the ARR assuming 50% rate of tax and depreciation on straight line method.

Answer :

$$ARR = \frac{\text{Average annual profit after tax}}{\text{Average investment}} \times 100$$

$$\text{Depreciation} = \frac{25,000 - 5,000}{5 \text{ years}} = ₹\,4,000$$

Years	PBDT	Depreciation	PBT	Tax at 50%	PAT
	(A)	(B)	(A – B = C)	(50% of C)	D
1	5,000	4,000	1,000	500	500
2	6,000	4,000	2,000	1,000	1,000
3	7,000	4,000	3,000	1,500	1,500
4	8,000	4,000	4,000	2,000	2,000
5	10,000	4,000	6,000	3,000	3,000
					8,000

$$\text{Average profit} = \frac{8000}{5} = ₹\,1600$$

$$\text{Average investment} = \frac{1}{2}(\text{Initial cost} - \text{Salvage value}) + (\text{Salvage value})$$

$$= \frac{1}{2}(25,000 - 5,000) + 5,000$$

$$\therefore \text{Average investment} = 15,000$$

$$\text{Average rate of return} = \frac{1,600}{15,000} \times 100 = 10.67\%$$

Q45) **The following particulars shown in below Table refers to two projects,**

Particulars	X	Y
Cost	40,000	60,000
Estimated life	5 years	5 years
Salvage value	₹ 3,000	₹ 3,000

Estimate Income (After Tax)

	X (₹)	Y (₹)
1	3,000	10,000
2	4,000	8,000
3	7,000	2,000
4	6,000	6,000
5	8,000	5,000

Answer :

$$ARR = \frac{\text{Average annual profit after tax}}{\text{Average investment}} \times 100$$

$$\text{Average profit (X)} = \frac{3,000 + 4,000 + 7,000 + 6,000 + 8,000}{5}$$

$$= 5,600$$

$$\text{Average profit (Y)} = \frac{10,000 + 8,000 + 2,000 + 6,000 + 5,000}{5}$$

$$= 6,200$$

$$\text{Average investment} = \frac{1}{2}\text{ (Initial cost − Salvage value) + (Salvage value)}$$

$$X = \frac{1}{2}(40,000 - 3,000) + 3,000 = 21,500$$

$$Y = \frac{1}{2}(60,000 - 3,000) + 3000 = 31,500$$

$$ARR(\text{firm X}) = \frac{5,600}{21,500} \times 100 = 26\%$$

$$ARR(\text{firm Y}) = \frac{6,200}{31,500} \times 100$$

$$= 19.68\%$$

Conclusion / Decision

X firm is accepted, as it is giving high rate of return.

Q46) Calculate the Average Rate of Return for Project A and B from the following :

Particulars	Project A	Project B
Investment	20,000	30,000
Expected life	4 yrs.	5 yrs.
1	2,000	3,000
2	1,500	3,000
3	1,500	2,000
4	1,000	1,000
5	-	1,000

Answer :

Note : If there is no information given, then it should be consider after tax.

Project A

(i) Annual earnings (Profits)

2000 + 1500 + 1500 + 1000 = 6000

$$\text{Average annual earning} = \frac{6000}{4} = 1{,}500$$

(ii) $$\text{Average investment} = \frac{20{,}000}{2} = 10{,}000$$

$$\text{ARR} = \frac{1{,}500}{10{,}000} \times 100 = 15\%$$

Project B

(i) Annual earnings (profits)

3000 + 3000 + 2000 + 1000 + 1000 = 10000

$$\text{Average annual earning} = \frac{10{,}000}{5} = 2{,}000$$

(ii) $$\text{Average investment} = \frac{30{,}000}{2} = 15{,}000$$

$$\text{Average rate of return} = \frac{2{,}000}{15{,}000} \times 100 = 13.3\%$$

Conclusion / Decision

Project A is accepted as it is giving high rate of return.

Q47) Discuss about the time-adjusted methods of capital budgeting.

Answer :

Discounted cash flow method or time adjusted technique is an improvement over the traditional techniques. In evaluation of the projects they need to give weightage to the timing of return as it is effectively considered in all DCF methods. DCF methods are cash flow based and take the cognisance of both the interest factors and cash flow after the payback period.

DCF technique involves the function to,

(1) Estimation of cash flows, both inflows and outflows of a project over the entire li: of the project.

(2) Discounting the cash flows by an appropriate interest factor (discount factor).

Methods/Techniques of discounted cashflows are,

(1) Net Present Value (NPV).

(2) Internal Rate of Return (IRR).

(3) Terminal Value (TV).

(4) Profitability Index (PI).

Q48) Explain briefly about net present value.

Answer :

Net Present Value (NPV) method recognizes the time value of money. It correctly admits that cash flows occurring at different time periods differ in value. Therefore, there is the need to find out the present values of all cash flows. NPV method is the most widely used technique among the DCF methods.

Steps in NPV Method

Steps involved in NPV method are,

(1) Forecasting the cash flows, both inflows and outflows of the projects to be taken up for execution.

(2) Decisions on discount factor or interest factor. The appropriate discount rate is the firm's cost of capital or required rate of return expected by the investors.

(3) Computation of the present value of cash inflows and outflows using the discount factor selected.

(4) Calculation of NPV by subtracting the PV of cash outflows from the present value of cash inflows.

ACCEPT OR REJECT CRITERIA

If NPV is positive, the project should be accepted. If NPV is negative the project should be rejected.

Accept or reject criterion can be summarized as given below,

(1) NPV > Zero = accept.

(2) NPV < Zero = reject.

NPV method can be used to select between mutually exclusive projects by examining whether incremental investment generates a positive net present value.

MERITS OF NPV METHOD

(1) **Consider Time Value of Money :** It takes into account the time value of money.

(2) **Consider all Cash Flows :** It considers cash flows occurring over the entire life of the project.

(3) **Consistent :** NPV method is consistent with the goal of maximizing the net wealth of the company.

(4) **Analyzing Relative Merits :** It analyzes the merits of relative capital investments.

(5) **Hurdle Rate :** Since, cost of capital of the firm is the hurdle rate, the NPV ensures that the project generates profits from the investment made for it.

DEMERITS OF NPV METHOD

(1) **Uncertainties :** Forecasting of cash flows is difficult as it involves dealing with the effect of elements of uncertainties on operating activities of the firm.

(2) **Essential Requirement :** To decide on the discounting factor there is the need to assess the investor's required rate of return. But, it is not possible to compute the discount rate precisely.

(3) **Unequal Funds :** There are practical problems associated with the evaluation of projects with unequal lives or under funds' constraints.

PROPERTIES OF THE NPV

(1) NPVs are additive. If two project A and B have NPV (A) and NPV (B) then by additive rule the net present value of the combined investment is NPV (A + B).

(2) Intermediate cash inflows are reinvested at a rate of return equal to the cost of capital.

PROBLEMS ON NET PRESENT VALUE

Q49) Calculate the NPV for a project, which require an initial investment of ₹20, 000 and which involves a net cash inflow of ₹6,000 each year for 6 years at 8% Per Anum is 4.623.

Answer :

Cash outflow = ₹ 20,000

Net cash inflow = ₹ 6,000

Net present value,

= Present value of cash flows – Cash outflow

Present value of cash flows,

= 6000 (8%, 6 yrs.)

= 6000 × 4.623

= 27,738

NPV = 27,738 – 20,000

= ₹ 7,738

Conclusion / Decision

The project shall be accepted since, NPV of project is positive.

Q50) A project costs ₹ 25,000 and is expected to generate cash inflows are given below,

Year	Cash Inflows
1	10,000
2	8,000
3	9,000
4	6,000
5	7,000

The cost of capital is 12%. The present value factors are given below Table.

Year	PV Factor at 12%
1	0.893
2	0.797
3	0.712
4	0.636
5	0.567

Compute the NPV of the project.

Answer :

Calculation of PV of Cash Flows

Year	Cash Flows	PV Factor at 12%	PV of Cash Flows
1	10,000	0.893	8,930
2	8,000	0.797	6,376
3	9,000	0.712	6,408
4	6,000	0.636	3,816
5	7,000	0.567	3,969
			PVCF = 29,499

NPV = Present value of cash flows – Cash outflows

= 29,499 – 25,000 = 4,499

Conclusion / Decision

The project generates a positive NPV of ₹ 4,499. Therefore, project should be accepted.

Q51) A company is evaluating two alternatives for distribution within the plant.

Two alternatives are,

(i) C system with a high initial cost but low annual operating costs.

(ii) F system which costs less but have considerably higher operating costs.

The decision to construct the plant has already been made and the choice here will have no effect on the overall revenues of the project. The cost of capital of the plant is 12% and the projects expected net cash costs are given below,

Year	Expected Net Cash Costs	
	C Systems	F System
0	(3,00,000)	(1,20,000)
1	(66,000)	(96,000)
2	(66,000)	(96,000)
3	(66,000)	(96,000)
4	(66,000)	(96,000)
5	(66,000)	(96,000)

What is the present value of costs of each alternative?

Which method should be chosen?

Answer :

Computation of Present Value

Year	C Systems	F Systems	Incremental
1	(66,000)	(96,000)	30,000
2	(66,000)	(96,000)	30,000
3	(66,000)	(96,000)	30,000
4	(66,000)	(96,000)	30,000
5	(66,000)	(96,000)	30,000

Present value of incremental savings = 30,000 × PV IFA (12%, 5) = 30,000 × 3.605 = 1,08,150

Initial cash outlay [C system – F system] = 3,00,000 - 1,20,000 = 1,80,000

Incremental cash outlay = 1,80,000 - 1,08,150 = 71,850

Conclusion / Decision

Since, the present value of incremental net cash inflows of C system over F system is negative, C system is not recommended.

Therefore, F system is recommended.

Q52) Calculate NPV of 2 projects with a discount rate of 10% suggest which project should be accepted.

Particulars	Project A	Project B
Initial Investment	40,000	50,000
Estimated Life	5 yrs.	5 yrs.
Scrap Value	4,000	2,000
Cash Flows :		
1	35,000	18,000
2	12,000	4,000
3	4,000	25,000
4	7,000	5,000
5	9,000	12,000

Answer :

$$\text{Depreciation} = \frac{\text{Initial investment} - \text{Scrap}}{\text{Estimated life}}$$

Project A

$$\text{Depreciation} = \frac{40{,}000 - 4{,}000}{5} = 7{,}200$$

Project B

$$\text{Depreciation} = \frac{50{,}000 - 2{,}000}{5} = 9{,}600$$

Project A

Calculation of PV of Project A

Year	Cash Flows	PV at 10%	Present Values
1	35,000	0.909	31,815
2	12,000	0.826	9,912
3	4,000	0.751	3,004
4	7,000	0.683	4,781
5	9,000	0.621	5,589
			55,101

Net present value = ₹ 55,101 - ₹ 40,000 =₹ 15,101

Project B

Calculation of PV of Project B

Year	Cash Flows	PV at 10%	Present Values
1	18,000	0.909	16,362
2	4,000	0.826	3,304
3	25,000	0.751	18,775
4	5,000	0.683	3,415
5	12,000	0.621	7,452
			49,308

Net present value = ₹ 49,308 - ₹ 50,000 = ₹ - 692

Conclusion / Decision

As the Project B has a negative value, so the Project A is accepted.

Q53) XYZ Ltd., Company is considering the purchase of machine. Two machines P and Q each costing ₹50,000 is available. EAT are a following,

Year	1	2	3	4	5
Machine P (₹)	15,000	20,000	25,000	15,000	10,000
Machine Q (₹)	5,000	15,000	20,000	30,000	2,000

Evaluate the two alternatives according to NPV method. Assuming cost of capital 10%, which machine should be selected and why?

Answer :

Calculation of Net Present Value

Year	Cashflow		PvF at 10%	Total Pv	
	P	Q		P	Q
1	15,000	5,000	0.909	13,635	4,545
2	20,000	15,000	0.826	16,520	12,390
3	25,000	20,000	0.751	18,775	15,020
4	15,000	30,000	0.683	10,245	20,490
5	10,000	20,000	0.621	6,210	12,420
Total Pv				65,385	64,865
Less : Cash outlay				50,000	50,000
NPV				**15,385**	**14,865**

Conclusion/Decision

Machine P has the NPV of 15,385 and Machine Q as 14,865. As the Machine P has the highest NPV value as compare to Machine Q. Hence, Machine P is accepted.

Q55) Explain briefly about internal rate of return (IRR) method.

Answer :

Internal Rate of Return (IRR) is the rate (i.e., discount rate) which makes the NPV of any project equal to zero. IRR is the rate of interest which equates the PV of cash inflows with the PV of cash outflows.

IRR is also called as yield on investment, managerial efficiency of capital, marginal productivity of capital, rate or return and time-adjusted rate of return. IRR is the rate of return that a project earns.

Steps Involved in Calculation of IRR

(1) Calculate cash flow after tax.

(2) Calculate fake payback period or factor by dividing the initial investment by average cash flows.

$$\text{Factor or Fake payback period} = \frac{\text{Initial investment}}{\text{Average cash flows}}$$

(3) Look for the factor in the present value annuity table in the years column until you arrive at a figure which is closest to the fake payback period.

(4) Note the corresponding percentage.

(5) Calculate NPV at that percentage.

(6) If NPV is positive take a rate higher and if NPV is negative take a rate lower and once again calculate NPV.

(7) Continue Step (5), until you arrive at two rates, one giving positive NPV and another negative NPV.

(8) Use interpolation to arrive at the actual IRR i.e., actual IRR can be calculated by using the following formula :

$$\text{Lower rate} + \frac{\text{Present value at lower rate} - \text{Cash outflow}}{\text{Present value at lower rate} - \text{Present value at higher rate}} \times \text{Diff. in the rates}$$

The more simpler words, IRR can be calculated by trial and error method. Which means the unknown discount factor which makes NPV = 0 can be calculated by substituting various values which is a tedious process. Therefore, the above method may be used.

Merits of IRR

(1) **Consider Time Value of Money :** IRR takes into account the time value of money.

(2) **Calculate Rate of Return :** IRR calculates the rate of return of the project, taking into account the cash flows over the entire life of the project.

(3) **Gives Profitability :** It gives a rate of return that reflects the profitability of the project.

(4) **Consistent :** It is consistent with the goal of financial management i.e., maximization of net wealth of share holders.

(5) **Compares :** IRR can be compared with the firm's cost of capital.

(6) **Evaluate the Discount Rate :** To calculate the NPV the discount rate normally used is cost of capital. But, to calculate IRR, there is no need to calculate and employ the cost of capital for discounting because the project is evaluated at the rate of return generated by the project. The rate of return is internal to the project.

DEMERITS OF IRR

(1) **No Satisfaction :** IRR does not satisfy the additive principle.

(2) **Unique is Absence :** Multiple rate of returns or absence of a unique rate of return in certain projects will affect the utility of this technique as a tool of decision-making in project evaluation.

(3) **Low Internal Rate :** In project evaluation, the projects with the highest IRR are given preference to the ones with low internal rates.

(4) **According to Situation :** Application of this criterion to mutually exclusive projects may lead to certain situations like the acceptance of projects of low profitability at the cost of high profitability projects.

(5) **Compute too Long :** IRR computation is quite tedious.

Accept or Reject Criteria

If the project's internal rate of return is greater than the firm's cost of capital, accept the proposal, otherwise reject the proposal.

Q55) Differentiate between NPV and IRR.

Answer :

The main difference between NPV and IRR are as follows,

(1) The net present value method takes the interest rate as a known factor while, the IRR methods takes is as an unknown factor.

(2) The net present value seeks to find out the amount that can be invested in a given project so that its anticipated earnings will exactly be sufficient to repay this amount with interest at the market rate. On the other hand, IRR method seeks to find the maximum rate of interest at which the funds invested in the project could be repaired out of the cash inflows arising out of that project.

(3) Both NPV and IRR proceed on the assumption, that cash inflows can be reinvested at the discounting rate in the new projects.

Problems on Internal Rate of Return

Q56) A project requires an initial outlay of ₹ 1,00,000. It is expected to generate the following cash inflows,

Year	Cash Inflows
1	50,000
2	50,000
3	30,000
4	40,000

What is the IRR of the project?

Answer :

Step 1

Calculation of FPBP

Year	Cash Inflows
1	50,000
2	50,000
3	30,000
4	40,000
	1,70,000

$$FPBP = \frac{\text{Initial investment}}{\text{Average cash inflows}}$$

$$\text{Average cash inflows} = \frac{1,70,000}{4} = ₹42,500$$

Divide the initial investment by the average of annual cash inflows :

$$= \frac{1,00,000}{42,500} = 2.35$$

Step 2 : From the PVIFA Table for 4 years, the annuity factor very near 2.35, IRR lies between 25% and 28%.

Step 3

Calculation of Present Values

Year	Cash Inflows	PV Factor at 25%	PV of Cash Flows
1	50,000	0.800	40,000
2	50,000	0.640	32,000
3	30,000	0.512	15,360
4	40,000	0.410	16,400
			1,03,760

Year	Cash Inflows	PV Factor at 28%	PV of Cash Flows
1	50,000	0.7813	39,065
2	50,000	0.6104	30,520
3	30,000	0.4768	14,304
4	40,000	0.3725	14,900
			98,789

Step 4 : The exact rates will have to be obtained by the method of interpolation as below,

$$r = \text{Lower rate} + \frac{\text{Present value at lower rate - Cash outflow}}{\text{Present value at lower rate - Present value at higher rate}} \times \text{Diff. in the rates}$$

$$= 25 + \frac{1,03,760 - 1,00,000}{1,03,760 - 98,789} \times (25 - 28)$$

$$= 25 + \frac{3,760}{4971} \times 3$$

$$= 25 + 2.269$$

$$= 27.269\%$$

Q57) **An equipment requires an initial investment of ₹ 6,000. The annual cash flow is estimated at ₹ 2000 each year for 5 years.**

Calculate the statement rate of return.

Answer :

Step 1 : Calculation of FPBP Cash outflow = ₹ 6,000

Annual cash inflow = ₹ 2,000

$$\text{FPBP} = \frac{\text{Initial investment}}{\text{Average cash flows}} = \frac{6000}{2000} = 3$$

Step 2 : The value of PV of annuity against the life of 5 years.

Closest to the fake payback period of 3 years

18% (3.1272)

20% (2.9906)

Step 3 : Calculation of PV of cash flows :

18% = ₹ 2000 × 3.1272 = 6254.4

20% = ₹ 2000 × 2.9906 = 5981.2

Step 4 : The exact rates will have to be obtained by the method of interpolation as below,

$$r = \text{Lower rate} + \frac{\text{Present value at lower rate} - \text{Cash outflow}}{\text{Present value at lower rate} - \text{Present value at higher rate}} \times \text{Diff. in rate}$$

$$= 18 + \frac{6254.4 - 6000}{6254.4 - 5981.2} \times (20 - 18)$$

$$= 18 + \frac{254.4}{273.2} \times 2$$

= 18 + 1.862 = 19.86%

Q58) A project requires an investment of ₹ 1,44,000 and is expected to generate cash inflows of ₹ 54,000, ₹ 63,000, ₹ 72,000 ₹ 63,000 and ₹ 54,000 per annum for the next five years. The risk free rate is 10%.

Evaluate the project using IRR method.

Answer :

Step 1 : Calculation of FPBP.

$$\text{FPBP} = \frac{\text{Initial investment}}{\text{Average cash in flows}}$$

$$\text{Average cash in flow} = \frac{3,06,000}{5} = 61,200$$

Initial investment = 1,44,000

$$\text{FPBP} = \frac{1,44,000}{61,200} = 2.3529$$

Step 2 : Present value annuity table indicates that, IRR lies between 31% and 32%.

Step 3

Calculation of Present Values

Year	Cash Flows	PV Factor @ 32%	PV of Cash Flows	PV Factor @ 31%	PV of Cash Flows
1	54,000	0.758	40,932	0.763	41,202
2	63,000	0.574	36,162	0.583	36,729
3	72,000	0.435	31,320	0.445	32,040
4	63,000	0.329	20,727	0.340	21,420
5	54,000	0.250	13,500	0.259	13,986
			1,42,641		**1,45,377**

Step 4 : The exact rates will have to be obtained by the method of interpolation as below,

$$r = \text{Lower rate} + \frac{\text{Present value at lower rate} - \text{Cash outflow}}{\text{Present value at lower rate} - \text{Present value at higher rate}} \times \text{Diff. in rate}$$

$$= 31 + \frac{1,45,377 - 1,44,000}{1,45,377 - 1,42,641} \times (32 - 31)$$

$$= 31 + \frac{1377}{2736} \times 1$$

$$= 31 + 0.5 = 31.5\%$$

The project is profitable on the basis of a higher IRR.

Q59) Explain the terminal value method.

Answer :

The terminal value is assumed as each cash flow is reinvested in another project at a certain rate of return. It is also assumed that each cash flow is reinvested elsewhere immediately until the termination of project.

The terminal value is almost a higher portion of the total value when the DCF method is used than when the economic value added method is used.

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Merits of Terminal Value Method

(1) This method has the advantage of the cash inflows being reinvested once they are received.

(2) It is mathematically easier to compute as compared to IRR.

(3) It is easy to understand.

(4) It is suitable for cash budgeting requirement.

Demerit of Terminal Value Method

The major problem of this method lies in projecting the future rates of interest at which the cash inflows will be re-invested.

Accept or Reject Rule

The decision rule is that if the present value of the sum total of the compounded reinvested cash inflows (PVTS) is greater than the present value of the outflows (PVO), the proposed project is accepted otherwise not. Symbolically :

(1) PVTS > PVO (accept).

(2) PVTS < PVO (reject).

Problems on Terminal Value

Q60) Following information is available about a firm,

Original outlay	₹8,000
Life of the project	3 years
Cash inflow	₹4,000 p.a. for 3 years
Cost of capital	10% p.a.

Expected interest rates at which the cash inflows will be re-invested,

Year End	%
1	8
2	8
3	8

Whether the project should be accepted under Terminal Value Method?

Answer :

First of all, it is necessary to find out the total compounded sum which will be discounted back to present value.

Year	Cash in Flow ₹	Rate of Interest	Years of Investment	Compounding Factor	Total Compounding Sum ₹
1	4,000	8	2	1.166	4,664
2	4,000	8	1	1.080	4,320
3	4,000	8	0	1.000	4,000
Total Compounded Amount					**12,984**

Now, we have to find out the present value of ₹12,984 by applying the discount rate of 10%.

$$\text{Present value} = \frac{\text{Compounded value cash inflow}}{(1+i)^n}$$

$$= \frac{12,984}{1.10^3} = 12,984 \times 0.7513$$ (0.7513 being the P.V. of ₹1 receipted after 3 years)

$$= ₹9,755$$

CONCLUSION / DECISION

Here, since the present value of re-invested cash flows, i.e., ₹9,755 is greater than the original cash outlay of ₹8,000 the project would be accepted under the Terminal Value criterion.

Q61) What is benefit cost ratio? State its merits and demerits?

Answer :

Profitability index is also known as profitability index. Benefit cost ratio is the ratio of the present value of cash inflows to initial cash outlay. The discount factor based on the required rate of return is used to discount the cash inflows.

PI = Present value of cash inflows/Initial cash outlay

Merits

(1) **Consider Time Value of Money :** It takes into account the time value of money.

(2) **Consistent :** It is consistent with the principle of maximization of shareholders wealth.

(3) **Measures Profitability :** It measures the relative profitability.

Demerits

(1) **Require Estimation :** Estimation of cash flows and discount rate cannot be done accurately with certainty.

(2) **Does Not Give Correct Decision :** If decisions are not given correctly then a conflict may arise between NPV and profitability index, if a choice between two or more mutually exclusive projects has to be made.

Accept or Reject Criteria

(1) Accept the project if PI is greater than 1.

(2) Reject the project if PI is less than 1.

If profitability index is 1, then the management may accept the project because the sum of the present value of cash inflows is equal to the sum of present value of cash outflows. It neither adds nor reduces the existing wealth of the company.

Q62) A firm is considering an investment proposal which requires an initial cash outlay of ₹8 lakhs now and ₹ 2 lakhs at the end of the third year. It is expected to generate cash flows are given below :

Year	Cash Inflows
1	3,50,000
2	8,00,000
3	2,50,000

Apply the discount rate of 12% and calculate benefit cost ratio.

Answer :

Calculation of Present Value Cash Outflow

Year	PV Factor at 12%	Cash Outflows	PV of Cash Flows
0	1.000	-₹ 8 lakhs	₹ 8 lakhs
1	-	-	-
2	-	-	-
3	0.712	2 lakhs	1.424 lakhs
			9.424 lakhs

Calculation of Present Value of Cash Inflows

Year	PVIF (12%)	Cash Inflows	PV of Cash Flows
1	0.893	3,50,000	3.1255 lakhs
2	0.797	8,00,000	6.376 lakhs
4	0.636	2,50,000	1.59 lakhs
			11.0915 lakhs

$$\text{Benefit Cost Ratio} = \frac{\text{Total of present value of cash inflows}}{\text{Total of present value of cash outflows}}$$

$$= \frac{11.0915}{9.424} = 1.177$$

For every ₹1 invested, the project is expected to given a cash inflow of ₹1.177 i.e., for every rupee invested, a profit of ₹0.177 is obtained.

Q63) A manager is considering 3 projects that are mutually independent and any of them can independently be selected. The company has necessary funds but cannot take up more than one project. The overall cost of capital of company is 10%. Expected cash flow from the projects are given below,

Project	Investment Required ₹	Cash Flows Year 1	Year 2	Year 3	Year 4	Year 5
A	10,000	12,000	3,000	-	-	-
B	14,000	-	-	10,000	5,000	7,000
C	9,000	-	4,000	5,000	5,000	2,000

You are required to advice the management as to which project should be taken up giving the reason for your advice. Calculate the benefit cost ratio.

Answer :

Project A

Calculation of Present Value of Cash Flow After TAx

Year	CFAT	PV at 10%	PV of CFAT
1	12,000	0.9091	10,909
2	3,000	0.8264	2,479
			13,388

$$\text{Benefit Cost Ratio} = \frac{\text{Total present value of cash inflow}}{\text{Total present value of cash outflow}}$$

PV of cash outflow = ₹ 10,000

$$= \frac{13,388}{10,000} = 1.34$$

Project B

Calculation of Present Value of Cash Flow After Tax

Year	CFAT	PV at 10%	PV of CFAT
1	-	0.9091	0
2	-	0.8264	0
3	10000	0.7513	7,513
4	5000	0.6830	3,415
5	7000	0.6209	4,346
			15,274

Cash outflow = ₹ 14,000

$$\text{Benefit Cost Ratio} = \frac{₹15,274}{₹14,000} = ₹1.09$$

Project C

Calculation of Present Value of Cash Flow After Tax

Year	CFAT	PV at 10%	PV of CFAT
1	0	0.9091	0
2	4000	0.8264	3,305
3	5000	0.7513	3,756
4	5000	0.6830	3,415
5	2000	0.6209	1,241
			11,717

Cash outflow = ₹ 9000

$$\text{Benefit Cost Ratio} = \frac{₹11,717}{₹9,000} = ₹1.30$$

CONCLUSION / DECISION

Project A is accepted as the profitability index is greater as compare to others.

UNIT 5

FINANCIAL STATEMENT ANALYSIS

SYLLABUS

Importance, Users, Ratio Analysis, Liquidity, Solvency, Turnover and Profitability Ratios.

PART - A
SHORT QUESTIONS WITH ANSWERS

Q1) What do you mean by ratio analysis?

Answer :

Ratio analysis is a technique of analyzing the financial statement by computing various types of ratios.

Ratio analysis is define as the process for calculating and interpreting relationship between the items of financial statements to provide a meaningful results of the performance and financial position of business.

Q2) Define profitability ratio.

Answer :

Profitability ratio is a measure of profitability, which is a way to measure a company's performance. It is a formulae helps in determining and evaluating the ability of the company to generate the income against the expenses in incur and takes into account the different elements of balance sheet and profit and loss of a company for analyzing the performnace of the company.

Q3) What is solvency ratio?

Answer :

Solvency ratio is also called capital structure ratio or leverage ratio. These ratios are primarily calculated to predict the ability of the firm to meet all its liabilities including those not currently payable.

Q4) Write a brief note on the importance of ratio analysis to different category of users?

Answer :

The importance of ratio analysis can be summarized for the various groups vested with diversified interests as under,

(1) **Management :** Ratio analysis is helpful to management by determining the operating efficiency of the firm. It helps to take the decisions from the information available in the financial statement. It helps to compare the one period data with another period, by comparing with actual and standard ratios.

(2) **Investors :** Ratio analysis helps an investor to know the financial position of the firm, to make the investor to invest or not, by that computations of various ratios.

(3) **Creditors :** Ratio analysis helps the creditors to know that their payments are paid at a correct period of time or not. The creditors involves with short-term and long-term creditors.

(4) **Employees :** Ratio analysis helps the employees to know the financial soundness of firm.

(5) **Government :** Ratio analysis is also helpful to government by knowing the industries financial health and plans to be prepare for future.

Q5) What is financial analysis?

Answer :

Financial analysis is a sequential technique for evaluating the financial performance of a concern.

According to *Myers*, "financial statement analysis is largely a study of relationships among the various financial factors in a business as disclosed by a single set of statements and a study of the trend of these factors as shown in a series of statements".

Q6) List out the steps in financial statement analysis.

Answer :

Following are the steps involved in financial analysis,

(1) The first step in financial analysis is to acquire the financial statements of the company for minimum of 3 to 5 years.

(2) Thoroughly examined to identify any major changes that took place in company.

(3) Reviewing of notes that have been attached to financial statements.

(4) The balance sheet of the company is evaluated.

(5) Then income statement is examined.

Q7) What are the precautions which financial analyst take while interpreting ratios?

Answer :

Following are the precautions to be taken while interpreting the results of ratio analysis,

(1) The financial statements from which the ratios are calculated should be accurate so, before calculating the ratios, one should see whether the financial statements are prepared basing on proper accounting concepts and conventions and whether they are properly audited by competent auditors or not.

(2) Before calculating ratios, the purpose or the objective behind calculating the ratios is to be kept in mind.

(3) Calculation of ratios should be based on certain standards called as "thumb rules".

(4) The person conducting ratio analysis should use ratio analysis only as a base but not to conclude the financial position of the concern only by depending on ratio analysis.

Q8) Write short notes on,

(1) EPS.

(2) P/E ratio (price-earning ratio).

Answer :

(1) **Earnings Per Share (EPS) :** EPS is one of the profitability ratio that measures the profitability position of a firm. It is given by,

$$\text{EPS} = \frac{\text{Net profit after tax} - \text{Preference dividend}}{\text{Number of equity shares}}$$

(2) **Price-earning Ratio (P/E Ratio) :** P/E ratio is the ratio between market price per equity share and earnings per share. It is given by,

$$\frac{P}{E}\ \text{ratio} = \frac{\text{Market price per equity share}}{\text{Earning per share}}$$

Q9) What is debt-equity ratio?

Answer :

Debt-equity ratio is defined as the ratio or the relationship between outsider's and shareholder's funds. This ratio is also called as external-internal equity ratio. It measures the relative claims of outsiders and the owners against the firm's assets.

Formula

$$\text{Debt-equity ratio} = \frac{\text{Outsiders funds}}{\text{Shareholder's funds}}$$

(or)

$$\text{Debt-equity ratio} = \frac{\text{External equities}}{\text{Internal equities}}$$

Q10) What is an operating ratio?

Answer :

Operating ratio is defined as the relationship between cost of goods sold and other operating expenses and net sales. It measures the cost of operations per rupee of sales.

Formula

$$\text{Operating ratio} = \frac{\text{Operating cost}}{\text{Net sales}} \times 100$$

$$= \frac{\text{Cost of goods sold + Operating expenses}}{\text{Net sales}} \times 100$$

Q11) State any three limitations of financial statements.

Answer :

The following are the limitation of the financial statements,

(1) **Only Interim Reports :** Financial statements provide only interim reports. Through financial statements accurate data cannot be obtained, it provides only approximate data. Generally, the financial statements are prepared at the end of the year (accounting year) only once. So as to obtain profits, costs, income and expenses.

(2) **Position :** The actual position of the business can be ascertained through "liquidation of business" and net through "financial statements". Few assets such as goodwill, preliminary expenses, discount on issue of shares are shown in the balance sheet but these assets cannot realize anything when the business is liquidated.

(3) **Expressed in Monetary Terms :** Even though financial statements are expressed in monetary terms, the value related to fixed asset cannot be ascertained when the fixed assets are sold or replaced.

Q12) What are financial statements?

Answer :

Financial statements are also called as financial reports. A financial statement is an organized collection of data according to logical and consistent accounting procedures. It mainly reveals the financial aspects of a business firm.

According to *John N. Myer*, "the financial statements provide a summary of the accounts of a business enterprise, the balance sheet reflecting the assets, liabilities and capital as on a certain data and the income statement showing the results of operations during a certain period".

Q13) Write the formula of current ratio and liquid ratio.

Answer :

Current ratio,

$$\text{Current ratio} = \frac{\text{Current assets}}{\text{Current liabilities}}$$

Liquid ratio,

$$\text{Liquid ratio} = \frac{\text{Liquid assets}}{\text{Current liabilities}}$$

$$\text{Liquid assets} = \text{Currents assets} - \text{Stock}$$

Q14) Write a note on interest coverage ratio.

Answer :

It is defined as the ratio or the relationship between net profit before interest and taxes and fixed interest charges.

Formula : Interest coverage ratio is given by,

$$= \frac{\text{Net profit (before taxes and interests)}}{\text{Fixed interest charges}}$$

Q15) What are the basic needs of financial statement analysis?

Answer :

The following are the general objectives of financial statements analysis,

(1) To know the earning capacity of the enterprise.

(2) To know the financial position of the enterprise.

(3) To judge the growth potential of the enterprise.

Q16) What is earning per share?

Answer :

EPS is the relationship between net profit after tax and the preference dividend divided by the number of equity shares. The EPS is one of the Important measures of economic performance of an economic entity. A higher EPS among the comparable firms means a better capital productivity.

$$\text{EPS} = \frac{\text{Net profit after tax} - \text{Preference divided}}{\text{Number of equity shares}}$$

Q17) Define the term short term solvency ratio?

Answer :

Liquidity ratio is also known as short-term solvency ratio. It measures the ability of the firm to meet its short-term obligations/requirements.

Q18) Write about proprietary ratio.

Answer :

Proprietary ratio is the relationship between shareholders funds/net worth to total assets of the firm. Here, total assets include fixed assets and current assets. A high ratio is an indication of a strong financial position.

❖ ❖ ❖

PART - B

ESSAY QUESTIONS WITH ANSWERS

5.1 FINANCIAL STATEMENT ANALYSIS, IMPORTANCE, USERS

Q19) What is financial statement analysis? What are its objectives?

Answer :

Meaning of Financial Statement Analysis

The term financial statement analysis is also known as analysis and interpretation of financial statement.

Financial statements analysis is an attempt to assess the efficiency and performance of an enterprise.

According to *Myers*, "Financial statement analysis is a study of relationship among the various financial factors in a business as disclosed by a single set of statement and a study of trends of these factors as shown in a series of statements".

Objective of Financial Statement Analysis

The following are the general objectives of financial statements analysis,

(1) To know the earning capacity of the enterprise.

(2) To know the financial position of the enterprise.

(3) To judge the growth potential of the enterprise.

(4) To find out the financial stability and financial base of the undertaking.

(5) To determine the administrative efficiency of the management of the undertaking.

(6) To compare intra-firm position, inter-firm position and pattern position within industry.

(7) To judge the possibility of reasonable return on the funds invested and safety of investment.

Q20) Discuss the importance of financial statement analysis?

Answer :

The following are the points which hilight the importance of financial statement,

(1) Financial statements are the summary of information relating to profitability, and resources owned by the firm.

(2) Financial statements provide the information which can be compared with those of other firms.

(3) Employs can use them to demand for increment in salary and other benefits.

(4) Bankers and other financial institutions can use them to make the lending decisions.

(5) Government bases on financial statements of the companies for the calculation of tax revenue from the firms.

(6) Financial statements can be used as the basis for management decision-making purpose like planning, promotion, research and development decision, etc.

(7) Existing investors can use them to assess how efficiently the firm is using their funds.

(8) Potential investors can obtain information which can be useful to take the investment decisions.

(9) Financial statements reveal the history of the firm.

(10) They can be used to assets the firm's liquidity and solvency position.

Q21) Explain the users of financial statement analysis?

Answer :

The uses of financial statement analysis are,

(1) **Measure the Health and Stability of Business :** The financial statement analysis and interpretation involves various technique, which helps to measure the firm position. These measurement is led to know about the firm's health and suitability of business.

(2) **Helps to Know the Efficiency :** The financial statement analysis and interpretation are useful in identifying the firm efficiency i.e., the various daily outstanding and accounting transaction takes place.

(3) **Get an Idea about Investment :** The major benefit is that an investors get enough idea to decide about the investments of their funds in the specific company.

(4) **Taxable :** The another advantage is it useful to analyze the various taxation of a company.

(5) **Decision Making :** The analysis of financial statement is done by the experts. They provide a valuable suggestion which helps the firm to take an effective decision.

5.2 RATIO ANALYSIS

Q22) Define ratio analysis? State the different types associated in it?

Answer :

MEANING AND DEFINITION OF RATIO ANALYSIS

Ratio analysis is define as the process for calculating and interpreting relationship between the items of financial statements to provide a meaningful results of the performance and financial position of business.

According to *Myers*, "ratio analysis is a study of relationship among the various financial factors in a business."

Classification of Ratio Analysis

The different types of ration analysis are shown in Figure,

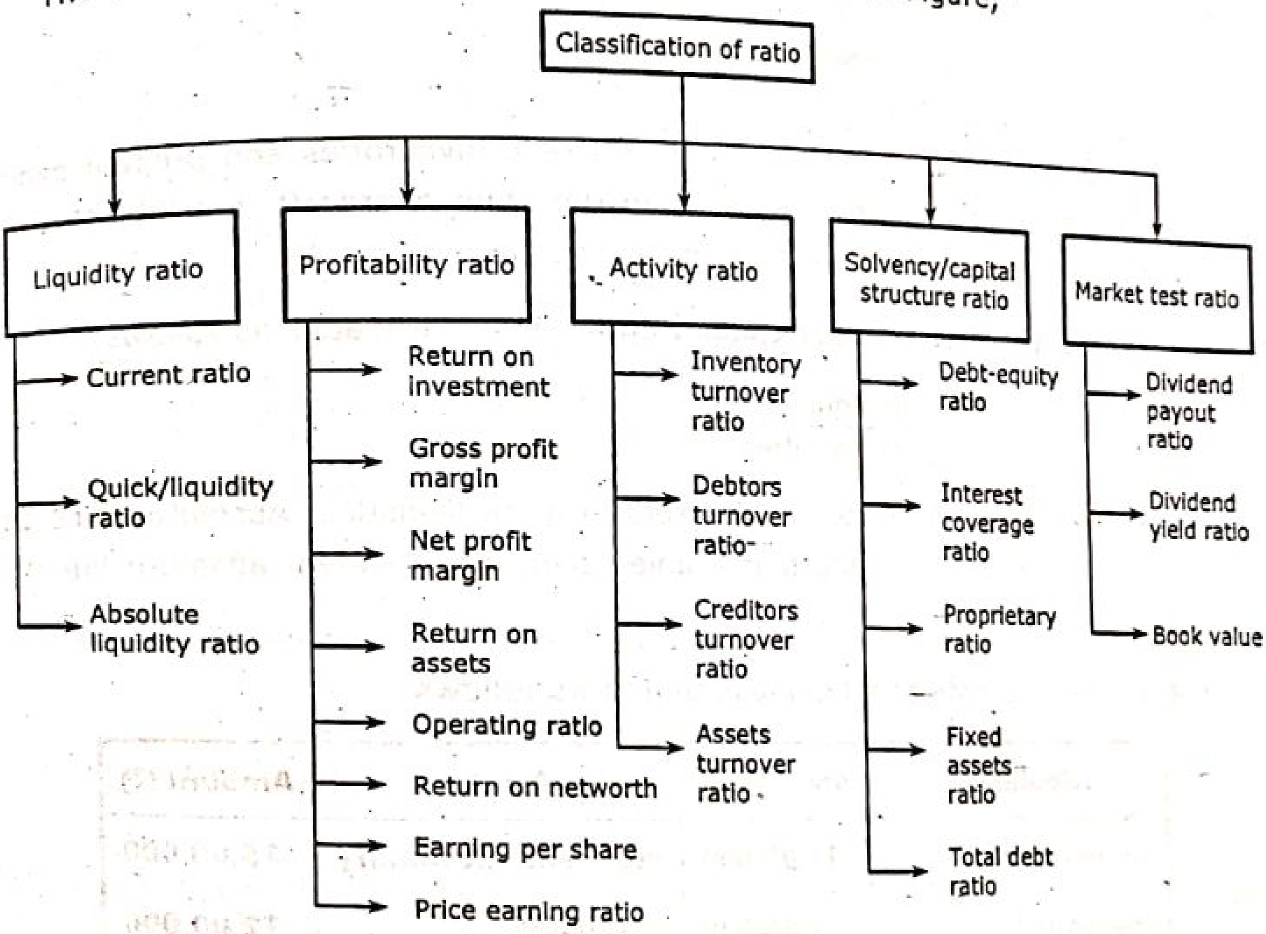

Figure Classification of Ratio Analysis

5.2.1 Liquidity Ratio

Q23) Define liquidity ratio? What are the liquidity ratios are used to measure the business.

Answer :

Liquidity ratio is also known as short-term solvency ratio. It measures the ability of the firm to meet its short-term obligations/requirements.

The following are the ratios which measure the liquidity position of a business concern,

(1) **Current Ratio (or) Working Capital Ratio :** It is calculated as follows,

$$= \frac{\text{Current assets}}{\text{Current liabilities}}$$

This ratio measures the solvency of the company in the short run (1 year). Current assets are those assets which can be converted into cash within one accounting period (usually 1 year) and current liabilities are those liabilities which are payable within a year. This ratio is usually expressed as proportion 2 : 1.

(2) **Quick Ratio (or) Liquid Ratio :** It is calculated as follows,

$$= \frac{\text{Current assets} - (\text{Inventories} + \text{Prepaid expenses})}{\text{Current liabilities} - \text{Bank overdraft}}$$

(or) $$= \frac{\text{Quick Assets}}{\text{Quick Liabilities}}$$

It is also called acid test ratio. In this ratio inventories and prepaid expenses are subtracted from current assets and the bank overdraft is subtracted from current liabilities. The standard norm for this ratio is 1 : 1.

(3) **Absolute Liquid Ratio (Super Quick Ratio) :** It is calculated as follows,

$$= \frac{\text{Absolute liquid assets}}{\text{Quick liabilities}}$$

It is a ratio of absolute liquid assets to quick liabilities: Absolute liquid assets are cash, bank balances and marketable securities. An ideal absolute liquid ratio is taken as 1:2 or .5.

Q24) The Accounting data of a business unit is as follows,

Liabilities	Amount (₹)	Assets	Amount (₹)
Share capital	11,00,000	Plant and machinery	15,00,000
Mortgage loans	11,50,000	Receivable	12,00,000
Contingent liabilities	6,50,000	Stock on hand	2,00,000
	29,00,000		29,00,000

Calculate,

(i) **Current ratio.**

(ii) **Quick ratio.**

Answer :

(i) Current ratio,

$$\text{Current ratio} = \frac{\text{Current assets}}{\text{Current liabilities}}$$

Current assets = Stock + Receivable

= 2,00,000 + 12,00,000

= 14,00,000

Current liabilities = Contigent liabilities

= 6,50,000

$$= \frac{14,00,000}{6,50,000}$$

= 2.153

Interpretation : The current ratio is greater than 2, so the business unit is possessing many current assets than its current liabilities. This indicates a good liquidity position of a business unit.

(ii) Quck ratio,

$$\text{Quick ratio} = \frac{\text{Current assets} - \text{Stock}}{\text{Quick liabilities}}$$

(or)

$$= \frac{\text{Liquid assets}}{\text{Quick liabilities}}$$

Liquid assets = Current assets - Stock

= 14,00,000 - 2,00,000

= 12,00,000

Current liabilities = 6,50,000

$$\therefore \quad = \frac{12,00,000}{6,50,000} = 1.846$$

Interpretation : The ratio is greater than 1 which indicates that the business unit have enough liquid assets to meet the liquid liabilities on time.

Q25) Following is the profit and loss account and balance sheet of Jai Hind Ltd.

Calculate the following ratios,

(i) **Current ratio.**

(ii) **Quick ratio.**

(iii) **Absolute liquid ratio.**

Dr. **Profit and Loss Account** Cr.

Particulars	(Amount) ₹	Particulars	(Amount) ₹
To opening stock of finished goods	1,00,000	By sales	8,00,000
To opening stock of raw materials	50,000	By closing stock of raw materials	1,50,000
To purchase of raw materials	3,00,000	By closing stock of finished goods	1,00,000
To manufacturing expenses	1,00,000	By profit or sale of shares	50,000
To administration expenses	50,000		
To selling and distribution expenses	50,000		
To loss on sale of plant	55,000		
To interest on debentures	10,000		
To net profit	3,85,000		
	11,00,000		11,00,000

Balance Sheet

Liabilities	(Amount) ₹	Assets	(Amount) ₹
SHARE CAPITAL		FIXED ASSETS	2,50,000
Equity share capital	1,00,000	Stock of raw materials	1,50,000
Preference share capital	1,00,000	Stock of finished goods	1,00,000
Reserves	1,00,000	Sundry debtors	1,00,000
Debentures	2,00,000	Bank balance	50,000
Sundry creditors	1,00,000		
Bills payable	50,000		
	6,50,000		6,50,000

Answer :

(i) Current ratio,

$$\text{Current Ratio} = \frac{\text{Current assets}}{\text{Current liabilities}}$$

Current Assets = Closing stock of raw materials and finished good + Debtors + Bank balance

= (1,50,000 + 1,00,000) + 1,00,000 + 50,000

= 4,00,000

Current liabilities = Creditors + Bills payable

= 1,00,000 + 50,000

= 1,50,000

$$\therefore \quad \text{Current ratio} = \frac{4,00,000}{1,50,000} = 2.67$$

Interpretation : From current ratio, it can be interpreted that the current assets owned by the firm are double than the current liabilities owned. This is an indication of good liquidity position.

(ii) Quick ratio,

$$\text{Quick ratio} = \frac{\text{Liquid/quick assets}}{\text{Quick liabilities}}$$

$$\text{Liquid Assets} = \text{Current assets} - \text{Stock}$$

$$= 4,00,000 - 1,50,000 = 2,50,000$$

$$\therefore \quad \text{Quick ratio} = \frac{2,50,000}{1,50,000} = 1.67$$

Interpretation : Quick ratio indicates that the firm owns the liquid assets that can be used to meet short-term obligations.

(iii) Absolute liquid ratio,

$$\text{Absolute liquid ratio} = \frac{\text{Absolute liquid assets}}{\text{Quick liabilities}}$$

$$\text{Absolute liquid Assets} = \text{Cash and bank balance}$$

$$= 50,000$$

$$\text{Quick liabilities} = \text{Current liabilities} - \text{Bank over draft}$$

$$= 1,50,000 - 0$$

$$= 1,50,000$$

$$\therefore \quad \text{Absolute liquid ratio} = \frac{50,000}{1,50,000} = 0.33$$

Interpretation : Absolute liquid ratio indicates that the firm, does not satisfy the standard norm i.e., 1 : 2.

5.2.2 Solvency Ratio

Q26) What is solvency ratio? How it is measured? State its formulae.

Answer :

Solvency ratio is also called capital structure ratio (or) leverage ratio. These ratios are primarily calculated to predict the ability of the firm to meet all its liabilities including those not currently payable. A set of ratios will give us information on the ability of the firm to meet all its financial obligation in future. Long-term financial liabilities are those financial liabilities which are to be met in the subsequent financial years.

The ratios which are used to measure solvency are as follows,

(1) **Debt-equity Ratio :** There are basically two sources of capital, equity and debt. Debts are raised when owners want to increase investment but are unwilling to dilute the equity or the cost of debt is less than that of equity. There are many ways to calculate this ratio but the most commonly used method is,

$$\text{Debt-equity ratio} = \frac{\text{Long-term debt}}{\text{Shareholder funds}}$$

There is no standard debt-equity ratio and the same will vary from industry to industry. For capital-intensive industries and industries having a high gestation period, this ratio will be high.

(2) **Interest Coverage Ratio :** The interest coverage ratio reflects the number of times interest charges are covered by the funds that are available for payment of interest. The more the number of coverage, the better is the solvency position of the borrower. It is calculated as follows,

$$= \frac{\text{Net profit before interest and tax}}{\text{Interest charges}}$$

(3) **Proprietary Ratio :** Proprietary ratio is the relationship between shareholders funds/ net worth to total assets of the firm. Here, total assets include fixed assets and current assets. A high ratio is an indication of a strong financial position. It is calculated as follows,

$$= \frac{\text{Net worth}}{\text{Total assets}}$$

(or) $$= \frac{\text{Shareholder funds}}{\text{Total assets}}$$

(4) **Fixed Assets Ratio :** This ratio indicates the proportion of capital employed (share capital reserves and surplus and long term loans) deployed in fixed assets (gross fixed assets minus depreciation). A high ratio indicates the safety of funds in case of liquidation. It is calculated as follows,

$$= \frac{\text{Fixed assets}}{\text{Capital employed}}$$

(5) **Total Debt Ratio :** Total debt ratio establishes the relationship between total debt to total assets of a firm. Here, total debt include long-term loans and total current liabilities. A lower ratio is an indication of a better financial position. To know the solvency of the company this type is used. It is calculated as follows,

$$= \frac{\text{Total debt}}{\text{Total assets}}$$

(or) $$= \frac{\text{Total liabilities to outsiders}}{\text{Total assets}}$$

Q27) From the following extract of a balance sheet of a company, calculate the debt-equity ratio and interest coverage ratio.

Given that the debt equity ratio is in the range of 10:1, how do you interpret this ratio?

50,000, 10% preference shares of ₹100 each

2,00,000 equity shares of ₹10 each

10%, 30,000 debentures of ₹100 each

Net profit during the year was ₹10,00,000.

Answer :

$$\text{Debt-equity ratio} = \frac{\text{Long - term debt}}{\text{Shareholder funds}}$$

$$= \frac{30,00,000}{50,00,000 + 20,00,000 + 10,00,000}$$

$$= \frac{30,00,000}{80,00,000}$$

Debt-equity ratio = 0.375

$$\text{Interest coverage ratio} = \frac{\text{PBIT}}{\text{Interest}}$$

$$= \frac{13,00,000}{3,00,000}$$

Interest coverage ratio = 4.33

Interest= 10% of 30,00,000,

= 3,00,000

PBIT = Net profit + Interest

= 10,00,000 + 3,00,000

PBIT = 13,00,000

Interpretation : As the range of the debt-equity ratio is 10 : 1 it indicates that excessive debt is used by the company leading to lower margin of safety for creditors.

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Q28) From the following information, calculate,

(i) Debt-equity ratio.

(ii) Current ratio.

Particular	Amount (₹)	Particular	Amount (₹)
Debentures	1,40,000	Bank balance	30,000
Long term loans	70,000	Sundry debtors	70,000
General reserve	40,000		
Creditors	66,000		
Bills payable	14,000		
Share capital	1,20,000		

Answer :

(i) Debt-equity ratio,

$$\text{Debt-equity ratio} = \frac{\text{Long-term debt}}{\text{Shareholder funds}}$$

Long-term debt/outsiders fund,

= Debentures + Long-term loans

= 1,40,000 + 70,000

= ₹2,10,000

Shareholders funds,

= Share capital + General reserves

= 1,20,000 + 40,000

= ₹1,60,000

$$\text{Deb-equity ratio} = \frac{2,10,000}{1,60,000}$$

∴ Deb-equity ratio = 1.3125

(ii) Current ratio,

$$\text{Current ratio} = \frac{\text{Current assets}}{\text{Current liabilities}}$$

Current asset = Bank balance + Sundry debtors

= 30,000 + 70,000

= ₹1,00,000

Current liabilities = Creditors + Bills payable

= 66,000 + 14,000

= ₹80,000

$$\text{Current ratio} = \frac{1,00,000}{80,000}$$

Current ratio = 1.25

Q29) **Following is the balance sheet of ABC company as on 31.12.2011.**

Liabilities	Amount (₹)	Assets	Amount (₹)
Equity share capital	20,000	Fixed assets	28,000
Capital reserve	10,000	Goodwill	12,000
8% loan on mortgage	16,000	Debtors	6,000
Trade creditors	8,000	Stock	6,000
Bank overdraft	6,000	Cash in hand	6,000
		Investments	2,000
	60,000		60,000

Sales amounted to ₹1,20,000. Calculate ratios for,

(i) Testing liquidity.

(ii) Solvency of the company.

(iii) Fixed assets ratio.

(iv) Proprietary ratio.

Answer :

(i) Testing liquidity,

$$\text{Current ratio} = \frac{\text{Current assets}}{\text{Current liabilities}}$$

Current assets = Debtors + Stock + Cash in hand + Investment (short-term)

= 6,000 + 6,000 + 6,000 + 2,000

= ₹20,000

Current liabilities = Trade creditors + Bank overdraft

= 8,000 + 6,000

= ₹14,000

$$= \frac{20,000}{14,000}$$

= 1.43%

(ii) Solvency of the company,

$$\text{Solvency ratio} = \frac{\text{Total liabilities to outsiders}}{\text{Total assets}}$$

$$= \frac{16,000 + 8,000 + 6,000}{60,000}$$

$$= \frac{30,000}{60,000}$$

Solvency ratio = 0.50 (or) 50%

(iii) Fixed asset ratio,

$$\text{Fixed asset ratio} = \frac{\text{Fixed assets}}{\text{Capital employed}}$$

Capital employed = Equity + Capital reserve + Loan on mortgage (long-term loan)

= 20,000 + 10,000 + 16,000

= ₹46,000

$$= \frac{28,000}{46,000} = 0.61 \text{ (or) } 61\%$$

(iv) Proprietary ratio,

$$\text{Proprietary ratio} = \frac{\text{Shareholders funds}}{\text{Total assets}}$$

Shareholder funds = Equity + Capital reserve

= 20,000 + 10,000

Shareholder funds = 30,000

Total assets = Fixed assets + Current assets

$= 28{,}000 + 32{,}000$

$= 60{,}000$

$= \dfrac{30{,}000}{60{,}000}$

Total assets = 0.50 (or) 50%

5.2.3 Turnover Ratio

Q30) What do you understand by turnover ratio? What are the important types of turnover ratio?

Answer :

Turnover ratio is also known as turnover ratio or efficiency ratio. *Activity ratio shows how well and efficiently the assets of company are utilize i.e., converted into sales.* Following are the important turnover ratio,

(1) **Inventory Turnover Ratio :** For manufacturing and trading firms a considerable amount of funds may be tied up in financing of raw material, work in progress and finished goods. A good inventory management practice is to keep inventory level consistent with the need to fulfil customer's order in time.

$$\text{Inventory/stock turnover ratio} = \frac{\text{Cost of goods sold (or) sales}}{\text{Average inventory}}$$

Where,

Cost of goods sold = Net sales − Gross profit

(or) = Opening stock + Net purchases + Direct expenses − Closing stock

Total sales = Cash sales + Credit sales

$$\text{Average inventory} = \frac{\text{Opening Stock + Closing Stock}}{2}$$

$$\text{Stock turnover period} = \frac{\text{365 days}}{\text{Inventory turnover ratio}}$$

Higher the inventory turnover ratio, lower the stock turnover period the better it is.

(2) **Debtor Turnover Ratio/Receivable Turnover Ratio :** Debtor turnover ratio shows the relationship between net credit sales and average debtor. The purpose of this ratio is to know after how much time the debtor make payments.

It is calculated as follows,

$$\text{Debtor turnover ratio} = \frac{\text{Credit sales}}{\text{Average debtors}}$$

Where,

Credit sales = Goods sold on credit

$$\text{Average debtor} = \frac{\text{Opening debtors + Closing debtor}}{2}$$

Average Collection Period/Debtor Velocity : Average collection period is calculated to find out the period within which debtors are realized.

$$\text{Average collection period (in days)} = \frac{\text{365 days}}{\text{Debtors turnover ratio}}$$

(3) **Creditor Turnover Ratio/Account Payable Turnover Ratio :** Creditor turnover ratio is used to measure the firm promptness i.e., how promptly the firm make payments to its creditors. A low creditors turnover means payment are going to be made efficiently where as high creditors turnover ratio means delay in payments.

$$\text{Creditors turnover ratio} = \frac{\text{Credit purchase}}{\text{Average creditors}}$$

Where,

Credit purchase = Goods purchase on credit

$$\text{Average creditors} = \frac{\text{Opening creditors + Closing creditors}}{2}$$

Creditors Payment Period : Creditor payment period is calculated to find the time to be taken to pay its creditors.

$$\text{Creditors payment period (in days)} = \frac{\text{365 days}}{\text{Creditors turnover ratio}}$$

(4) **Assets Turnover Ratio :** These ratios measure the firms ability to generate sales revenue in relation to the size of the asset investment.

(i) **Fixed Assets Turnover Ratio :** It is calculated as follows,

$$= \frac{\text{Net sales}}{\text{Fixed assets}}$$

This ratio measures sales per rupee of investment. This ratio measures the efficiency with which fixed assets are being employed. When the fixed assets of the firm are old and substantially depreciated the fixed asset turnover ratio tends to be high.

(ii) **Working Capital Turnover Ratio :** It is calculated as follows,

$$= \frac{\text{Net sales}}{\text{Average working capital}}$$

This ratio indicates the extent of working capital turned over in achieving sales,

$$\text{Average working capital} = \frac{\text{Working capital}}{2}$$

Q31) Calculate stock turnover ratios in the following cases,

(i) Cost of goods sold ₹2,00,000

Average stock ₹40,000

(ii) Sales ₹2,20,000

Average stock ₹40,000

Sales returns ₹20,000

Gross profit ₹20% on sales

(iii) Opening stock ₹21,000

Closing stock ₹29,000

Purchases ₹1,00,000

Wages ₹10,000

Answer :

(i) Stock Turnover Ratio (STR),

$$\text{STR} = \frac{\text{Cost of goods sold}}{\text{Average stock}}$$

$$= \frac{2,00,000}{40,000}$$

$$\text{STR} = 5 \text{ times}$$

(ii) $$\text{STR} = \frac{\text{Cost of Goods Sold (CGS)}}{\text{Average stock}}$$

CGS = Net sales − Gross profit

Net sales = Sales − Sales returns

= 2,20,000 − 20,000

Net sales = 2,00,000

Gross profit = 20% of sales

$$= 2,00,000 \times \frac{20}{100}$$

Gross profit = 40,000

$\therefore$ CGS = 2,00,000 - 40,000

CGS = 1,60,000

$$\text{Stock turnover ratio} = \frac{1,60,000}{40,000} = 4 \text{ times}$$

(iii) Cost of goods sold = Opening stock + Purchases + Wages - Closing stock

= 21,000 + 1,00,000 + 10,000 - 29,000

Cost of goods sold = 1,02,000

$$\text{Average stock} = \frac{\text{Opening stock + Closing stock}}{2}$$

$$= \frac{21,000 + 29,000}{2}$$

$$= \frac{50,000}{2}$$

Average stock = 25,000

$$\text{Stock turnover ratio} = \frac{\text{CGS}}{\text{Average stock}}$$

$$= \frac{1,02,000}{25,000}$$

Stock turnover ratio = 4.08 times

Q32) From the following information, calculate,

(i) Current ratio.

(ii) Acid test ratio.

(iii) Inventory turnover ratio.

(iv) Average debt collection period.

(v) Average creditors payment period.

(vi) Give your meaningful inferences.

Sales 1,500

Cost of sales 1,000.

Gross profit 500

Current assets,

Inventories ₹125.

Debtors ₹250.

Cash ₹225.

Current liabilities,

Trade creditors ₹200.

Answer :

(i) Current ratio,

$$\text{Current ratio} = \frac{\text{Current assets}}{\text{Current liabilities}}$$

$$= \frac{125 + 250 + 225}{200}$$

$$= \frac{600}{200}$$

Current ratio = 3

Meaningful Inferences : The standard current ratio is 2 : 1 and is this case it is 3 : 0. It indicates the company's position is sound in meeting short-term finance.

(ii) Acid test ratio/liquidity ratio,

$$\text{Acid test ratio} = \frac{\text{Liquid assets}}{\text{Current liabilities}}$$

Liquid asset = Current asset – Stock

$$= \frac{600 - 125}{200}$$

Acid test ratio = 2.375 times

Meaningful Inferences : A liquid ratio indicates that the firm is liquid and has enough liquid assets to meet the liquid liabilities on time.

(iii) Inventory turnover ratio,

$$\text{Inventory turnover ratio} = \frac{\text{Cost of sales}}{\text{Average stock}}$$

$$= \frac{1{,}000}{125}$$

Inventory turnover ratio = 8 times

Meaningful Inferences : As the ratio is 8 : 0, it indicates a company is following good sales procedure.

(iv) Average debt collection period,

$$\text{Average debt} = \frac{\text{Average debtors}}{\text{Average credit sales}} \times \text{Number of working days in a year}$$

$$= \frac{250}{1{,}500} \times 365$$

Average debt = 60.8 days

Meaningful Inferences : This period shows an average period for which the credit sales remain outstanding and measures the quality of debtors.

(v) Average creditors payment period,

$$\text{Average creditors payment period} = \frac{\text{Trade creditors}}{\text{Cost of sales}} \times 365$$

$$= \frac{200}{1{,}000} \times 365$$

Average creditors payment period = 73 days

Meaningful Inferences : This period shows an average period for which the credit purchases remain outstanding or the average credit period actually availed of.

Q33) From the following information, you are required to prepare balance sheet,

Current ratio 1.75

Liquid ratio 1.25

Stock turnover ratio (cost of sales/closing stock) 9

Gross profit ratio 25%

Debt collection period $1\frac{1}{2}$ months

Reserved and surpluses to capital 0.2

Turnover to fixed assets 1.2

Capital gearing ratio 0.6

Fixed assets to net worth 1.25

Sales for the year ₹12,00,000

Answer :

(i) Cost of good sold + Gross profit = Sales

75%	+	25%	=	100%
9,00,000	+	3,00,000	=	12,00,000
[12,000,000 × 75%]		[12,000,000 × 25%]		

(ii) Stock turnover ratio,

$$\text{Stockturn over ratio} = 9$$

$$\text{Stock turnover ratio} = \frac{\text{Cost goods sold}}{\text{Average stock [x]}}$$

$$9 = \frac{9,00,000}{\text{Average stock [x]}}$$

$$9x = 9,00,000$$

$$x = \frac{9,00,000}{9}$$

$$\therefore \quad \text{Stock} = 1,00,000$$

(iii)

Current ratio	=	1.75	3,50,000
Less : Quick ratio	=	1.25	2,50,000
Stock		**0.50**	**1,00,000**

(iv) Debt collection period,

$$\text{Debt collection period} = 1\frac{1}{2} \text{ months}$$

$$\text{Debt collection period} = \frac{\text{Debtors}}{\text{Sales}} \times 12$$

$$1.5 = \frac{\text{Debtors}}{12,00,000} \times 12$$

$$1.5 \times 12,00,000 = \text{Debtors} \times 12$$

$$18,00,000 = \text{Debtors} \times 12$$

$$\text{Debtors} = \frac{18,00,000}{12}$$

$$\therefore \quad \text{Debtors} = 1,50,000$$

(v) Turnover to fixed assets 1.2,

$$\text{Turnover to fixed assets} = \frac{\text{Turnover}}{\text{Fixed assets}}$$

$$1.2 = \frac{9,00,000}{\text{Fixed assets}}$$

$$1.2 \times \text{Fixed assets} = 9,00,000$$

$$\text{Fixed assets} = \frac{9,00,000}{1.2}$$

$$\therefore \quad \text{Fixed assets} = 7,50,000$$

(vi) Fixed assets to net worth 1.25,

$$\text{Fixed assets to net worth} = \frac{\text{Fixed assets}}{\text{Networth}}$$

$$1.25 = \frac{7{,}50{,}000}{\text{Networth}}$$

$$1.25 \times \text{Networth} = \frac{7{,}50{,}000}{1.25}$$

$$\text{Networth} = 6{,}00{,}000$$

(vii) Reserves and surplus to capital,

Reserves	+	Share capital	=	Net worth
0.2	+	1.00	=	1.2
1,00,000	+	5,00,000	=	6,00,000

1.2 – 6,00,000   1.2 – 6,00,000

0.2 – ?   1 – ?

$$\frac{6{,}00{,}000 \times 0.2}{1.2} = 1{,}00{,}000 \qquad \frac{6{,}00{,}000}{1.2} = 5{,}00{,}000$$

(viii) Capital gearing ratio,

$$\text{Capital gearing ratio} = \frac{\text{Fixed interest bearing}}{\text{Equity share capital}}$$

$$0.6 = \frac{\text{Fixed interest bearing}}{5{,}00{,}000}$$

$$\text{Fixed interest bearing} = 5{,}00{,}000 \times 0.6$$

$\therefore$ Long term debt = ₹3,00,000

Balance Sheet

Liabilities	Amount (₹)	Assets	Amount (₹)
Equity share capital	5,00,000	Fixed assets	7,50,000
Long-term debt	3,00,000	Current assets	3,50,000
Reserve	1,00,000		
Current liabilities	2,00,000		
	11,00,000		**11,00,000**

Working Notes

(i) Current ratio,

$$\text{Current ratio} = \frac{\text{Current assets}}{\text{Current liabilities}}$$

$$1.75 = \frac{3,50,000}{C.L}$$

$$1.75 \times C.L = 3,50,000$$

$$C.L = \frac{3,50,000}{1.75}$$

$\therefore$ Current liability = 2,00,000

Current assets,

Stock = 1,00,000

0.50 - 1,00,000

1.75 = ?

$$\frac{1,00,000 \times 1.75}{0.50} = \frac{1,75,000}{0.50}$$

$\therefore$ Current assets = 3,50,000

$$\text{Current ratio} = \frac{3,50,000}{2,00,000} = 1.75$$

(ii) Quick assets,

Quick assets= Current assets - Stock

= 3,50,000 - 1,00,000

Quick assets= 2,50,000

Q34) The following are the extracts from the financial statements of Blue and Red Ltd., as on 31st March 2019 and 2020 respectively.

	31st March 2019 (₹)	31st March 2020 (₹)
Stock	10,000	25,000
Debtors	20,000	20,000
Bills receivables	10,000	5,000
Cash in hand	18,000	15,000
Bills payable	15,000	20,000
Bank overdraft		2,000
9% debentures	5,00,000	5,00,000
Sales for the year	3,50,000	3,00,000
Gross profit	70,000	50,000

Compute for both the years the following,

(i) Current ratio.

(ii) Acid ratio.

(iii) Stock turnover ratio. Also interpret the results.

Answer :

(i) Current ratio,

$$\text{Current ratio} = \frac{\text{Current assets}}{\text{Current liabilities}}$$

Where,

Current assets = Stock + Debtors + Bills receivables + Cash in hand

Current liabilities = Bills payable + Bank overdraft

2019

Current assets = 25,000 + 20,000 + 5,000 + 15,000

= 65,000

Current liabilities = 20,000 + 2,000

= 22,000

$$\therefore \quad \text{Current ratio} = \frac{65,000}{22,000}$$

Current ratio = 2.96

2020

Current assets = 10,000 + 20,000 + 10,000 + 18,000

= 58,000

Current liabilities = 15,000

$$\text{Current ratio} = \frac{58,000}{15,000}$$

$\therefore$ Current ratio = 3.87

Interpretation : The comparison of current ratios of 2017 with 2016 it got reduced indicating a downfall of firm's liquidity.

(ii) Acid ratio,

$$\text{Acid/liquid Ratio} = \frac{\text{Quick assets}}{\text{Quick liabilities}}$$

Where,

Quick assets = Current assets - Stock

Quick liabilities = Current liabilities - Bank overdraft

2019

Quick assets= 65,000 - 25,000

= 40,000

Quick liabilities = 22,000 - 2000

= 20,000

$$\text{Acid ratio} = \frac{40,000}{20,000}$$

Acid ratio = 2

∴

2020

Quick assets= 58,000 - 10,000

= 48,000

$$\text{Acid ratio} = \frac{48,000}{15,000}$$

Acid ratio = 3.2

∴

Interpretation : From the ratio of 2017 and 2016, it can be interpreted that, the firms liquidity has reduced from 2016 to 2017. It can also be understood that when compared to 2016, stock in 2017 is less converted into sales.

(iii) Stock turnover ratio,

$$\text{Stock turnover ratio} = \frac{\text{Cost of goods sold}}{\text{Average stock}}$$

Cost of goods sold = Net sales - Gross profit

$$\text{Average stock} = \frac{\text{Opening stock + Closing stock}}{2}$$

2019

Cost of goods sold = 3,50,000 - 70,000

= 2,80,000

$$\text{Average stock} = \frac{10,000}{2}$$

Average stock = 5,000

$$\text{Stock turnover ratio} = \frac{2,80,000}{5,000}$$

∴ Stock turnover ratio = 56

2020

Cost of goods sold $= 3{,}00{,}000 - 50{,}000$

$= 2{,}50{,}000$

$$\text{Average stock} = \frac{10{,}000 + 25{,}000}{2}$$

$$= \frac{35{,}000}{2}$$

Average stock = 17,500

$$\text{Stock turnover ratio} = \frac{2{,}50{,}000}{17{,}500}$$

Stock turnover ratio = 14.29

Interpretation : When compared to the stock turnover ratio of 2017 to 2016. Stock turnover ratio got reduced in 2017 indicating a downfall in the conversion of stock into sales.

5.2.4 Profitability Ratio

Q35) What is profitability ratio? What are the different types of it?

Answer :

Profitability ratio measures management overall effectiveness as shown by the returns generated on revenue from operations and investment. The purpose of calculating these ratios is to assess the adequacy of the profits earned by the company and also to estimate the trend of profitability over a period of time. Profitability of a company is the net result of numerous policies and decision. Profitability, ratios are measured with reference to sales, capital employed, total assets, shareholders funds etc. The major profitability ratios are as follows,

(1) Gross Profit Margin : The gross profit margin is calculated as follows,

$$= \frac{\text{Sales} - \text{cost of goods sold}}{\text{Net sales}} \times 100$$

(or)

$$= \frac{\text{Gross profit}}{\text{Net sales}} \times 100$$

Cost of goods sold = Opening stock + Net purchases + Direct expenses − Closing stock

Net sales = Total sales − Sales returns

Net purchases = Total purchases − Purchase returns

The gross profit measures, the excess of sales proceed over their cost before taking into consideration administration, selling, distribution and financing charges. This ratio measures, the efficiency of the company's operation. The higher the gross profit ratio, the better it is. Variation in gross profit margin may be due to the following reasons,

(i) Price cuts.

(ii) Cost increases.

(iii) Change in product mix.

(iv) Under or over valuation of stocks.

(2) **Net Profit Margin :** This profit is calculated as follows,

$$= \frac{\text{Net profit after tax}}{\text{Net sales}} \times 100$$

The net profit ratio is used to measure the overall profitability of the business. Higher the net profit ratio/margin, the better the operational efficiency.

(3) **Operating Ratios :** The ratio of all operating expenses (i.e., cost of goods sold, factory overheads, administration and selling expenses), to net sales is the operating ratio over a period of time would reveal the behaviour of the particular cost.

$$= \frac{\text{Operating expenses}}{\text{Net sales}} \times 100$$

The higher the operating ratio, the lower is the profitability and vice versa.

(4) **Return on Investment :** The aim of any business enterprise is to earn a return on capital employed. The profitability of the business is measured in terms of return on investment. The return on investment can be calculated as,

$$\text{Return on capital employed (ROCE)} = \frac{\text{Profit before interest and fax}}{\text{Capital employed}} \times 100$$

Where, capital employed includes share capital, reserves and surplus and long-term debt.

From this total subtract if any,

(i) Capital work in progress.

(ii) Investment outside the business activities.

(iii) Preliminary expenses.

(iv) Debit balance of P&L A/c.

ROI is a measure regarding optimal utilization of the assets of the company. This measures helps in selecting and disposing of assets as well as in selecting various investment proposals.

(5) **Return on Shareholders Funds or Return on Net Worth :** This ratio is computed as follows,

$$= \frac{\text{Net profit tax}}{\text{Net worth}} \times 100$$

Where,

Net Worth = Equity + Preference + reserves and surplus. This ratio expresses the net profit in terms of the equity shareholder funds.

(6) **Return on Assets**

This ratio is calculated as follows,

$$= \frac{\text{Net profit after tax}}{\text{Total assets}} \times 100$$

This ratio establishes the relationships of profits with the total assets of the organiza-tion. This ratio indicates the efficiency of utilization of assets in generating revenue.

(7) **Earnings Per Share (EPS) :** EPS is the relationship between net profit after tax and the preference dividend divided by the number of equity shares. The EPS is one of the important measures of economic performance of an economic entity. A higher EPS among the comparable firms means a better capital productivity.

$$\text{EPS} = \frac{\text{Net profit after tax} - \text{Preference divided}}{\text{Number of equity shares}}$$

(8) **Price Earning Ratio/P/E ratio**

The ratio is computed as follows,

$$= \frac{\text{Market price per equity share}}{\text{Earning per share (EPS)}}$$

It mainly evaluate the performance of a company as expected by investors.

Q36) From the following information find out,

(i) Gross profit ratio.

(ii) Operating profit ratio.

(iii) Net profit ratio.

Particulars		Amount (₹)
Sales		56,00,000
LESS (COST OF GOODS SOLD)		
Raw material consumed	22,00,000	
Wages	12,00,000	
Other production expenses	8,00,000	42,00,000
Gross profit	1,200	14,00,000
LESS (ADMINISTRATION EXPENSES)		
Selling expenses	50,000	
Distribution expenses	1,00,000	
Administrative expense	3,00,000	
Loss on sale of fixed assets	18,000	
Loss on sale of investments	10,000	
Interest (on long-term debts)	13,000	
Provision for taxation	2,60,000	
(Inclusive of advance tax paid)		8,68,000
Net profit		5,32,000

Answer :

(i) Gross profit ratio,

$$\text{Gross profit ratio} = \frac{\text{Gross profit}}{\text{Net sales}} \times 100$$

$$= \frac{14,00,000}{56,00,000} \times 100$$

Gross profit ratio = 25%

(ii) Operating profit ratio,

$$\text{Operating profit ratio} = \frac{\text{Operating net profit}}{\text{Net sales}} \times 100$$

Operating net profit = Net profit as per P/L A/c + Non-operating (−) Non-operating incomes

= 5,32,000 + 18,000 + 10,000 + 1,30,000 + 2,60,000

= ₹9,50,000

$$\text{Operating profit ratio} = \frac{9,50,000}{56,00,000} \times 100 = 16.96\%$$

(iii) Net profit ratio,

$$\text{Net profit ratio} = \frac{\text{Net profit}}{\text{Net sales}} \times 100$$

$$= \frac{5,32,000}{56,00,000} \times 100$$

Net profit ratio = 9.5%

Q37) The following is the balance sheet of ABC Ltd., as on 31-3-2009.

Liabilities	Amount (₹)	Assets	Amount (₹)
Sales	3,00,000	Gross profit	1,50,000
Sale returns	50,000	Cost of goods sold	60,000
Number of equity shares 15,000 @ ₹10/	1,50,000	Office expenses	20,000
Preference dividend	50,000	Selling expenses	15,000
Sundry creditors	10,000	Profit after tax	3,00,000
Bills payable	30,000	Stock	15,000
Total	5,60,000		5,60,000

Calculate the following ratios,

(i) Gross profit ratio.

(ii) Net profit ratio.

(iii) EPS.

(iv) Price earning ratio.

(v) Operating ratio.

Answer :

(i) Gross profit ratio,

$$\text{Gross profit ratio} = \frac{\text{Gross profit}}{\text{Net sales}} \times 100$$

$$\text{Net sales} = \text{Sales} - \text{Returns}$$

$$= 3{,}00{,}000 - 50{,}000$$

$$\text{Net sales} = 2{,}50{,}000$$

$$\text{Gross profit ratio} = \frac{1{,}50{,}000}{2{,}50{,}000} \times 100$$

$$\text{Gross profit ratio} = 60\%$$

(ii) Net profit ratio,

$$\text{Net profit ratio} = \frac{\text{Net profit after tax}}{\text{Net sales}} \times 100$$

$$= \frac{3{,}00{,}000}{3{,}00{,}000} \times 100$$

$$\text{Net profit ratio} = 100\%$$

(iii) Earning Per Share (EPS),

$$EPS = \frac{\text{Net profit after tax and preference dividend}}{\text{Number of equity shares}}$$

Net profit after tax preference dividend = 3,00,000 - 50,000

= 2,50,000

$= \frac{2,50,000}{15,000}$

EPS = ₹16.67 per share

(iv) Price earning ratio,

$$\text{Price earning ratio} = \frac{\text{Market price per equity share}}{\text{Earning per share}}$$

$$= \frac{10}{16.67}$$

Price earning ratio = 0.59

(v) Operating ratio,

$$\text{Operating ratio} = \frac{\text{Operating costs}}{\text{Net sales}} \times 100$$

Operating costs = Office expenses + Selling expenses

= 20,000 + 15,000

Operating costs = 35,000

$$\text{Operating ratio} = \frac{35,000}{2,50,000} \times 100$$

Operating ratio = 14%

Q38) From the following information,

Sales	**3,00,000**	**Gross profit**	**1,50,000**
Sales returns	**50,000**	**Cost of goods sold**	**60,000**
Number of equity shares 15,000 @ ₹10	**1,50,000**	**Office expenses**	**20,000**
Preference dividend	**50,000**	**Selling expenses**	**15,000**
Sundry creditors	**10,000**	**Profit after tax**	**3,00,000**
Bills payable	**30,000**	**Stock**	**15,000**

Calculate the following ratios,

(i) Gross profit ratio.

(ii) Net profit ratio.

(iii) EPS.

(iv) Price earning ratio.

(v) Operating ratio.

Answer :

(i) Gross profit ratio,

$$\text{Gross profit ratio} = \frac{\text{Gross profit}}{\text{Net sales}} \times 100$$

Net sales = Sales − Sales returns

= 3,00,000 − 50,000

Net sales = 2,50,000

$$\text{Gross profit ratio} = \frac{1,50,000}{2,50,000} \times 100$$

Gross profit ratio = 60%

(ii) Net profit ratio,

$$\text{Net profit ratio} = \frac{\text{Net profit after tax}}{\text{Net sales}} \times 100$$

$$= \frac{3,00,000}{3,00,000} \times 100$$

Net profit ratio = 100%

(iii) Earning Per Share (EPS),

$$\text{EPS} = \frac{\text{Net profit after tax} - \text{Preference dividend}}{\text{Number of equity shares}}$$

$$= \frac{3,00,000 - 50,000}{15,000}$$

$$= \frac{2,50,000}{15,000} = 16.67$$

EPS = ₹16.67 per share

(iv) Price earning ratio,

$$\text{Price earning ratio} = \frac{\text{Market price per equity share}}{\text{Earning per share}}$$

$$= \frac{10}{16.67}$$

Price earning ratio = 0.59

) Operating ratio,

$$\text{Operating ratio} = \frac{\text{Operating expenses}}{\text{Net sales}} \times 100$$

Operating expenses = Cost of goods sold + Office expenses + Selling expenses

= 60,000 + 20,000 + 15,000

Operating expenses = 95,000

$$\text{Operating ratio} = \frac{95,000}{2,50,000} \times 100$$

Operating ratio = 38%

Q39) Following is the balance sheet of PQR company as on 31-12-2010.

Liabilities	(Amount) ₹	Assets	(Amount) ₹
Equity share capital	1,00,000	Fixed assets	1,80,000
8% preference shares	50,000	Stock	25,000
9% debentures	50,000	Debtors	55,000
Retained earnings	20,000	Bills receivables	3,000
Creditors	45,000	Bank	2,000
	2,65,000		2,65,000

The net profit of the PQR firm was ₹2,00,000. Calculate the following,

(i) Return on capital employed.

(ii) Return on networth.

(iii) Return on assets.

Answer :

(i) Return on capital employed,

$$\text{Return on capital employed} = \frac{\text{Net profit before interest and tax}}{\text{Capital employed}}$$

Net profit = 2,00,000

Capital employed = Equity + Preference + Long term debt (debentures) + Retained earnings

= 1,00,000 + 50,000 + 50,000 + 20,000

= ₹2,20,000

$$\text{ROCE} = \frac{2,00,000}{2,20,000} \times 100$$

ROCE = 90.91%

(ii) Return on net worth,

$$\text{Return on networth} = \frac{\text{Net profit after tax}}{\text{Networth}} \times 100$$

$$\text{Networth} = \text{Equity} + \text{Preference} + \text{Retained earnings}$$

$$= 1,00,000 + 50,000 + 20,000$$

$$\text{Networth} = 1,70,000$$

$$\text{Return on networth} = \frac{2,00,000}{1,70,000} \times 100$$

$$\text{Return on networth} = 117.64\%$$

(iii) Return on assets,

$$\text{Return on assets} = \frac{\text{Net profit after tax}}{\text{Total assets}}$$

$$\text{Total assets} = \text{Current assets} + \text{Fixed assets}$$

$$= 85,000 + 1,80,000$$

$$\text{Total assets} = 2,65,000$$

$$\text{Return on assets} = \frac{2,00,000}{2,65,000} \times 100$$

$$\text{Return on assets} = 75.47\%$$

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IMPORTANT QUESTIONS

UNIT-I

SHORT QUESTIONS

Q1) Write about accounting rules. *(Refer Unit - I, Q2)*

Q2) What is journal proper. *(Refer Unit - I, Q5)*

Q3) Define financial accounting. *(Refer Unit - I, Q11)*

Q4) What do you mean by accounting cycle. *(Refer Unit - I, Q12)*

Q5) Define bank reconciliation statement. *(Refer Unit - I, Q15)*

ESSAY QUESTIONS

Q1) Define accountancy? Explain its features and objectives. *(Refer Unit - I, Q17)*

Q2) What is accounting cycle? Explain the various steps involved in it? *(Refer Unit - I, Q19)*

Q3) Distinguish between journal and ledger. *(Refer Unit - I, Q27)*

Q4) Pass journal entries and make ledger accounts for the following transactions.

(i) Started business with cash (assume owner's name as Mr. S) ₹ 3,50,000

(ii) Deposited cash into bank ₹ 1,10,000.

(iii) Purchased machinery for ₹ 33,000 in cash.

(iv) Paid rent by cheque ₹ 5,500.

(v) Purchased goods from Ashok ₹ 45,000.

(vi) Paid wages in cash ₹ 3,500.

(vii) Paid electricity bill by cheque ₹ 1,200.

(viii) Sold goods to Neeraj ₹ 98,000.

(ix) Paid advertising expenses by cheque ₹ 10,000.

(x) Issued a cheque of ₹ 40,000 to Ashok.

(xi) Received a cheque of ₹ 70,000 from Neeraj.

(xii) Paid salary ₹ 12,000 for the month by cheque.

(xiii) Purchased goods for ₹ 25,000 and issued cheque.

(xiv) Sold goods of ₹ 42,000 and received cheque. *(Refer Unit - I, Q28)*

Q5) What is trial balance? Explain the method of preparing trial balance? *(Refer Unit - I, Q31)*

Q6) Prepare a bank reconciliation statement of M/s. Hussain and Co. as on 31-03-2010.

(i) Bank balance as per cash book ₹ 12,500.

(ii) Cheque paid into bank but not credited ₹ 1,600.

(iii) Cheuqe issued but not presented for of payment ₹ 900.

(iv) Interest on fixed deposit collected and credited in pass book ₹ 1,200.

(v) Bank charge debited in pass book ₹ 50. *(Refer Unit - I, Q42)*

UNIT-II

SHORT QUESTIONS

Q1) What is trading account? *(Refer Unit - II, Q1)*

Q2) What do you mean by gross profit? *(Refer Unit - II, Q3)*

Q3) Define profit and loss account? *(Refer Unit - II, Q6)*

Q4) What is balancesheet? *(Refer Unit - II, Q12)*

Q5) Distinguish between balancesheet and profit and loss account. *(Refer Unit - II, Q17)*

ESSAY QUESTIONS

Q1) What is trading account? Explain the concept of gross profit under trading account?

(Refer Unit - II, Q20)

Q2) What is profit and loss account? What are steps involved in its preparation?

(Refer Unit - II, Q23)

Q3) The following Trail balance is extracted from the books of a Rahul on 31-12-2020, prepare trading and profit and loss account.

Particulars	Amount (₹)	Particulars	Amount (₹)
Furniture and fittings	640	Sales Returns	200
Motor vehicles	6,250	Purchase Returns	125
Buildings	7,500	Advertising	450
Capital Account	12,500	Commission Received	375
Bad Debts	125	Cash	650
Sundry Debtors	3,800	Taxes and Insurance	1,250
Sundry Creditors	2,500	General Expenses	782
Stock on 1-1-2004	3,460	Salaries	3,300
Purchases	5,475		
Sales	15,450		

(Refer Unit - II, Q24)

Q4) Define balancesheet? What are the minor adjustment entries associated with it?

(Refer Unit - II, Q26)

Q5) From the following particulars prepare trading and profit and loss account and balance sheet as on 30-06-2012.

TRIAL BALANCE

Particulars	Debit (₹)	Credit (₹)
Capital		37,000
Cash in hand	4,000	
Purchases and Sales	45,000	95,000
Returns	500	600
Wages	8,500	
Power and Fuel	3,500	
Salaries	6,500	
Carriage inwards	1,800	
Opening stock	7,200	
Buildings	25,000	
Machinery	15,000	
Furniture	5,000	
Debtors and Creditors	12,000	9,000
General expenses	2,600	
Drawings	5,000	
Total ₹	1,41,600	1,41,600

Adjustments:

(i) Closing stock ₹ 14,000

(ii) Machinery and Furniture to be depreciated by ₹ 750 and ₹ 250

(iii) Outstanding wages ₹ 500

(iv) Write off bad debts ₹ 600

(v) Charge interest on drawings @ 5%

(Refer Unit - II, Q27)

Q6) From the following particulars prepare trading and profit abnd loss account of Surya for the year ending 31-12-2008.

Particulars	Debit (₹)	Credit (₹)
Sury's Capital		25,000
Opening stock	6,200	
Cash	1,700	
Sundry Debtors	9,100	
Purchases	61,300	
Sales		93,600
Rutum out words		1,800
Return in words	500	
Carriage in words	3,700	
Carriage out words	7,200	
Salaries	7,200	
Rent	6,000	
Sundry Credits		4,000
Discounts Received		100
Drawings	6,300	
Furniture and Fittings	10,800	
Printing and stationary	1,200	
Total	1,24,500	1,24,500

Adjustments : Closing stock pm 31-12-2008 was valued at ₹ 7,800.

(Refer Unit - II, Q29)

UNIT-III

SHORT QUESTIONS

Q1) What is financial system? What are its key components and role? *(Refer Unit - III, Q1, 4 and 5)*

Q2) State the role of financial intermediaries. *(Refer Unit - III, Q7)*

Q3) What do you understand by financial market? Mention its regulation. *(Refer Unit - III, Q10 and 13)*

Q4) What is money market? What are its role? *(Refer Unit - III, Q14 and 15)*

Q5) What is capital market? State its types? *(Refer Unit - III, Q18 and 20)*

ESSAY QUESTIONS

Q1) What do you understand by financial market? Discuss its components and role? *(Refer Unit - III, Q22, 23 and 25)*

Q2) Discuss the consideration of the investors and issuers. *(Refer Unit - III, Q26)*

Q3) What is financial intermediaries? Discuss its role. *(Refer Unit - III, Q27)*

Q4) What is financial market? Discuss the key players and regulations of it. *(Refer Unit - III, Q28, 30 and 31)*

Q5) Define money market? What are its role and instruments. *(Refer Unit - III, Q32 and 34)*

Q6) What do you mean by capital market? Explain its types. *(Refer Unit - III, Q36 and 37)*

UNIT-IV

SHORT QUESTIONS

Q1) What is capital budgeting? *(Refer Unit - IV, Q1)*

Q2) Define time value of money and annuity. *(Refer Unit - IV, Q2)*

Q3) What do you mean by payback period? *(Refer Unit - IV, Q9)*

Q4) Briefly write about NPV. *(Refer Unit - IV, Q11)*

Q5) Distinguish between NPV and IRR. *(Refer Unit - IV, Q14)*

ESSAY QUESTIONS

Q1) Define capital budgeting? Why are capital budgeting decision are important?

(Refer Unit - IV, Q15)

Q2) What is time value of money? What are the main reasons of it? Briefly state its methods.

(Refer Unit - IV, Q18)

Q3) Explain the concept of present value of money in single and multiple flows.

(Refer Unit - IV, Q28)

Q4) Write about payback period, NPV and IRR. *(Refer Unit - IV, Q37, 48 and 54)*

Q5) A project costs ₹ 25,000 and is expected to generate cash inflows are given below,

Year	Cash Inflows
1	10,000
2	8,000
3	9,000
4	6,000
5	7,000

The cost of capital is 12%. The present value factors are given below Table.

Year	PV Factor at 12%
1	0.893
2	0.797
3	0.712
4	0.636
5	0.567

Compute the NPV of the project.

(Refer Unit - IV, Q50)

Q6) A project requires an investment of ₹ 1,44,000 and is expected to generate cash inflows of ₹ 54,000, ₹ 63,000, ₹ 72,000 ₹ 63,000 and ₹ 54,000 per annum for the next five years. The risk free rate is 10%.

Evaluate the project using IRR method.

(Refer Unit - IV, Q58)

UNIT-V

SHORT QUESTIONS

Q1) What do you mean by ratio analysis? *(Refer Unit - V, Q1)*

Q2) What is solvency ratio? *(Refer Unit - V, Q3)*

Q3) List out the steps involved in financial statement analysis? *(Refer Unit - V, Q5)*

Q4) What are financial statements? *(Refer Unit - V, Q12)*

Q5) What are the basic needs of financial statement analysis. *(Refer Unit - V, Q15)*

ESSAY QUESTIONS

Q1) What is financial statement analysis? Discuss the importance of financial statement analysis? *(Refer Unit - V, Q19 and 20)*

Q2) Explain the uses of financial statement analysis? *(Refer Unit - V, Q21)*

Q3) Define ratio analysis? Explain its types. *(Refer Unit - V, Q22)*

Q4) Explain the concept of liquidity and solvency ratio. *(Refer Unit - V, Q23 and 26)*

Q5) Following is the profit and loss account and balance sheet of Jai Hind Ltd.

Calculate the following ratios,

(i) Current ratio.

(ii) Quick ratio.

(iii) Absolute liquid ratio.

Dr. **Profit and Loss Account** Cr.

Particulars	(Amount) ₹	Particulars	(Amount) ₹
To opening stock of finished goods	1,00,000	By sales	8,00,000
To opening stock of raw materials	50,000	By closing stock of raw materials	1,50,000
To purchase of raw materials	3,00,000	By closing stock of finished goods	1,00,000
To manufacturing expenses	1,00,000	By profit or sale of shares	50,000
To administration expenses	50,000		
To selling and distribution expenses	50,000		
To loss on sale of plant	55,000		
To interest on debentures	10,000		
To net profit	3,85,000		
	11,00,000		11,00,000

Balance Sheet

Liabilities	(Amount) ₹	Assets	(Amount) ₹
SHARE CAPITAL		**FIXED ASSETS**	2,50,000
Equity share capital	1,00,000	Stock of raw materials	1,50,000
Preference share capital	1,00,000	Stock of finished goods	1,00,000
Reserves	1,00,000	Sundry debtors	1,00,000
Debentures	2,00,000	Bank balance	50,000
Sundry creditors	1,00,000		
Bills payable	50,000		
	6,50,000		6,50,000

(Refer Unit - V, Q25)

Q6) Following is the balance sheet of ABC company as on 31.12.2011.

Liabilities	Amount (₹)	Assets	Amount (₹)
Equity share capital	20,000	Fixed assets	28,000
Capital reserve	10,000	Goodwill	12,000
8% loan on mortgage	16,000	Debtors	6,000
Trade creditors	8,000	Stock	6,000
Bank overdraft	6,000	Cash in hand	6,000
		Investments	2,000
	60,000		60,000

Sales amounted to ₹1,20,000. Calculate ratios for,

(i) Testing liquidity.

(ii) Solvency of the company.

(iii) Fixed assets ratio.

(iv) Proprietary ratio.

(Refer Unit - V, Q29)

Q7) Following is the balance sheet of PQR company as on 31-12-2010.

Liabilities	(Amount) ₹	Assets	(Amount) ₹
Equity share capital	1,00,000	Fixed assets	1,80,000
8% preference shares	50,000	Stock	25,000
9% debentures	50,000	Debtors	55,000
Retained earnings	20,000	Bills receivables	3,000
Creditors	45,000	Bank	2,000
	2,65,000		2,65,000

The net profit of the PQR firm was ₹2,00,000. Calculate the following,

(i) Return on capital employed.

(ii) Return on networth.

(iii) Return on assets.

(Refer Unit - V, Q39)

IMPORTANT FORMULAE

UNIT-IV

1. Future value of money.

$$A = P(1 + I)n$$

2. Future Value of a Single Flow (Lumpsum)

$$FVn = PV(1 + i)n$$

3. Increased Frequency of Compounding

$$FVn = PV(1 + i/m)m \times n$$

4. Effective Vs Nominal Rate of Interest

$$r = [(1 + i/m)m] - 1$$

5. Future Value of an Annuity

$$FVAn = A[(1 + i)n - 1]/i$$

6. Sinking Fund

$$A = FVA \times i/[(1 + i)n - 1]$$

7. Discounting or Present Value of a Single Flow

$$PV = FV_n(1 + i)^n$$

8. Present Value of even Series of Cash Flows,

$$PV = C1/(1 + i)^1 + C2/(1 + i)^1 + C3/(1 + i)^3 + C4/(1 + i)^4 + \ldots + Ct/(1 + i)^n$$

9. Present Value of Perpetuity

$$P = A/i$$

10. Present Value of uneven Periodic Sum

$$P = A_1/(1 + i)^1 + A_2/(1 + i)^2 + A_3/(1 + i)^3 + \ldots + A_n/(1 + i)^n$$

11. Capital Recovery Factor

$$A = PV\ A_n\ [i(1 + i)^n/(1 + i)^n - 1]$$

12. Payback period

$$\text{Payback period} = \frac{\text{Initial investment}}{\text{Annual cash inflows}}$$

13. Average rate of return.

$$\text{ARR} = \frac{\text{Average annual profit after tax (net earings)}}{\text{Average investment}}$$

14. Average investment

Average investment = ½ (Initial cost – Salvage value) + (Salvage value)

UNIT-V

1. Current Ratio

$$\text{Current ratio} = \frac{\text{Current assets}}{\text{Current liabilities}}$$

2. Quick Ratio

$$\text{Quick ratio} = \frac{\text{Quick assets}}{\text{Current liabilities}}$$

3. Liquid ratio or Acid ratio,

$$\text{Liquid ratio (or) Acid ratio} = \frac{\text{Liquid assets}}{\text{Current liabilities}}$$

4. Debt-equity ratio,

$$\text{Debt-equity ratio} = \frac{\text{Long term debt}}{\text{Shareholder's funds}}$$

5. Fixed asset ratio,

$$\text{Fixed asset ratio} = \frac{\text{Fixed assets}}{\text{Shareholder's funds}} \times 100$$

6. Stock turnover ratio,

$$\text{Stock turnover ratio} = \frac{\text{Cost of goods sold}}{\text{Average inventory}}$$

7. Cost of goods sold,

Cost of goods sold = Net sales – Gross profit

8. Interest coverage ratio,

$$\text{Interest coverage ratio} = \frac{\text{Net profit (before taxes and interests)}}{\text{Fixed interest charges}}$$

9. Proprietary Ratio,

$$= \frac{\text{Shareholder funds}}{\text{Total assets}}$$

10. Fixed Assets Ratio,

$$= \frac{\text{Fixed assets}}{\text{Capital employed}}$$

11. Total Debt Ratio,

$$= \frac{\text{Total debt}}{\text{Total assets}}$$

12. Inventory Turnover Ratio,

$$\text{Inventory/stock turnover ratio} = \frac{\text{Cost of goods sold (or) sales}}{\text{Average inventory}}$$

13. Debtor Turnover Ratio/Receivable Turnover Ratio,

$$\text{Debtor turnover ratio} = \frac{\text{Credit sales}}{\text{Average debtors}}$$

14. Creditor Turnover Ratio/Account Payable Turnover Ratio,

$$\text{Creditors turnover ratio} = \frac{\text{Credit purchase}}{\text{Average creditors}}$$

15. Fixed Assets Turnover Ratio,

$$= \frac{\text{Net sales}}{\text{Fixed assets}}$$

16. Working Capital Turnover Ratio,

$$= \frac{\text{Net sales}}{\text{Average working capital}}$$

17. Gross Profit Margin,

$$= \frac{\text{Sales} - \text{cost of goods sold}}{\text{Net sales}} \times 100$$

18. Net Profit Margin,

$$= \frac{\text{Net profit after tax}}{\text{Net sales}} \times 100$$

19. Operating Ratios,

$$= \frac{\text{Operating expenses}}{\text{Net sales}} \times 100$$

20. Return on Investment,

$$\text{Return on capital employed (ROCE)} = \frac{\text{Profit before interest and fax}}{\text{Capital employed}} \times 100$$

21. Return on Shareholders Funds or Return on Net Worth,

$$= \frac{\text{Net profit tax}}{\text{Net worth}} \times 100$$

22. Return on Assets,

$$= \frac{\text{Net profit after tax}}{\text{Total assets}} \times 100$$

23. Earnings Per Share (EPS),

$$\text{EPS} = \frac{\text{Net profit after tax} - \text{Preference divided}}{\text{Number of equity shares}}$$

24. Price Earning Ratio/P/E ratio,

$$= \frac{\text{Market price per equity share}}{\text{Earning per share (EPS)}}$$

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FACULTY OF ENGINEERING

OSMANIA UNIVERSITY

B.E. III Semester (IT, ECE, MECH.) Examination

MODEL PAPER - I

FINANCE AND ACCOUNTING

Time : 3 Hours **Marks : 75**

Note : Answer all questions from Part-A and Any five questions from Part-B.

PART - A (25 MARKS)

Q1) What is journal proper. *(Refer Unit - I, Q5)*

Q2) Define bank reconciliation statement. *(Refer Unit - I, Q15)*

Q3) What is trading account? *(Refer Unit - II, Q1)*

Q4) What do you mean by gross profit? *(Refer Unit - II, Q3)*

Q5) What is financial market? What are its key components and role? *(Refer Unit - III, Q1,4 and 5)*

Q6) State the role of financial intermediaries. *(Refer Unit - III, Q7)*

Q7) What is capital budgeting? *(Refer Unit - IV, Q1)*

Q8) Distinguish between NPV and IRR. *(Refer Unit - IV, Q14)*

Q9) What do you mean by ratio analysis? *(Refer Unit - V, Q1)*

Q10) What is solvency ratio? *(Refer Unit - V, Q3)*

PART - B (50 MARKS)

Q11) What is accounting cycle? Explain the various steps involved in it? *(Refer Unit - I, Q19)*

Q12) What is trading account? Explain the concept of gross profit under trading account? *(Refer Unit - II, Q20)*

Q13) What is financial market? Discuss the key players and regulations of it.

(Refer Unit - III, Q28,30 and 31)

Q14) Define capital budgeting? Why are capital budgeting decision are important?

(Refer Unit - IV, Q15)

Q15) What is financial statement analysis? Discuss the importance of financial statement analysis?

(Refer Unit - V, Q19 and 20)

Q16) A project costs ₹ 25,000 and is expected to generate cash inflows are given below,

Year	Cash Inflows
1	10,000
2	8,000
3	9,000
4	6,000
5	7,000

The cost of capital is 12%. The present value factors are given below Table.

Year	PV Factor at 12%
1	0.893
2	0.797
3	0.712
4	0.636
5	0.567

Compute the NPV of the project.

(Refer Unit - IV, Q50)

Q17) From the following particulars prepare trading and profit and loss account for the year ending 31-12-2006 and balance sheet as on date.

Particulars	Debit (₹)	Credit (₹)
Sales		1,28,000
Duty and clearing charges	3,500	
Purchases	50,000	
Bank overdraft		6,000
Capital		30,000
Sundry creditors		43,000
Drawings	6,000	
Bills payable		4,000
Sundry debtors	51,000	
Bills receivable	8,000	
Loan given to Vijay and Co.	10,000	
Fixtures and fittings	7,500	
Opening stock	47,000	
Cash in hand	900	
Machinery	12,500	
Commission received		4,000
Salaries	9,500	
Sales returns	1,000	
Purchase returns		1,100
Commission and travelling expenses	4,700	
General expenses	2,500	
Rent paid	2,000	
Total ₹	2,16,100	2,16,100

Adjustments :

(i) Closing stock ₹ 60,000

(ii) Outstanding salaries ₹ 300, Rent ₹ 400

(iii) Depreciate plant and machinery by 10%, fixtures and fittings by 5%

(iv) Commision received in advance ₹ 500

(v) Allow interest on capital at 8% P.A.

(Refer Unit - II, Q28)

FACULTY OF ENGINEERING

OSMANIA UNIVERSITY

B.E. III Semester (IT, ECE, MECH.) Examination

MODEL PAPER - II

FINANCE AND ACCOUNTING

Time : 3 Hours **Marks : 75**

Note : Answer all questions from Part-A and Any five questions from Part-B.

PART - A (25 MARKS)

Q1) What do you mean by accounting cycle. *(Refer Unit - I, Q12)*

Q2) Write about accounting rules. *(Refer Unit - I, Q2)*

Q3) Define profit and loss account? *(Refer Unit - II, Q6)*

Q4) Distinguish between balancesheet and profit and loss account. *(Refer Unit - II, Q17)*

Q5) What do you understand by financial market? Mention its regulation. *(Refer Unit - III, Q10 and 13)*

Q6) What is capital market? State its types? *(Refer Unit - III, Q18 and 20)*

Q7) What do you mean by payback period? *(Refer Unit - IV, Q9)*

Q8) Briefly write about NPV? *(Refer Unit - IV, Q11)*

Q9) What are the steps involved in financial statement analysis? *(Refer Unit - V, Q5)*

Q10) What are the basic needs of financial statement analysis. *(Refer Unit - V, Q15)*

PART - B (50 MARKS)

Q11) Pass journal entries and make ledger accounts for the following transactions.

(i) Started business with cash (assume owner's name as Mr. S) 3,50,000

(ii) Deposited cash into bank 1,10,000.

(iii) Purchased machinery for 33,000 in cash.

(iv) Paid rent by cheque 5,500.

(v) Purchased goods from Ashok 45,000.

(vi) Paid wages in cash 3,500.

(vii) Paid electricity bill by cheque 1,200.

(viii) Sold goods to Neeraj 98,000.

(ix) Paid advertising expenses by cheque 10,000.

(x) Issued a cheque of 40,000 to Ashok.

(xi) Received a cheque of 70,000 from Neeraj.

(xii) Paid salary 12,000 for the month by cheque.

(xiii) Purchased goods for 25,000 and issued cheque.

(xiv) Sold goods of 42,000 and received cheque. *(Refer Unit - I, Q28)*

Q12) Prepare a bank reconciliation statement of M/s. Hussain and Co. as on 31-03-2010.

(i) Bank balance as per cash book 12,500.

(ii) Cheque paid into bank but not credited 1,600.

(iii) Cheuqe issued but not presented for of payment 900.

(iv) Interest on fixed deposit collected and credited in pass book 1,200.

(v) Bank charge debited in pass book 50. *(Refer Unit - I, Q42)*

Q13) The following Trail balance is extracted from the books of a Rahul on 31-12-2020, prepare trading and profit and loss account.

Particulars	Amount (₹)	Particulars	Amount (₹)
Furniture and fittings	640	Sales Returns	200
Motor vehicles	6,250	Purchase Returns	125
Buildings	7,500	Advertising	450
Capital Account	12,500	Commission Received	375
Bad Debts	125	Cash	650
Sundry Debtors	3,800	Taxes and Insurance	1,250
Sundry Creditors	2,500	General Expenses	782
Stock on 1-1-2004	3,460	Salaries	3,300
Purchases	5,475		
Sales	15,450		

(Refer Unit - II, Q24)

Q14) Define money market? What are its role and instruments. *(Refer Unit - III, Q32 and 34)*

Q15) A project requires an investment of ' 1,44,000 and is expected to generate cash inflows of Rs. 54,000, Rs. 63,000, Rs. 72,000 Rs. 63,000 and Rs. 54,000 per annum for the next five years. The risk free rate is 10%.

Evaluate the project using IRR method. *(Refer Unit - IV, Q58)*

Q16) Following is the profit and loss account and balance sheet of Jai Hind Ltd.

Calculate the following ratios,

(i) Current ratio.

(ii) Quick ratio.

(iii) Absolute liquid ratio.

Dr. **Profit and Loss Account** Cr.

Particulars	(Amount) ₹	Particulars	(Amount) ₹
To opening stock of finished goods	1,00,000	By sales	8,00,000
To opening stock of raw materials	50,000	By closing stock of raw materials	1,50,000
To purchase of raw materials	3,00,000	By closing stock of finished goods	1,00,000
To manufacturing expenses	1,00,000	By profit or sale of shares	50,000
To administration expenses	50,000		
To selling and distribution expenses	50,000		
To loss on sale of plant	55,000		
To interest on debentures	10,000		
To net profit	3,85,000		
	11,00,000		11,00,000

Balance Sheet

Liabilities	(Amount ₹)	Assets	(Amount ₹)
SHARE CAPITAL		FIXED ASSETS	2,50,000
Equity share capital	1,00,000	Stock of raw materials	1,50,000
Preference share capital	1,00,000	Stock of finished goods	1,00,000
Reserves	1,00,000	Sundry debtors	1,00,000
Debentures	2,00,000	Bank balance	50,000
Sundry creditors	1,00,000		
Bills payable	50,000		
	6,50,000		6,50,000

(Refer Unit - V, Q25)

Q17) What do you understand by financial market? Discuss its components and role?

(Refer Unit - III, Q22, 23 and 25)