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Shivaji University, Kolhapur

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Advanced Accountancy
Paper I and III : B. Com. III

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Preface

It gives us immense pleasure, to present this study material before the distance learning students of B. Com. Part-III. The students who are deprived from taking admission in the colleges due to some personal or social reasons may get the required subject knowledge from this book.

Here in this book we the unit writers and editorial board have taken reasonable care to give maximum theoretical and practical knowledge to the students. Hope it will enable the students to get the adequate knowledge.

We are thankful to all the members of the Board of Studies, unit writers and the editorial board, without support of which it may not have completed.

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B. Com Part-III

Semester V and VI

SIM IN ADVANCED ACCOUNTANCY PAPER I AND III

INDEX

Each Unit begins with the section 'Objectives' -

Objectives are directive and indicative of :

1. What has been presented in the Unit and

2. What is expected from you

3. What you are expected to know pertaining to the specific Unit once you have completed working on the Unit.

The self check exercises with possible answers will help you to understand the Unit in the right perspective. Go through the possible answer only after you write your answers. These exercises are not to be submitted to us for evaluation. These are provided to you as Study Tools to help keep you in the right track as you study the Unit.

SECTION - I

ADVANCED ACCOUNTANCY PAPER – I

Unit - 1

Bank Final Accounts

(Vertical Format only)

Objectives :

After studying this unit you will be able to understand the :

- Meaning of Bank
- Scope of banking business
- Various statutory provisions of Banking Regulation Act 1949
- Method of presenting final accounts in prescribed forms

Structure of Unit :

1.1 Introduction

1.2 Meaning and definition of Bank

1.3 Scope of banking business.

1.4 Statutory provisions of Banking Regulation Act 1949

1.5 Form of Balance Sheet (Vertical)

1.6 Form of Profit and Loss Account (Vertical)

1.7 Various Schedules

1.8 R.B.I. Guidelines for compilation of financial statement.

1.9 Illustrative examples of Bank Final Accounts.

1.10 Important adjustments and their effects in Final Accounts.

1.11 Keywords

1.12 Self Study Questions.

1.1 Introduction :

Bank business in India is governed by the banking Regulation Act 1949, which came into force from16th March 1949. As per section 2 of this Act, provisions of companies Act 1956, are also applicable to Banking companies. Bank is a commercial institution, licensed to accept deposits and acts as a safe custodian of the funds of its customers, banks are mainly concerned with receiving, collection, transferring, buying, lending, investing, exchanging, servicing money and claims to money both domestically and internationally. The principal activities of a bank are operating current accounts, receiving deposits, and advancing loans.

1.2 Meaning and Definition of Bank :

As per section 5(b) of the Banking Regulation Act 1949, 'banking' means the accepting, for the purpose of lending or investment, of deposits of money from the public repayable on demand or otherwise, and withdrawable by cheque, drafts, order or otherwise.

Section 5(c) of banking Regulation Act defines 'banking companies' as "any company which transacts the business of banking in India" However the definition given by the Act is too narrow. In modern world banking is not restricted merely to acceptance of deposits and lending Advances. Section 6 of the Act also recognises this fact and has accordingly laid down that in addition to the usual banking business, a banking company may carry on any additional business as specified by section 6

1.3 Scope of banking business :

As per the provisions of section 6 of the Banking Regulation Act, 1949 a banking company may engage in any one of the following forms of business. In addition to the banking business. These are

1) Borrowing, raising money, advancing money either upon or without security, dealing in bills of exchange, granting and issue of letter of credit, travellors cheques and circular notes, selling and dealing in bullion and specie, buying and selling of foreign exchange including foreign bank notes, dealing in stock, shares, debenture, purchasing and selling of bonds providing of safe deposit vaults, the collecting and transmitting of money and securities.

2) Acting as an agent for any Government or local authority or any other person, acting as an attorney on behalf of customers.

3) Contracting for public and private loans and negotiating and issuing the same.

4) Insuring, guaranteeing, underwriting any issue of any company, corporation or association and lending of money for the purpose of such issue.

5) Carring on and transacting every kind of guarantee and indemnity business.

6) Selling any property which is acquired in satisfaction of claims.

7) Acquiring and holding any property or right in any property against any loans connected with such security.

8) Undertaking and executing trusts.

9) Establishing and supporting any institution, funds, trusts to benefit employees or ex-employees of company.

10) The acquisition, construction, maintenance and alteration of any building for the purpose of the company.

11) Selling, leasing, mortgaging, disposing all or any property and rights of the company.

12) Doing all such other things as are incidental or conductive to the promotion or advancement of the business of the company.

13) Any other form of business which the Central Government may, by notification in the Official Gazette, specify as a form of business.

Restriction on Bank Business -

As per section 8 of the Banking Regulation Act 1949, certain restrictions are laid down on the business of banking company These are-

a) No banking company shall directly or indirectly deal in the buying, selling or bartering of goods, except in connection with the realisation of security given to or held by it.

b) No banking company can engage in any trade or buy, sell or barter goods for others otherwise than in connection with bill of exchange, received for collection or negotiation or with such of its business.

1.4 Statutory provisions of Banking Regulations Act :

1) Minimum Capital and Reserves

As per the section of 11 (2) of the Banking Regulation Act 1949, the aggregate value of paid up capital and reserves of a banking company in corporate outside India, shall not be less than 15 lakhs rupees, and it has a place of business in city of Mumbai or Calcutta, then it shall not be less than 20 lakhs rupees. It should be noted that such sum and 20% of the net profit of each year shall be kept deposited with Reserve. Bank of India is cash or in the form of men cumbered approved securities, or partly in cash and partly in the form of such securities.

However in case of a banking company which is incorporated in India, the aggregate value of capital and reserves shall not be less than the stated amount according to place of business.

2) Restriction on commission, Brokerage etc. :

No banking company shall pay out directly or indirectly by way of commission, brokerage in any form in respect of shares issued by it, any amount exceeding 2.5% of paid up value of shares.

3) Statutory Reserve :

According to section 17 of the banking Regulation Act, 1949, every banking company incorporated in India shall create a reserve and transfer to it at least 20% of its annual profit before any dividend is declared.

4) Cash Reserve :

Every banking company not being a schedule bank, has to maintain a cash reserve of at least 3% of the total of its demand and time liabilities in India, as on last Friday of the Second proceeding fortnight.

5) Restrictions on loans and advances :-

No banking company shall,

i) grant any loans or advances on the security of its own shares.

ii) grant any loan or advances to any of its directors, or any of the firm in which any of its director is interested as partner, employee or manager.

6) Restriction on Payment of Dividend :

No banking company shall pay any dividend on its shares until all its capitalized expenses have been completely written off.

7) Books of Accounts :

Bank has to adopt a specialized system of book-keeping which will ensure dimidiated entry of numerous transactions and keep an internal check on the books of accounts. For this, bank generally maintain a large number of subsidiary and memorandum books in addition to principal books of accounts.

Principal books of accounts :

Cash book and general ledger are the principal books of accounts of any bank. Cash book records all cash transactions and general ledger contains control accounts of all subsidiary ledgers and different assets and liabilities account.

8) Final Accounts :

According to section 29 of the Banking Regulation Act, 1949, every banking company is required to prepare with reference to that year a balance sheet and profit and loss account on the last working day of the year in the Form 'A' and Form 'B' respectively as given in schedule III

1.5 Form of Balance Sheet (Vertical)

Third Schedule

(Section - 29)

Form 'A'

Form of Balance Sheet

Balance Sheet of .... Bank

as on 31-3-.........

Particulars	Schedule No.	Current Year	Previous Year
Capital and Liabilities			
Capital	1		
Reserve and Surplus	2		
Deposits	3		
Borrowings	4		
Other liabilities and provisions	5		
Total			

(Conted. on next page)

Particulars	Schedule No.	Current Year	Previous Year
Assets			
Cash in hand and Balance with R.B.I.	6		
Balance with other banks, money at call	7		
Investments	8		
Advances	9		
Fixed Assets	10		
Other Assets	11		
Total			
Contingent Liabilities	12		
Bills for collection			

1) **Capital :** It is a first item of Liabilities. It's details are given in schedule-1. Which contain authorized capital, issued, subscribed, called up and paid up capital.

2) **Reserves and Surplus** : It includes statutory reserves, capital reserves, share premium, profit and loss account balance. The details of this are given in schedule No. 2

3) **Deposits** : It contains demand deposits, saving bank deposits / accounts, term deposits. The details are given in schedule No. 3

4) **Borrowings** : It includes borrowings from Reserve Bank of India, borrowing from other banks and institutions and agencies. The details about it are given in schedule No. 4

5) **Other liabilities and provisions** : It includes Bills payables, Branch Office / interoffice adjustment credit balance, interest outstanding / accrued on deposits, provision for taxations, Rebate on bills discounted etc. and shown in schedule No. 5

6) **Cash in hand and balance with R.B.I. -** It includes cash in hand including foreign currency notes, and balance with Reserve Bank of India. Details are given in Schedule No. 6

7) **Balance with other banks, Money at call and short notice -** It contains balance with other banks, money at call and short notice. These are shown in schedule No. 7

8) Investments - Investment in Government securities, other approved securities, investment in shares / debentures and bonds, gold are shown under this heading. The details are given in schedule No. 8

9) Advances - It gives details about loans and advances granted by bank. It includes loans cash credit and overdraft, Term loans, bills purchased and discounted. The details are given in schedule No. 9

10) Fixed Assets - Premises, Furniture and Fixtures and other fixed assets are shown under this head. The details are given in schedule No. 10.

11) Other Assets - It includes advance taxes, stationery and stamps on hand, Branch adjustment (Dr. bal.), Interest accrued on advances, non banking assets etc. Details are given in schedule No. 11

12) Contingent Liabilities - It indicate the liabilities which are not provided in Balance Sheet. It includes liabilities on partly paid shares, claims against bank not acknowledged as debts; acceptances endorsement and other obligations etc. Details are given in schedule No. 12

13) Bills for collection - It includes bills receivables received on behalf of customers for collection. These are shown outside the Balance Sheet.

1.6 Form of Profit and Loss Account (Vertical)

Form 'B'

Form of Profit and Loss Account

For the year ended on 31-3-…………….

Particulars	Schedule No.	Current Year	Previous Year
I. Income			
Interest earned	13		
Other Income	14		
Total			
II. Expenditure			
Interest expended	15		
Operating expenses			
Provisions and Contingencies			
Total			

(Conted. on next page)

Particulars	Schedule No.	Current Year	Previous Year
III. Profit/ Loss Profit /Loss brought forward (op. bal) Net profit/loss for current year.			
Total			
IV. Appropriations 20% transfer to Statutory Reserve Transfer to other reserves Proposed Dividend/Interium Dividend Balance carried over to Balance Sheet.			
Total			

I) **Income** : It includes interest earned or discount received by bank on advances or bills discounted, income on Investments, Interest on balance with R.B.I, etc. It is shown under schedule-13

Other Income : includes commission exchange and brokerage, profit on sale of investments, profit on revelation of assets, Dividend from subsidiaries. These are shown in schedule No. 14.

II) **Expenditure** : These are shown under three different heads viz. interest expended, operating expenses and provisions. Interest expended includes interest paid by bank on deposits and borrowings. It is shown under schedule No. 15. Operating Expenses of bank such as salaries and allowances to staff and officers, Rent taxes rates, printing & stationery, Advertisement, depreciations on bank property etc. are shown under schedule -16, Provisions include provision made for dorebuttul debts, tax provisions and other contingencies.

III) **Profit / Loss** : It shows the profit or loss balance of last year and current year Net Profit (i.e. difference between Income and expenditures)

IV) **Appropriations** : Amount transferred to statutory reserve and other reserves, proposed dividends are shown under this heading.

1.7 Various Schedules :

Schedule No. 1 - **Capital**

Particulars		Current Year	Previous Year
Authorised Capital			
.... shares of Rs. ....each		....	
Issued Capital			
.... shares of Rs. ....each		....	
Subscribed Capital			
.... shares of Rs. ....each		....	
Called up capital			
.... shares of Rs. ....each	....		
Less : Calls in arrears	....		
Add : fortified shares	....	....	
Total			

Schedule No. 2 - **Reserves & Surplus**

Particulars	As on 31-3-....... (Current Year)	Previous Year
I. Statutory Reserves		
Opening Balance		
Additions during the year		
Deductions during the year		
II. Capital Reserves		
Opening Balance		
Additions during the year		
Deductions during the year		
III. Shares Premium		
Opening Balance		
Additions during the year		
Deductions during the year		
IV. Revenue and other Reserves		
Opening Balance		
Additions during the year		
Deductions during the year		
V. Balance in Profit and Loss Account		
Total (I+II+III+IV+V)		

Schedule No. 3 - **Deposits**

Particulars	As on 31-3-....... (Current Year)	Previous Year
A. I. Demand Deposits		
(i) From banks		
(ii) From others		
II. Savings Bank Deposits		
III. Term Deposits		
(i) From banks		
(ii) From others Total		
(I+II+III)		
B. (i) Deposits of branches in India		
(ii) Deposits of branches outside India		
Total		

Schedule No. 4 - **Borrowings**

Particulars	As on 31-3-....... (Current Year)	Previous Year
I. Borrowings in India		
(i) Reserve Bank of India		
(ii) Other banks		
(iii) Other institutions and agencies		
II. Borrowing outside India		
Total (I + II)		
Secured borrowings included in I & II above Rs.		

Schedule No. 5 - **Other Liabilities and Provisions**

Particulars	As on 31-3-....... (Current Year)	Previous Year
I. Bills payable II. Inter-office adjustments (net) (cr.) III. Interest accrued IV. Others (including provisions)		
Total		

Schedule No. 6 - **Cash & Balances with Reserve Bank of India**

Particulars	As on 31-3-....... (Current Year)	Previous Year
Cash in hand (including foreign currency notes) **Balances with RBI** (i) in Current Account (ii) in Other Accounts		
Total (I + II)		

Schedule No. 7 **- Balances with Banks & Money at call & short Notice**

Particulars	As on 31-3-....... (Current Year)	Previous Year
India I. Balances with banks (a) In Current Accounts (b) In other Deposit Accounts II. Money at Call and Short Notice (a) With banks (b) With other institutions		
Total		
Outside India (i) In Current Accounts (ii) In other Deposit Accounts (iii) Money at Call and Short Notice		
Total		
Total Grand Total (I + II)		

Schedule No. 8 - **Investments**

Particulars	As on 31-3-....... (Current Year)	Previous Year
Investments in India in		
(i) Government securities		
(ii) Other approved securities		
(iii) Shares		
(iv) Debentures and Bonds		
(v) Subsidiaries and/or joint ventures		
(vi) Others (to be specified)		
Total		
Investments outside India in		
(i) Government securities (including local authorities)		
(ii) Subsidiaries and/or joint ventures abroad		
(iii) Other investments (to be specified)		
Total Grand Total (I+ 11)		

Schedule No. 9 - **Advances**

Particulars	As on 31-3-....... (Current Year)	Previous Year
i) Bills purchased and discounted		
ii) Cash credits, overdrafts and loans repayable on demand		
iii) Term loans		
Total		
i) Secured by tangible assets		
ii) Covered by Bank/ Government guarantees		
iii) Unsecured		
Total		

(Conted. on next page)

C.I. Advances in India		
(i) Priority Sectors		
(ii) Public Sector		
(iii) Banks		
(iv) Others		
II. Advances Outside India		
(i) Due from banks		
(ii) Due from others		
(a) Bills purchased and discounted		
(b) Syndicated loans		
(c) Others		
Total		
Total Grand Total (C.I.+ C. II)		

Schedule No. 10 - **Fixed Assets**

Particulars	**As on 31-3-....... (Current Year)**	**Previous Year**
I. Premises		
At cost an on 31st March of the preceding year		
Additions during the year		
Deductions during the year		
Depreciation to date		
II. Other Fixed Assets		
(Including furniture & fixtures)		
At cost as on 31st March of the preceding year		
Additions during the year		
Deductions during the year		
Depreciation to date		
Total (I + II)		

Schedule No. 11 - **Other Assets**

Particulars	As on 31-3-....... (Current Year)	Previous Year
I. Inter-office adjustment (net)		
II. Interest accrued		
III. Tax paid in advance /tax deducted at source		
IV. Stationery and stamps.		
V. Non - banking assets acquired in satisfaction of claims		
VI. Others.		
Total		

Schedule No. 12 - **Contingent Liabilities**

Particulars	As on 31-3-....... (Current Year)	Previous Year
I. Claims against the bank not acknowledged as debts		
II. Liability for partly paid investments		
III. Liability on account of outstanding forward exchange contracts.		
IV. guarantees given on behalf of constituents		
(a) In India		
(b) Outside India		
V. Acceptances, endorsements and, other obligations		
VI. Other items for which the bank is contingently liable		
Total		

Schedule No. 13 - **Interest Earned**

Particulars	As on 31-3-....... (Current Year)	Previous Year
Interest /discount on advances/bills		
Income on investments		
Interest on balances with		
Reserve Bank of India and other inter-bank funds		
Others		
Total		

Schedule No. 14 - **Other Income**

Particulars	As on 31-3-....... (Current Year)	Previous Year
Commission, exchange and brokerage		
Profit on sale f investments		
Less : **Loss on sale of investments**		
Profit on revaluation of investments		
Less : **Loss on revaluation of investments**		
Profit on sale of land, buildings and other assets		
Less **: Loss on sale of land, buildings and other assets**		
Profit on exchange transactions		
Less : **Loss on exchange transactions**		
Income earned by way of dividends etc. from subsidiaries / companies and/or joint ventures abroad/in India		
Miscellaneous Income		
Total		

Schedule No. 15 **- Interest Expended**

Particulars	As on 31-3-....... (Current Year)	Previous Year
Interest on deposits Interest on Reserve Bank of India / Inter - bank borrowings Others		
Total		

Schedule No. 16 **- Operating Expenses**

Particulars	As on 31-3-....... (Current Year)	Previous Year
I. Payment to and provisions for employees II. Rent, taxes and lighting III. Printing & Stationery IV. Advertisement & Publicity V. Depreciation on bank's property VI. Directors fees, allowances and expenses VII. Auditors fees and expenses (including branch auditors fees and expenses) VIII. Law charges IX. Postages, telegrams, telephones etc. X. Repairs and maintenance XI. Insurance XII. Other expenditure		
Total		

1.8 R.B.I. Guidelines for Compilation of Financial Statement

Item	Schedule	Coverage	Notes and Instructions for compilation
(1)	(2)	(3)	(4)
Capital	**1.**	**Nationalized Banks** Capital (fully owned by Central Government)	The capital owned by Central Government as on the date of the Balance Sheet, including contribution from Government if any, for participating in World Bank Projects, should be shown,
		Banking Companies incorporated outside India.	(i) The amount brought in by banks way of start-up capital as prescribed by RBI, should be shown under this head. (ii) The amount or deposits kept with RBI under subsection 2 of Section 11 of the Banking Regulation Act, 1949 should also be shown.
		Other Banks (Indian) Authorised capital (... Shares of Rs.... each) Issued Capital (... Shares of Rs. ... each) Subscribed Capital (........... Shares of Rs. .... each) Called-up Capital (............. Shares of Rs............. each) *Less :* **Calls unpaid** *Add :* **Forfeited** *Shares :* **Paid-up Capital**	Authorised, Issued, Subscribed. Called-up Capitals should be given separately. Calls-in-arrears will be deducted from Called-up Capital while the paid-up value of forfeited shares should be added, thus arriving at the paid-up capital, the necessary items which can be combined should be shown under one head, for instance, "Issued and Subscribed capital". **Notes**: General The changes in the above items, if any, during the years, say fresh contribution made by the Government, fresh issue of capital, capitalisation of reserves, etc. may be explained in the notes.

(Conted. on next page)

Item	Schedule	Coverage	Notes and Instructions for compilation
(1)	(2)	(3)	(4)
Reserve and Surplus	2	**(I) Statutory Reserves**	Reserves created in terms of Section 17 or another section of Banking regulation Act, must be separately disclosed.
		(II) Capital Reserves	The expression 'capital reserve' shall not include any amount regarded as free for distribution through the Profit and Loss Account. Surplus on revaluation should be treated as Capital Reserve. Surplus on translation of the financial statements of foreign branches (which includes fixed assets also) is of a revaluation reserve.
		(III) Share Premium	Premium on issue of share capital may be shown separately under this head.
		(IV) Revenue and other Reserves	The expression 'Revenue Reserve' shall mean any reserve other than capital reserve. This item will include all reserves, other than those separately classified. This expression 'reserve' shall not include any amount, written-off or retained by way of providing for depreciation, renewals or diminution in value of assets or retained by way of providing for any known liability.
		(V) Balance of Profit	Includes balance of profit after appropriation. In case of loss the balance may be shown as a deduction. **Notes**: General Movement in various categories of reserves should be shown as indicated in the schedule.

(Conted. on next page)

Item	Schedule	Coverage	Notes and Instructions for compilation
(1)	(2)	(3)	(4)
Reserve and Surplus	3	**A. (I) Demand Deposits** (i) from banks (ii) from others (II) **Saving Bank Deposits**	Includes all bank deposits repayable on demand. Includes all demand deposits of the non-banking sectors. Credit balance in overdrafts, cash credit accounts, deposits payable at call, overdue deposits, inoperative current accounts, matured time deposits and cash certificates, certificate of deposits, etc. are to be included under this category. Includes all savings bank deposits (including inoperative savings bank accounts) Includes all types of bank deposits repayable after specified term.
		(III) Term Deposits (i) from banks (ii) from others	Includes all types of deposits of the non-banking sector, repayable after a specified term. Fixed deposits, cumulative and recurring deposits, annuity deposits, deposits mobilised under various schemes, ordinary staff deposits, foreign currency nonresident deposit accounts, etc., are to be included under this category.
	B.	**(i) Deposits of branches in India** **(ii) Deposits of branches outside India**	The total of these two items will agree with the total deposits. **Notes :** General (a) Interest payable on deposits which is accrued but not due should but be included but shown under other liabilities. (b) Matured time deposits and cash certificates, etc., should be treated as demand deposits.

(Conted. on next page)

Item	Schedule	Coverage	Notes and Instructions for compilation
(1)	(2)	(3)	(4)
			(c) Deposits under special schemes should be included under the term deposits, if they are not payable on demand. When such deposits have matured for payment they should be shown under demand deposits. (d) Deposits from banks will include deposits from the banking system in India, co-operative banks, foreign banks, which may or may not have presence in India,
Borrow-ings	4	**(I) Borrowings in India** (i) Reserve Bank of India (ii) Other Banks (iii) Outside Institutions and agencies **(II) Borrowings outside India** Secured borrowings included above.	Includes borrowing / refinance obtained from Reserve Bank of India. Includes borrowings / refinance obtained from -commercial banks (including co-operative banks). Includes borrowings / refinance obtained from Industrial Development Bank of India, Export-Import of Bank of India, National Bank for Agriculture and Rural Development and other institutions, agencies (including liability against participation certificates, if any). Includes borrowings of Indian branches abroad as well as borrowing of foreign branches. This item will be shown separately. Includes secured borrowings/ refinance in India and outside India. Notes: General (i) The total of I and II will agree with the total borrowings shown in the Balance Sheet.

(Conted. on next page)

Item	Schedule	Coverage	Notes and Instructions for compilation
(1)	(2)	(3)	(4)
			(ii) Inter-office transactions should not be shown as borrowings. (iii) Funds raised by foreign branches by way of certificates of deposits, notes, bonds, etc., should be classified depending upon documentation, as 'deposits', 'borrowings', etc. (iv) Refinance obtained by banks from Reserve Bank of India and various institutions arc being brought under the head 'Borrowings'. Hence, advances will be shown at the gross amount on the assets side.
Borrow-ings	5	I. Bills Payable	Includes drafts telegraphic transfers, traveler cheques, mail transfers payable, pay slips, bankers cheques and other miscellaneous items.
		II. Inter-office Adjustments	The inter-office adjustments balance, if the credit, should be shown under this head. Only net position of inter-office accounts, inland as well as foreign, should be shown here.
		III. Interest Accrued	Includes interest accrued but not due on deposits and borrowings.
		IV. Others (including provisions)	Includes net provision for income tax and other taxes like interest tax (less advance payment, tax deducted at source etc.,) surplus in aggregate in provisions for Bad Debts Provision Account, surplus in aggregate in provisions for depreciation in securities, contingency funds which

(Conted. on next page)

Item	Schedule	Coverage	Notes and Instructions for compilation
(1)	(2)	(3)	(4)
		IV. Others (including provisions)	are not disclosed as reserves but arc actually in the nature of reserves but are actually in the nature of reserves, proposed dividend/transfer to Government, other liabilities which arc not disclosed under any of the major heads such as unclaimed dividend, provisions and funds kept for specific purpose, unexpired discount, outstanding charges like rent, conveyance, etc. Certain types of deposits like staff security deposits margin deposits etc., where the repayment is not free, should also be included under this head. **Notes :** General (i) For arriving at the net balance of inter-office adjustments all connected inter-office accounts should be aggregated and the net balance should only be shown, representing mostly items in transit and unadjusted items. (ii) the interest accruing on all deposits, whether the payment is due or not, should be treated as a liability. (iii) it is proposed to show only pure deposits under the head deposits; and hence, all surplus provisions for bad and doubtful debts, contingency funds, secret reserves, etc. which are not netted off against the relative assets, should be brought under the head 'others' (including provisions).

(Conted. on next page)

Item	Schedule	Coverage	Notes and Instructions for compilation
(1)	(2)	(3)	(4)
Cash and Balance with the Reserve Bank of India	**6.**	**I. Cash in hand** (including foreign currency notes) **II. Balance with RBI** (i) in Current Account (ii) in Other Accounts	Includes cash in hand, including foreign currency notes and also of foreign branches in the case of banks having such branches.
Balance with banks and money at call and short notice	**7**	**I. In India** (i) Balance with Banks (a) in current accounts (b) in other deposit accounts	Includes all balance with banks in India (including co-operative banks). Balance in current accounts and deposit accounts should be shown separately.
		(ii) Money at call and short notice (a) with banks (b) with other institutions	Includes deposits repayable within 15 days notice, lent in the inter-bank call money market.
		II. Outside India (i) Current accounts (ii) Deposits (iii) Money at call and short notice	Includes balances held by foreign branches and balances held by Indian branches of the banks outside India. Balance held with foreign branches by other branches of the bank, should not he shown under this head but should be included in the inter-branch accounts. The amounts held in current accounts' and 'deposit accounts should be shown separately. Includes deposits usually classified in foreign currencies as money at call and short notice.

(Conted. on next page)

Item	Schedule	Coverage	Notes and Instructions for compilation
(1)	(2)	(3)	(4)
Invest-ment	8.	**I. Investment in India** (i) Government securities	Includes Central and State Government securities and Government treasury bills. These securities should be at the book value. However, the difference between the book value and market value should be given in the notes to the Balance Sheet.
		(ii) Other approved securities	Securities other than Government securities, which according to the Banking regulation Act 1949, are treated as approved securities, should be included here.
		(iii) Shares	Investment in shares of companies and corporation not included in item (ii) should be included here.
		(iv) Debentures and Bonds	Investments in debentures and bonds of Companies, Corporations not included in item (ii) should be included here.
		(v) Investments in sub-sidiaries/Joint ventures	Investment in subsidiary/joint ventures (including R.R.Bs) should be in included here.
		(vi) Others	Includes general investments, if any, kike gold, commercial paper and other instruments in the nature of shares / debentures / bonds.
		II. Investment outside India (i) Government securities (including local authorities)	All foreign Government securities issued by local authorities may be classified under this head. All investments made in the share capital of subsidiaries, floated

(Conted. on next page)

Item	Schedule	Coverage	Notes and Instructions for compilation
(1)	(2)	(3)	(4)
		(ii) Subsidiaries and/or joint ventures abroad (iii) Others	outside India and/or joint ventures abroad, should be classified under this head. All other investments outside India by shown under this head.
Advan-ces	9	A. (i) Bills purchased and Discounted (ii) Cash credits, overdrafts and loans repayable on demand (iii) Term loans	In classification under Section 'A', all outstanding in India as well as outside-less provisions made, will be classified under three heads as indicated, and both secured and unsecured advances will be included under these heads, including overdue installments.
		B. (i) Secured by tangible assets	All advances or part of advances which are secured by tangible asseta may be shown here. The item will include advances in India and outside India.
		(ii) Covered by Bank/ Government Guarantee	Advances in India and outside India to the extent they are covered by guarantees of Indian and foreign governments and Indian and foreign banks and DICGS & ECGC are to be included.
		(iii) Unsecured	All advances not classified under (i) and (ii) will be included here, total of 'A' should tally with the total of 'B'.
		C.I. Advances in India (i) Priority sectors (ii) Public sectors (iii) Banks (iv) Others	Advances should be broadly classified into 'Advances in India' and 'Advances outside India'. Advances in India will be further classified on the sectorial basis as indicated.

(Conted. on next page)

Item	Schedule	Coverage	Notes and Instructions for compilation
(1)	(2)	(3)	(4)
		II. Advances outside India (i) Due form banks (ii) Due from others (a) Bills purchased and discounted (b) Syndicated loans (c) Others	Advances to sectors which for the time being are classified as priority sectors according to the instructions of the Reserve Bank are to be classified under the head 'Priority sectors'. Such advances should be excluded from the item (ii) i.e., advance to public sector. Advances to Central and State Governments and other Government undertakings including Government companies and corporations, which are, according to the statutes, to be treated as Public sectors companies are to be included in the category 'Public sectors companies are to be included in the category 'Public sector'. All advances to the banking sector including co-operative banks, will come under the dead 'Banks'. All the remaining advances will be included under the head. 'Others' and typically this category will include non-priority advances to the private, joint and co-operative sectors. Notes: general (i) The gross amount of advances including refinance and rediscounts but excluding provisions made to the satisfaction of auditors, should be shown as advances. (ii) Term loans will be loans not repayable on demand. (iii) Consortium advances would be shown net of share from other participating banks/institutions.

(Conted. on next page)

Item	Schedule	Coverage	Notes and Instructions for compilation
(1)	(2)	(3)	(4)
Fixed Assets	**10**	**I. Premises** (i) At cost as on 31st March of the preceding year (ii) Addition during the year (iii) Deductions during the year (iv) Depreciation to due	Premises wholly or partly owned by the banking company for the purpose of business, including residential premises should be shown against 'premises'. In the case of premises and other fixed assets, the previous balance, additions thereto, deductions there from, during the year, and also the total depreciation written-off should be shown. Where sums have been written-off on reduction of capital and revaluation of assets. every Balance Sheet after the first Balance Sheet, subsequent to the reduction or revaluation should show the revised figures for a period of five years, with the date and amount of revision made.
		II. Other Fixed Assets (including furniture and fixtures) (i) At cost on 31st March of the preceding year (ii) Additions during the year (iii) Deductions during the year (iv) Depreciation to date	Motor vehicles and all other fixed assets other than premises but including furniture and fixtures should be shown under this head.
Other Assets	**11**	I. **Inter-office Adjustment (net)**	The inter-office adjustment balance, if in debit, should be shown under this head. Only net position of inter-office accounts inland as well as foreign, should be shown here. For arriving at the net balance of inter-office adjustment accounts all connected inter-office accounts should be aggregated and the net balance, if in debit, only should be

(Conted. on next page)

Item	Schedule	Coverage	Notes and Instructions for compilation
(1)	(2)	(3)	(4)
			shown, representing mostly items in transit and unadjusted items.
Other Assets		**II. Interest Accrued**	Interest accrued but not due on investments and, advance and interest due but not collected on investment, will be the main components of this item. As banks normally debit, the borrowers' accounts with interest due on the balance sheet date, usually there may not be any account of interest due on advances. Only such interest as can be realised in the ordinary course should be shown under this head.
		III. Tax paid in advance/ tax deducted at source	The amount of tax deducted at source on securities, advance tax paid etc. to the extent that these items are not set off against relative tax provision should be shown against this item.
		IV. Stationery and Stamps	Only exceptional items of expenditure on stationery like bulk purchase of security paper, loose leaf or other ledgers, etc. which are shown as quasi-asset to be written-off over a period of time, should be shown here. The value should be on a realistic basis and cost escalation should not be taken into account, as these items are for internal use.
		V. Non-banking assets acquired in satisfaction of claims	Immovable properties/tangible assets acquired in satisfaction of claims are to be shown under this head.

(Conted. on next page)

Item	Schedule	Coverage	Notes and Instructions for compilation
(1)	(2)	(3)	(4)
		VI. **Others**	This will include items like claims which have not been met for instance, clearing items, debit items representing addition to assets or reduction in liabilities, which have not been adjustment for technical reasons, want of particulars, etc. advances given to staff by a bank as an employer and not as a banker, etc. Items which are in the nature of expenses, which are pending adjustments, should be provided for and the provision netted against this item, so that only realisable value is shown under this head. Accrued income other than interest may also be included here.
Contingent Liabilities	**12**	**I. Claims against the bank not acknowledged as debts**	
		II. Liabilities for partly paid Investments	Liabilities on partly paid shares, debentures, etc. will be included in this head.
		III. Liabilities on account of outstanding forward exchange contracts	Outstanding forward exchange contracts may be included here.

(Conted. on next page)

Item	Schedule	Coverage	Notes and Instructions for compilation
(1)	(2)	(3)	(4)
Contin-gent Liabi-lities		IV. **Guarantees given on behalf of constituents** (i) in India (ii) outside India	Guarantees given for constituents in India and outside India may be shown separately.
		V. Acceptances, endorse-ment and other obligations	This item will include letters of credit and bills accepted by the bank on behalf of customers.
		VI. Other items for which the Bank is contingently liable	Arrears of cumulative dividends, bills rediscounted under under-writing contracts, estimated amounts of contracts remaining to be executed on Capital Account and riot provided for, etc., are to be included here.
Bill for Collect-ion			Bills and other items in the course of collection and not adjusted will be shown against this item in summary version only, a separate schedule is proposed.
Profit and Loss Account			
Interest earned	13	I. **Interest/discount on advances bills**	Includes interest and discount on all types of loans and advances, cash credit, demand loans, overdrafts, export loans, term loans, domestic and foreign bills purchased and discounted (including those rediscounted), over interest and also interest subsidy, if any, relating to advances/bills.
		II. **Income on investments**	Includes all income derived from the investment portion folio by way of interest and dividend.

(Conted. on next page)

Item	Schedule	Coverage	Notes and Instructions for compilation
(1)	(2)	(3)	(4)
Interest earned		III. Interest on balances with the Reserve Bank of India and other inter-bank funds	Includes interest on balances with Reserve Bank and other banks, call loans, money market placements, etc.
		IV. Others	Includes any other interest / discount income not included in the above heads.
Other Income	14	I. Commission, exchange and Brokerage	Includes all remuneration on services such as commission on collections, commission/exchanges on remittances and transfers, commission on letters of credit, letting out of lockers and guarantees, commission on Government business, commission on other permitted agency business including consultancy and other services, brokerage, etc., on securities. It does not include foreign exchange income.
		II. Profit on sale of investments, *Less :* Loss on sale of investments III. Profit on revaluation of investments. *Less :* Loss on revaluation of investments IV. Profit on sale of land, buildings and other assets. Less: Loss on sale of land, buildings and other assets	Includes profit/loss on sale of securities, furniture, land and buildings, motor vehicle, gold, silver, etc. Only the net position should be shown. If the net position is a loss, the amount should be shown as a deduction. The net profit/loss on revaluation of assets may also be shown under this item.

(Conted. on next page)

Item	Schedule	Coverage	Notes and Instructions for compilation
(1)	(2)	(3)	(4)
Other Income		V. Profit on exchange Transactions. Less : Loss on sale of land, buildings and other assets.	Includes profit/loss on dealing in foreign exchange, all income earned by way of foreign exchange, commission and charges on foreign exchange transactions excluding interest which will be shown under interest. Only the net position should be shown. If the net position is a loss, it is to be shown as a deduction.
		VI. Income earned by way of dividends etc., from subsidiaries, companies, joint ventures abroad/in India.	
		VII. Miscellaneous income	Includes recoveries from constituents for godown rents, income from bank's properties, security charges, insurance, etc., and any other miscellaneous income. In case, any item under this head exceeds one percentage of the total income, particulars may be given in the notes.
Interest Expended	15	I. Interest on deposits	Includes interest paid on all types of deposits including deposits from banks and other institutions.
		II. Interest on Reserve Bank of India / inter-bank borrowings	Includes discount/interest on all borrowings and refinance from the Reserve Bank of India and other banks.
		III. Others	Includes discount / interest on all borrowings / refinance from financial institutions. All other payments like

(Conted. on next page)

Item	Schedule	Coverage	Notes and Instructions for compilation
(1)	(2)	(3)	(4)
			interest on participation certificates, penal interest paid, etc. may also be included here.
Operating Expenses	**16**	I. Payments to and provisions for employees	Includes staff salaries/wages, allowances, bonus, and other staff benefits, like provident fund, pension, gratuity, live ness to staff, leave fare concessions, staff welfare, medical allowance to staff, etc.
		II. Rent, taxes and lighting	Includes rent paid by the banks on buildings and other municipal and other taxes paid (excluding income-tax and interest tax) electricity and other similar charges and levies, House rent allowance and other similar payments to staff should appear under the head 'Payments to and Provisions for Employees'
		III. Printing and Stationery	Includes books and forms, and stationery used by the bank and other printing charges, which are not incurred by way of publicity expenditure.
		IV. Advertisement and Publicity	Includes expenditure incurred by the bank for advertisement and publicity purposes including printing charges or publicity matter.
		V. Depreciation on bank's property	Includes depreciation on bank's own property, motor cars and other vehicles, furniture, electric fittings, vaults, lifts, lease hold properties, non-banking assets, etc.

(Conted. on next page)

Item	Schedule	Coverage	Notes and Instructions for compilation
(1)	(2)	(3)	(4)
Operating Expenses		VI. Director's fees, allowances and expenses	Includes sitting fees and all other items of expenditure incurred on behalf of the directors. The daily allowance, hotel charges, conveyance charges, etc. which though in the nature of reimbursement of expenses incurred, may be included under this head. Similar expenses of Local Committee members may also be included under this head.
		VII. Auditor's fees and expenses (including branch auditor's fees and expenses)	Includes the fees paid to the statutory auditors and branch auditors for the professional services rendered and also all expenses for performing their duties, even though they may be in the nature of reimbursement of expenses. If external auditors have been appointed by the banks themselves for internal inspections and audits and other services. the expenses incurred in that context including fees may not be included under this head but should be shown under 'other expenditure'
		VIII. Law charges	All legal expenses and reimbursement of expenses incurred in connection with legal services arc to be included here.
		IX. Postage, telegraphs, telephones, etc.	Includes all postal charges like stamps, telegrams, telephones, etc.
		X. Repairs and maintenance	Includes repairs to bank's property, their maintenance charges, etc.

(Conted. on next page)

Item	Schedule	Coverage	Notes and Instructions for compilation
(1)	(2)	(3)	(4)
Operating Expenses		XI. Insurance	Includes insurance charges on bank's property, insurance premier paid to Deposit Insurance and Credit Guarantee Corporation, etc. to the extent they are not recovered from the concerned parties.
		XII. Other expenditure	All expenses other than those not included in any of the other heads, like, licence fees, donations, dubscriptions to papers, periodicals, entertainment expenses, travel expenses, etc. may be included under this head. In case, any particular item under this head exceeds one percentage of the total income, the particulars may be given inthc notes.
Provisions and contin-gencies			Includes all provisions made for bad and doubtful debts, provisions for taxation, provisions for diminution in the value of investments, transfers to contingencies and other similar items.

Disclosure of Accounting Policies

In order that the financial position of banks represent a true and fair view, the Reserve Bank of has directed the banks to disclose accounting policies regarding the key areas of operations along with the notes of account in their financial statements for the accounting year ending 31-3-1991 and onwards, on a regular basis. The accounting policies disclosed may contain the following aspects subject to reflection by individual banks:

1. General :

The accompanying financial statements have been prepared on the historical cost and conform to the statutory provisions and practices prevailing in the country.

2. Transactions involving Foreign Exchange :

a) Monetary assets and liabilities have been translated at the exchange rates, prevailing at the close of the year. Non-monetary assets have been carried in the books at the historical cost.

b) Income and expenditure items in respect of Indian branches have been translated at the exchange rates, ruling on the date of the transaction and in respect of overseas branches at the exchange rates prevailing at the close of the year.

c) Profit or loss on pending forward contracts have been accounted for.

3. Investments :

a) Investment in governments and other approved securities in India are valued at the lower of cost or market value.

b) Investments in subsidiary companies and associate (i.e. companies in which the bank holds at least 25 percent of the share capital) have been accounted for on the historical cost basis.

c) All other investments are valued at the lower of cost or market value.

4. Advances :

a) Provisions for doubtful advances have been made to the satisfaction of the auditors:

   i) In respect of identified advances, based on a periodic review of advances and after taking into account the portion of advance guaranteed by the Deposit Insurance and Credit Guarantee Corporation, the Export Credit and Guarantee Corporation and similar statutory bodies;

   ii) In respect of general advances, as a percentage of total advances taking into account the guidelines issued by the Government of India and the Reserve Bank of India.

b) Provisions in respect of doubtful advances have been deducted from the advances to the extent necessary and the excess have been included under “Other Liabilities and Provisions”.

c) Provision have been made on a gross basis. Tax relief, which will be available when the advance is written-off, will be accounted for in the year of write-off.

5. Fixed Assets :

a) Premises and other fixed assets have been accounted for at their historical cost. Premises which have been revalued are accounted for at the value determined on the basis of such revaluation made by the professional values, profit arising on revaluation has been credited to Capital Reserve.

b) Depreciation has been provided for on the straight line/diminishing balance method.

c) In respect of revalued assets, depreciation is provided for on the revalued figures and an amount equal to the additional depreciation consequent of revaluation is transferred annually from the Capital Reserve to the General Reserve / Profit and Loss Account.

6. Staff Benefits :

Provision for gratuity pension benefits to staff have been made on an accrual casual basis. Separate funds for gratuity / pension have been created.

7. Net Profit :

a) the net profit disclosed in the Profit and Loss Account in after:

   i) provisions for taxes on income, in accordance with the statutory requirements,

   ii) provisions for doubtful advances.

   iii) adjustments to the value of "current investments" in government and other approved securities in India, valued at lower of cost of market value,

   iv) transfers to contingency funds.

   v) other usual or necessary provisions.

b) Contingency funds have teen grouped in the Balance Sheet under the head "Other Liabilities and Provisions".

Some Special Transactions

Interest on Doubtful Debts

When a debt is found to be doubtful at the end of the accounting year, a question may arise whether the interest on that should be credited to interest Account or not. There is no doubt that interest has accrued; but It is equally clear that the realization of this interest is doubtful. Therefore, as prudent accounting policy, such interest should be transferred to Interest Suspense Account.

1.9 Illustrative Examples on Bank Final Accounts

Illustration - I

1. From the following balances extracted from the books of Tushar Bank Ltd., Akola, prepare the Profit and Loss Account for the year ended 31st March 2015 and the Balance Sheet as on that date.

Particulars	Rs.
Current accounts	1,60,00,000
Savings Accounts	60,00,000
Fixed and time deposits	19,00,000
Acceptances	4,00,000
Unclaimed dividend	60,000
Dividend 2013-2014	1,00,000
Profit and Loss A/c (Credit) on 1-4-2015	4,20,000
Reserve fund	7,00,000
Share Capital: 20,000 shares of Rs. 50 each.	10,00,000
Interest and discount received	15,00,000
Interest paid	4,00,000
Borrowings from other banks	14,00,000
Money at call	6,00,000
Investments (Market value Rs. 62,00,000)	60,00,000
Premises	
(After depreciation upto 31-3-2014 Rs. 2,00,000)	24,00,000
Sundry creditors	60,000
Bills payable	16,00,000
Bills for collection	2,80,000

Salaries	1,60,000
Rent and taxes	40,000
Audit fee	4,000
Printing	10,000
General expenses	6,000
Cash in hand	1,20,000
Cash with R.B.I.	30,00,000
Cash with other banks	26,00,000
Bills discounted and purchased	12,00,000
Loans, overdrafts and cash credits	1,40,00,000

Adjustments :

1) Authorised share capital is Rs. 20,00,000 divided into 40,000 shares of Rs. 50 each.
2) Rebate on bills discounted amounted to Rs. 10,000.
3) Create a provision for taxation Rs. 2,00,000.
4) Provision for bad and doubtful debts is required to be made at Rs. 60,000.
5) Provide 5% depreciation on the original amount of premises.

Tushar bank Ltd.

Profit and Loss Account

For the year ended 31st March 2015

Particulars	Schedule No.	Current Year	Previous Year
I. Income			
Interest earned	13	14,90,000	
Other Income	14	Nil	
Total		**14,90,000**	
II. Expenditure			
Interest expended	15	4,00,000	
operating expenses	16	3,50,000	
provision (tax)		2,00,000	
other provisions		60,000	
Total		**10,10,000**	

(Conted. on next page)

III. Profit/ Loss			
Profit brought forward		4,20,000	
Net profit for the year		4,80,000	
Total		**9,00,000**	
IV. Appropriations			
Transfer to Reserve fund		96,000	
Dividend for last year		1,00,000	
Balance C/d.		7,04,000	
Total		**9,00,000**	

Form 'A'

Balance Sheet of Tushar Bank Ltd.

As on 31-3-2015

Particulars	**Schedule No.**	**Current Year**	**Previous Year**
Capital and Liabilities			
Capital	1	10,00,000	
Reserve and surplus	2	15,00,000	
Deposits	3	2,39,00,000	
Borrowings	4	14,00,000	
Other liabilities and provisions	5	19,30,000	
Total		**2,97,30,000**	
Assets			
Cash in hand and with R.B.I.	6	31,20,000	
Balance with other banks, money at call and short notice	7	32,00,000	
Investments	8	60,00,000	
Advances	9	1,51,40,000	
Fixed Assets	10	22,70,000	
Other Assets	11	Nil	
Total		**2,97,30,000**	
Contingent Liabilities	12	4,00,000	
Bills for collection	--	2,80,000	

Working Details :

Schedule No. 1 : **Capital**

Particulars	Current Year	Previous Year
Authorised Capital		
40,000 shares of Rs. 50 each	20,00,000	
Issued Capital		
20,000 shares of Rs. 50 each fully paid	10,00,000	
Total	**10,00,000**	

Schedule No. 2 : **Reserve and Surplus**

Particulars		Current Year	Previous Year
Reserve Fund	7,00,000		
Add 20% addition	96,000	7,96,000	
Balance of P & L Appropriation A/c.		7,04,000	
Total		**15,00,000**	

Schedule No. 3 : **Deposits**

Particulars	As on 31-3-....... (Current Year)	Previous Year
Current Accounts	1,60,00,000	
Saving Account	60,00,000	
Fixed and time deposits	19,00,000	
Total	2,39,00,000	

Schedule No. 4 : **Borrowings**

Particulars	As on 31-3-....... (Current Year)	Previous Year
Borrowing from other Banks	14,00,000	
Total	14,00,000	

Schedule No. 5 : **Other Liabilities and Provisions**

Particulars	Current Year	Previous Year
Unclaimed dividend	60,000	
Sundry Creditors	60,000	
Bills payables	16,00,000	
Rebate on bills discounted	10,000	
Provision for taxation	2,00,000	
Total	**19,30,000**	

Schedule No. 6 : **Cash in hand and with R.B.I.**

Particulars	Current Year	Previous Year
Cash in hand	1,20,000	
Cash with R.B.I.	30,00,000	
Total	**31,20,000**	

Schedule No. 7

Balance with other Banks, Money at call & Short Notice.

Particulars	Current Year	Previous Year
Money at call	6,00,000	
Cash with other Banks	26,00,000	
Total	**32,00,000**	

Schedule No. 8 : **Investments**

Particulars	Current Year	Previous Year
Investments	60,00,000	
(Market Value Rs. 6,20,000)		
Total	**60,00,000**	

Schedule No. 9 : **Advances**

Particulars		Current Year	Previous Year
Loans overdrafts & cash credits	1,40,00,000		
Less : provision	60,000	1,39,40,000	
Bills discounted and purchased		12,00,000	
Total		**1,51,40,000**	

Schedule No. 10 : **Fixed Assets**

Premises	24,00,000		
Less : Depreciation (5% on original cost)	1,30,000	22,70,000	
Total		**22,70,000**	

Schedule No. 11 : **Other Assets**

	Nil	
Total	NIL	

Schedule No. 12 : **Contingent Liabilities**

Acceptances on behalf of customer	4,00,000	
Total	4,00,000	

Schedule No. 13 : **Interest earned**

Interest and Discount	15,00,000		
Less Rebate on bill discount	10,000	14,90,000	
Total		14,90,000	

Schedule No. 14 : **Other Incomes**

	Nil	
Total	Nil	

Schedule No. 15 : **Interest Expended**

Interest Paid	4,00,000	
Total	**4,00,000**	

Schedule No. 16 : **Operating Expenses**

Particulars	Current Year	Previous Year
Salaries	1,60,000	
Rentals Taxes	40,000	
Audit Fees	4,000	
Printing	10,000	
General Expenses	6,000	
Depreciation on Premises	1,30,000	
Total	**3,50,000**	

Illustration-II

1. From the following balances of Mahindra Bank Ltd., as on 31st March 2015, prepare Profit and Loss A/c for the year ended 31st march 2008 and Balance sheet as on that date.

Particulars	**Rs.**
Equity share capital of Rs. 100 each	
Rs. 50 paid up (Authorised and Issued 40,000 shares)	20,00,000
Profit and Loss A/c (Cr. on 1-4-2014)	8,00,000
Current Deposit A/c	68,20,000
Fixed Deposit A/c	78,00,000
Saving Bank A/c	51,30,000
Director's fees	90,000
Audit fees	20,000
Furniture (Cost Rs. 20,00,000)	17,40,000
Interest and discount received	42,00,000
Commission and exchange	20,00,000
Reserve fund	7,00,000
Printing and Stationery	80,000
Salary (including Manager's Rs. 4,00,000)	14,00,000
Building (Cost Rs. 60,00,000)	45,00,000
Cash in hand	3,20,000

Cash with RBI	70,00,000
Cash with Other Bank	65,00,000
Law charges	30,000
Investment at cost	24,00,000
Loans, cash credit and overdraft	60,00,000
Bills discounted and purchased	28,00,000
Interest paid	30,00,000
Borrowing from Laxmi Bank Ltd.	40,00,000
Branch Adjustment A/c(Cr.)	26,00,000
Rent and Taxes	1,70,000

Following additional information is available:

1) The Bank has accepted on behalf of the customers bills worth Rs. 30,00,000 against the securities or Rs. 38,00,000 lodged with the Bank.
2) Rebate on bills discounted to Rs. 1,10,000
3) Provide depreciation on building by 10% and on furniture by 5% on cost.
4) Provide Rs. 30,000 for bad and doubtful debts.

Mahindra Bank Ltd.
Profit and Loss Account
For the year ended 31st March 2015

Particulars	Schedule No.	Current Year	Previous Year
Income			
Interest earned	13	40,90,000	
Other Income	14	20,00,000	
Total		**60,90,000**	
Expenditure			
Interest expended	15	30,00,000	
Operating expenses	16	24,90,000	
Provisions		30,000	
Other provisions			
Total		**55,20,000**	

(Conted. on next page)

Prof it /Loss			
Profit brought forward		8,00,000	
Net profit for the year		5,70,000	
Total		**13,70,000**	
Appropriations			
Transfer to Reserve fund		1,14,000	
Balance C/d.		12,56,000	
Total		**13,70,000**	

Form 'A'

Balance Sheet of Mahindra Bank Ltd.

as on 31-3-2015

Particulars	Schedule No.	Current Year	Previous Year
Capital and Liabilities			
Capital	1	20,00,000	
Reserve and surplus	2	20,70,000	
Deposits	3	1,97,50,000	
Borrowings	4	40,00,000	
Other liabilities and provisions	5	27,10,000	
Total		**3,05,30,000**	
Assets			
Cash in hand and with R.B.I.	6	73,20,000	
Balance with other banks, money at call and short notice	7	65,00,000	
Investments	8	24,00,000	
Advances	9	87,70,000	
Fixed Assets	10	55,40,000	
Other Assets	11	Nil	
Total		**3,05,30,000**	
Contingent Liabilities	12	30,00,000	
Bills for collection	---	---	

Working Details

Schedule No. 1 : **Capital**

Particulars	Current Year	Previous Year
Authorised Capital		
40000 shares of Rs. 1 00 each	40,00,000	
Issued and Paid up Capital		
40000 shares of Rs. 1 00 each Rs. 50 paid	20,00,000	
Total	**20,00,000**	

Schedule No. 2 : **Reserve and Surplus**

Particulars		Current Year	Previous Year
Reserve Fund	7,00,000		
Add 20% addition	1,14,000	8,14,000	
Balance of P & L Appropriation A/c.		12,56,000	
Total		**20,70,000**	

Schedule No. 3 : **Deposits**

Particulars	Current Year	Previous Year
Current Deposits A/c	68,20,000	
Fixed Deposit A/c	78,00,000	
Saving Bank A/c	51,30,000	
Total	**1,97,50,000**	

Schedule No. 4 : **Borrowings**

Particulars	Current Year	Previous Year
Borrowing from Laxmi Bank Ltd.	40,00,000	
Total	**40,00,000**	

Schedule No. 5 : **Other Liabilities and Provisions**

Particulars	Current Year	Previous Year
Branch Adjustment	26,00,000	
Rebate on bills discounted	1,10,000	
Total	**27,10,000**	

Schedule No. 6 : **Cash in hand and with R.B.I.**

Particulars	Current Year	Previous Year
Cash in hand	3,20,000	
Cash with R.B.I.	70,00,000	
Total	**73,20,000**	

Schedule No. 7

Balance with other Banks, Money at call & Short Notice.

Particulars	Current Year	Previous Year
Cash with other Banks	65,00,000	
Total	**65,00,000**	

Schedule No. 8 **: Investments**

Particulars	Current Year	Previous Year
Investments at Cost	24,00,000	
Total	**24,00,00**	

Schedule No. 9 : **Advances**

Particulars		Current Year	Previous Year
Loan Cash Credit and overdrafts	60,00,000		
Less : Provision	30,000	59,70,000	
Bills discounted and purchased		28,00,000	
Total		**87,70,000**	

Schedule No. 10 : **Fixed Assets**

Particulars		Current Year	Previous Year
Furniture at cost	20,00,000		
Less : Depreciation upto date	3,60,000	16,40,000	
Building at cost	60,00,000		
Less Dep. upto date	21,00,000	39,00,000	
	Total	55,40,000	

Schedule No. 11 : **Other Assets**

Particulars	Current Year	Previous Year
	Nil	
Total	Nil	

Schedule No. 12 : **Contingent Liabilities**

Particulars	Current Year	Previous Year
Acceptances on behalf of customers	30,00,000	
Total	30,00,000	

Schedule No. 13 : **Interest earned**

Particulars		Current Year	Previous Year
Interest and Discount Received	42,00,000		
Less Rebate on bill discounted	1,10,000	40,90,000	
	Total	40,90,000	

Schedule No. 14 : **Other Incomes**

Particulars	Current Year	Previous Year
Commission and Exchange	20,00,000	
Total	20,00,000	

Schedule No. 15 : **Interest Expended**

Particulars	Current Year	Previous Year
Interest Paid	30,00,000	
Total	30,00,000	

Schedule No. 16 : **Operating Expenses**

Particulars	Current Year	Previous Year
Directors fees	90,000	
Audit fees	20,000	
Printing and Stationery	80,000	
Managers Salary	4,00,000	
Staff Salary	10,00,000	
Law Charges	30,000	
Rent and Taxes	1,70,000	
Depreciation on Furniture	1,00,000	
Depreciation on Building	6,00,000	
Total	24,90,000	

Illustration - III

The following is the Trial Balance of Lalu Bank Ltd.,

as on March 31^{st} 2015

Particulars	Rs.	Particulars	Rs.
Loans, cash credits		Share Capital :	
and Overdrafts	28,50,000	50,000 equity shares	
Premises	5,00,000	of Rs. 100 each fully	
Indian Government Securities	41,70,000	paid	50,00,000
Salaries	2,80,000	Reserve Fund	25,00,000
General Expenses	2,74,000	Current Deposit	10,00,000
Rent, Rates and Taxes	23,000	Fixed Deposit	12,50,000
Director's Fees	18,000	Savings Bank Deposit	5,00,000
Stock of Stationery	85,000	Profit & Loss A/c	
Bill Purchased and Discounted	4,60,000	(1-4-2014)	1,60,000
Shares	5,00,000	Interest and Discount	12,80,000
Cash in hand and with		Recurring Deposits	2,00,000
Reserve Bank	19,30,000		
Money at call and short notice	8,00,000		
	1,18,90,000		**1,18,90,000**

The following information should be considered :

a) Provision for bad and doubtful debts is required, amounting to Rs. 50,000

b) Interest accrued on investments was Rs. 80,000

c) Unexpired discount amounts of Rs. 3,800

d) Endorsement made on behalf of customers totalled Rs. 11,50,000

e) Authorised capital was 80,000 equity shares of Rs. 100 each,

f) Rs. 1,00,000 were added to the premises during the year.

Depreciation at 5% on the opening balance is required,

g) Market Value of Indian Government Securities was Rs. 39,00,000

Prepare Profit and Loss Account for the year ended 31st March 2015 and Balance Sheet as on that date in the prescribed form.

Lalu Bank Ltd.

Profit and Loss Account

For the year ended 31st March 2015

Particulars	Schedule No.	Current Year	Previous Year
I. Income			
Interest earned	13	13,56,200	
Other Income	14	Nil	
Total		**13,56,200**	
Expenditure			
Interest expended	15	Nil	
Operating expenses	16	6,15,000	
Provisions		50,000	
Other provisions		--	
Total		**6,65,000**	
Profit and Loss			
Profit brought forward		1,60,000	
Net profit for the year		6,91,200	
Total		**8,51,200**	
Appropriations			
Transfer to Reserve fund		1,38,240	
Balance C/d.		7,12,960	
Total		**8,51,200**	

Form 'A'

Balance Sheet of Lalu Bank Ltd.

For the year ended on 31st March, 2015

Particulars	Schedule No.	Current Year	Previous Year
Capital and Liabilities			
Capital	1	50,00,000	
Reserve and surplus	2	33,51,200	
Deposits	3	29,50,000	
Borrowings	4	Nil	
Other liabilities and provisions	5	3,800	
Total		**1,13,05,000**	
Assets			
Cash in hand and with R.B.I.	6	19,30,000	
Balance with other banks, money at call and short notice	7	8,00,000	
Investments	8	46,70,000	
Advances	9	32,60,000	
Fixed Assets	10	4,80,000	
Other Assets	11	1,65,000	
Total		**1,13,05,000**	
Contingent Liabilities	12	11,50,000	
Bills for collection	---	---	

Working Details

Schedule No. 1 : **Capital**

Particulars	Current Year	Previous Year
Authorised Capital		
80000 shares of Rs. 100 each	80,00,000	
Issued and Paid up Capital		
50000 shares of Rs. 1 00 each Fully paid	50,00,000	
Total	**50,00,000**	

Schedule No. 2 : **Reserve and Surplus**

Particulars		Current Year	Previous Year
Reserve Fund	25,00,000		
Add 20% addition	1,38,240	26,38,240	
Balance of P & L Appropriation A/c.		7,12,960	
	Total	**33,51,200**	

Schedule No. 3 : **Deposits**

Particulars	Current Year	Previous Year
Current Deposits A/c	10,00,000	
Fixed Deposit A/c	12,50,000	
Saving Bank A/c	5,00,000	
Recurring Deposits	2,00,000	
Total	**29,50,000**	

Schedule No. 4 : **Borrowings**

	Nil	
Total	Nil	

Schedule No. 5 : **Other Liabilities and Provisions**

Particulars	Current Year	Previous Year
Unexpired Discount	3,800	
Total	**3,800**	

Schedule No. 6 : **Cash in hand and with R.B.I.**

Particulars	Current Year	Previous Year
Cash in hand and with R.B.I.	19,30,000	
Total	**19,30,000**	

Schedule No. 7

Balance with other Banks. Money at call & Short Notice.

Particulars	Current Year	Previous Year
Money at call and short notice	8,00,000	
Total	**8,00,000**	

Schedule No. 8 : **Investments**

Particulars		Current Year	Previous Year
Indian Government securities			
(Market value 39, 00, 000)		41,70,000	
Shares		5,00,000	
Total		**46,70,000**	

Schedule No. 9 : **Advances**

Loan Cash Credit and overdrafts	28,50,000		
Less : Provision	50,000	28,00,000	
Bills discounted and purchased		4,60,000	
Total		**32,60,000**	

Schedule No. 10 : **Fixed Assets**

Premises Opening bal.	4,00,000		
Add : Addition during year	1,00,000		
	5,00,000		
Less : Dep.on Op. baol. 5%	20,000	4,80,000	
Total		4,80,000	

Schedule No. 11 : **Other Assets**

Stock of Stationery		85,000	
Interest accrued on Investment		80,000	
Total		**1,65,000**	

Schedule No. 12 : **Contingent Liabilities**

Endorsement on behalf of customers		11,50,000	
Total		**11,50,000**	

Schedule No. 13 : **Interest earned**

Interest and Discount	12,80,000		
Less : Unexpired Discount	3,800	12,76,200	
Interest on Investment		80,000	
Total		13,56,200	

Schedule No. 14 : **Other Incomes**

Particulars	Current Year	Previous Year
	Nil	
Total	Nil	

Schedule No. 15 : **Interest Expended**

Particulars	Current Year	Previous Year
	Nil	
Total	Nil	

Schedule No. 16 : **Operating Expenses**

Particulars	Current Year	Previous Year
Depreciation on Premises	20,000	
Salaries	2,80,000	
General Expenses	2,74,000	
Rent. Rate and Taxes	23,000	
Director Fees	18,000	
Total	**6,15,000**	

Illustration - IV

From the following balances extracted from the books of Karodpati Bank Ltd, Solapur prepare the Profit & Loss Account for the year ended 31st March, 2015 and the Balance Sheet as on that date.

Particulars	**Rs.**
Salaries and allowances (including remuneration to General Manager Rs. 9,00,000 and Director's Fees Rs. 1,00,000)	25,00,000
Sundry expenses	1,50,000
Interest paid on deposits	21,25,000
Commission, exchange (credit)	17,00,000
Interest and discount received	48,00,000
Statutory Reserved fund	20,00,000

Deposits :	a) Fixed	87,50,000
	b) Savings	60,00,000
	c) Current	90,00,000
Loans, cash-credits and over drafts		2,30,00,000
Bills discounted and purchased		15,00,000
Investment fluctuation fund		5,00,000
Cash in hand		17,50,000
Cash with RBI		25,00,000
Cash with Vijay Bank Ltd.		2,50,000
4% Government securities		60,00,000
Silver		5,00,000
Gold		21,00,000
Bills for collection		10,00,000
Interest accrued on investments		3,00,000
Acceptances, endorsements and other obligations		20,00,000
Profit and Loss account (credit balance on 1-4-2007)		30,00,000
Shares in Telco Co. Ltd.		10,00,000
Interim divided paid		3,00,000
Drafts payable		8,00,000
Share capital (authorised and issued) 2,00,000 shares or Rs. 100 each Rs. 50 paid		10,00,000
Rent and taxes paid		2,00,000
Premises		25,00,000
Furniture and fixtures		7,50,000
Provident fund		8,00,000
Rebate on bills discounted		75,000
Unclaimed dividend		1,00,000

Adjustments :

1. Provide Rs. 4,00,000 for taxation and Rs. 2,50,000 for bad and doubtful debts.

2. Rebate on bills discounted is over calculated by Rs. 25,000
3. An interim dividend declared was at 4% actual.
4. The market value of 4% Govt. securities on 31-3-2008 was Rs. 58,25,000 and was to be shown at this figure in the B/S.
5. Current Accounts include Rs. 4,00,000 debits balance being overdraft.

Solution :

Karodpati bank Ltd.
Profit and Loss Account
For the year ended 31st March 2008

Particulars		Schedule No.	Current Year	Previous Year
Income				
Interest earned		13	48,25,000	
Other Income		14	17,00,000	
	Total		**65,25,000**	
Expenditure				
Interest expended		15	21,25,000	
Operating expenses		16	28,50,000	
Provisions			2,50,000	
Other provisions			4,00,000	
	Total		**56,25,000**	
Profit /Loss				
Profit brought forward			30,00,000	
Net profit for the year			9,00,000	
	Total		**39,00,000**	
Appropriations				
Transfer to Reserve fund			1,80,000	
Interim Dividend	3,00,000			
Add : outstanding	1,00,000		4,00,000	
Balance C/d.			33,20,000	
	Total		**39,00,000**	

Form 'A'

Balance Sheet of Lalu Bank Ltd.

as on 31-3-2015

Particulars	Schedule No.	Current Year	Previous Year
Capital and Liabilities			
Capital	1	100,00,000	
Reserve and surplus	2	58,25,000	
Deposits	3	2,41,50,000	
Borrowings	4	Nil	
Other liabilities and provisions	5	21,50,000	
Total		**4,21,25,000**	
Assets			
Cash in hand and with R.B.I.	6	42,500,000	
Balance with other banks,			
Money at call and short notice	7	2,50,000	
Investments	8	89,25,000	
Advances	9	2,46,50,000	
Fixed Assets	10	32,50,000	
Other Assets	11	8,00,000	
Total		**4,21,25,000**	
Contingent Liabilities	12	20,00,000	
Bills for collection	--	10,00,000	

Working Details

Schedule No. 1 : **Capital**

Particulars	Current Year	Previous Year
Authorised Capital		
2,00,000sharesof Rs. 100each	2,00,00,000	
Issued and Paid up Capital		
200000 shares of Rs. 1 00 each Rs. 50 paid	1,00,00,000	
Total	**1,00,00,000**	

Schedule No. 2 : **Reserve and Surplus**

Particulars		Current Year	Previous Year
Statutory Reserve Fund	20,00,000		
Add : 20% transfer	1,80,000	21,80,000	
Investment flaction fund	5,00,000		
Less : loss on revaluation of Investment?	1,75,000	3,25,000	
Balance of P&L Appropriation A/c		33,20,000	
	Total	**58,25,000**	

Schedule No. 3 : **Deposits**

Particulars		Current Year	Previous Year
Fixed Deposits		87,50,000	
Saving Deposits		60,00,000	
Current Deposits	90,00,000		
Add overdrawn	4,00,000	94,00,000	
	Total	2,41,50,000	

Schedule No. 4 : **Borrowings**

	Nil	
Total	**Nil**	

Schedule No. 5 : **Other Liabilities and Provisions**

Particulars		Current Year	Previous Year
Drafts Payable		8,00,000	
Provident Fund		8,00,000	
Rebate on bills discounted	75,000		
Less over calculated	25,000	50,000	
Provision for tax		4,00,000	
Unclaimed Dividend		1,00,000	
	Total	**21,50,000**	

Schedule No. 6 **: Cash in hand and with R.B.I.**

Particulars		Current Year	Previous Year
Cash in hand		17,50,000	
Cash with R.B.I.		25,00,000	
Total		**42,50,000**	

Schedule No. 7

Balance with other Banks, Money at call & Short Notice.

Particulars		Current Year	Previous Year
Cash with millions Bank		2,50,000	
Total		2,50,000	

Schedule No. 8 : **Investments**

Particulars		Current Year	Previous Year
4% Govt. securities	60,00,000		
Less loss on revaluation	1,75,000	58,25,000	
Gold		21,00,000	
Shares in Ltd. Co.		10,00,000	
Total		**89,25,000**	

Schedule No. 9 : **Advances**

Loan Cash Credit and overdrafts	2,30,00,000		
Less Provision	2,50,000		
	2,27,50,000		
Add overdrawn Current A/c.	4,00,000	2,31,50,000	
Bills purchased and discounted		15,00,000	
Total		**2,46,50,000**	

Schedule No. 10 **: Fixed Assets**

Premises	25,00,000	
Furniture and fixtures	7,50,000	
Total	**32,50,000**	

Schedule No. 11 : **Other Assets**

Particulars		Current Year	Previous Year
Silver		5,00,000	
Interest accrued on Investment		3,00,000	
Total		**8,00,000**	

Schedule No. 12 : **Contingent Liabilities**

Acceptance, endorsement and other obligations		20,00,000	
Total		**20,00,000**	

Schedule No. 13 : **Interest earned**

Interest and discount received	48,00,000		
Add over calculated rebate	25,000	48,25,000	
Total		**48,25,000**	

Schedule No. 14 : **Other Incomes**

Commission Exchange		17,00,000	
Total		**17,00,000**	

Schedule No. 15 : **Interest Expended**

Interest paid on deposits		21,25,000	
Total		**21,25,000**	

Schedule No. 16 : **Operating Expenses**

General managers remuneration		9,00,000	
Directors fees		1,00,000	
Staff salaries and allowances		15,00,000	
Sundry Expenses		1,50,000	
Rent and taxes paid		2,00,000	
Total		**28,50,000**	

Illustration – 5

The following are the figure extracted from the books of Ichalkaranji Bank Limited, as on 31-3-2015 :

Particulars	Rs.
Interest and Discount Received	37,05,738
Interest paid on Deposits	20,37,452
Issued and Subscribed Capital	10,00,000
Salaries and Allowances	2,00,000
Director's fee and allowances	30,000
Rent and taxes paid	90,000
Postage and telegrams	60,286
Statutory reserve fund	8,00,000
Commission, exchange & brokerage	1,90,000
Rent received	65,000
Profit on sale of investments	2,00,000
Depreciation on Bank's properties	30,000
Stationery expenses	40,000
Other expenses	25,000
Auditor's Fee	5,000

Other Information:

a) A customer to whom a sum of Rs. 10 lakhs had been advanced has become insolvent and it is expected that only 50% can be recovered from his estate.

b) Also there were other debts, for which a provision of Rs. 1,50,000 was found necessary by the auditors.

c) Rebate on bills discounted on 31-3-2014 was Rs. 12,000 and or 31-3-2015 was Rs. 16,000.

d) Provide Rs. 6,50,000 for Income tax.

e) The directors desire to declare 10% dividends.

Prepare the Profit and Loss Account of Ichalkaranji Bank Ltd. for the year ended on 31-3-2015.

Solution - 5

Ichalkaranji Bank Ltd.
Profit and Loss Account

For the year ended 31st March 2015

Particulars	Schedule No.	Current Year	Previous Year
I. Income			
Interest earned	13	37,01,738	
Other Income	14	4,55,000	
Total		**41,56,738**	
II. Expenditure			
Interest expended	15	20,37,452	
Operating Expenses	16	4,80,286	
Provisions (Bad & doubtful)		6,50,000	
Other Provisions (Tax)		6,50,000	
Total		**38,17,738**	
III. Profit / Loss			
Profit brought forward		---	
Net profit for the year		3,39,000	
Total		**3,39,000**	
IV. Appropriations			
Transfer to Reserve Fund		67,800	
Proposed Dividend (10%)		1,00,000	
Balance C/d.		1,71,200	
Total		**3,39,000**	

Schedule No. 13 : **Interest Earned**

Interest and discount received	37,05,738			
Add : Opening balance of rebate on bills discounted	12,000			
	37,17,738			
Less : Closing balance of rebate on bills discounted	16,000		37,01,738	
Total			**37,01,738**	

Schedule No. 14 : **Other Incomes**

Commission exchange and brokerage		1,90,000	
Rent received		65,000	
Profit on sale of investment		2,00,000	
Total		**4,55,000**	

Schedule No. 15 **: Interest Expended**

Interest on deposits		20,37,452	
Total		**20,37,452**	

Schedule No. 16 : **Opening Expenses**

Salaries and allowances		2,00,000	
Directors fees and allowances		30,000	
Rent and taxes paid		90,000	
Postage and telegrams		60,286	
Depreciation on bank property		30,000	
Stationery expenses		40,000	
Auditors fees		5,000	
Other expenses		25,000	
Total		**4,80,286**	

Illustration – 6

Friends Bank Ltd. gives you the following particulars from their books for the year ended 31-3-2015. You are required to prepare Balance Sheet as on 31-3-2015 in the prescribed form.

Particulars	**Debit Rs.**	**Credit Rs.**
Cash in hand	1,50,000	
Share Capital		25,00,000
Investments in Equity Shares (Fully paid Rs. 3 lakhs Partly paid Rs. 2 lakhs)	5,00,000	
General Reserve		3,00,000

Statutory Reserve		6,00,000
Investments in Government Securities (Central & State Government)	5,75,000	
Interest accrued on Investments	15,000	
Balances with Reserve Bank of India	2,00,000	
Balance with Other Banks - (Current Accounts)	1,50,000	
Borrowings from Central Bank of India (unsecured)		4,00,000
Bills Payable		2,00,000
Fixed Deposits		25,00,000
Current Accounts		40,00,000
Contingency Accounts		4,00,000
Loans	50,00,000	
Cash Credits	80,00,000	
Overdrafts	7,70,000	
Savings Accounts		65,00,000
Unclaimed Dividends		25,000
Bills Discounted & Purchased	15,00,000	
Branch Adjustments		74,000
Profit & Loss A/c (1-4-2014)		1,00,000
Advances	7,50,000	
Premises (less depreciation)	6,00,00	
Furniture (less depreciation)	2,00,000	
Provision for taxation		3,91,000
Profit for 2015		4,20,000
	1,84,10,000	**1,84,10,000**

Following further information is given.

a) Authorised Capital is Rs. 1,00,00,000 (2,00,000 Shares of Rs. 50 each.)

b) Issued Capital is half of the Authorised Capital. All Shares are fully subscribed on which Rs. 25 per share are paid up.

c) Constituents 'Liabilities for Acceptances and Endorsements Rs. 22,00,000.

d) Bills for collection Rs. 15,00,000.

e) Contingent liability for partly paid shares Rs. 2,00,000.

f) Provide for doubtful loans Rs. 20,000.

g) Market value of Investment on 31-3-2008 were

  i) Shares in companies Rs. 5,25,000

  ii) Government securities Rs. 6,00,000

Solution - 6

Form 'A'

Balance Sheet of Friends Bank Ltd.

as on 31-3-2015

Particulars	Schedule No.	Current Year	Previous Year
Capital and Liabilities			
Capital	1	25,00,000	
Reserve and surplus	2	14,00,000	
Deposits	3	13,400,000	
Borrowings	4	4,00,000	
Other Liabilities and provisions	5	6,90,000	
Total		**1,83,90,000**	
Assets			
Cash in hand and with R.B.I.	6	3,50,000	
Balance with other banks, money at call and short notice	7	1,50,000	
Investments	8	10,75,000	
Advances	9	1,60,00,000	
Fixed Assets	10	8,00,000	
Other Assets	11	15,000	
Total		**1,83,90,000**	
Contingent Liabilities	12	24,00,000	
Bills for collection	--	15,00,000	

Working Details

Schedule No. 1 - **Capital**

Authorised Capital				
200000 shares of Rs. 50 each			1,00,00,000	
Issued and paid up Capital				
1,00,000 shares of Rs. 50 each Rs. 25 per share paid up			25,00,000	
Total			**25,00,000**	

Schedule No. 2 - **Reserve and Surplus**

General Reserve			3,00,000	
Statutory Reserve	6,00,000			
Add - 20% of current profit	84,000		6,84,000	
Balance of profit & loss appropriation A/c.			4,16,000	
Total			**14,00,000**	

Schedule No. 3 - **Deposits**

Fixed deposits		25,00,000	
Current Accounts		40,00,000	
Contingency Accounts		4,00,000	
Saving Accounts		65,00,000	
Total		**1,34,00,000**	

Schedule No. 4 - **Borrowings**

Borrowing from Central Bank of India		4,00,000	
Total		4,00,000	

Schedule No. 5 - **Other Liabilities and Provisions**

Bills payables		2,00,000	
Unclaimed dividend		25,000	
Branch adjustments		74,000	
Provision for taxation		3,91,000	
Total		**6,90,000**	

Schedule No. 6 : **Cash in hand and with R.B.I.**

Particulars	Current Year	Previous Year
Cash in hand	1,50,000	
Balance with Reserve Bank of India	2,00,000	
Total	**3,50,000**	

Schedule No. 7

Balance with other Banks, money at call and short notice.

Particulars	Current Year	Previous Year
Balance with other Bank	1,50,000	
Total	**1,50,000**	

Schedule No. 8 : **Investments**

Particulars	Current Year	Previous Year
Investment in shares (M.V. Rs. 5,25,000)	5,00,000	
Investment in Government securities	5,75,000	
(Market value Rs. 6,00,000)		
Total	**10,75,000**	

Schedule No. 9 : **Advances**

Loans	50,00,000		
Less : Provision	20,000	49,80,000	
Cash Credits		80,00,000	
Overdrafts		7,70,000	
Bills discounted and purchased		15,00,000	
Advances		7,50,000	
Total		**1,60,00,000**	

Schedule No. 10 - **Fixed Assets**

Premises less depreciation	6,00,000	
Furniture less depreciation	2,00,000	
Total	**8,00,000**	

Schedule No. 11 - **Other Assets**

Particulars	Current Year	Previous Year
Interest accrued on investment	15,000	
Total	**15,000**	

Schedule No. 12 - **Contingent Liabilities**

Contingent liabilities for Acceptances	22,00,000	
Liability for partly paid shares	2,00,000	
Total	**24,00,000**	

P & L Opening Balance		:	1,00,000
Add :	Current year profit	:	4,20,000
			5,20,000
Less :	Bad debt provisions	:	20,000
			5,00,000
Less :	Transfer to statutory reserve	:	84,000
			4,16,000

1.10 Important Adjustments/items and their effects in Bank Final Accounts:

1) Depreciation on bank property :

If it is asked to charge on original cost but written down value of asset is given then add amount of depreciation to the W.D.V. for getting original cost of asset.

a) Show the asset at its original cost in schedule No. 10 and deduct the total amount of depreciation from original cost.

b) Show the amount of depreciation of current year in operating expenses schedule No. 16

2) Rebate on bills discounted / unexpired discount :

If it is given in trial balance - show in Schedule No. 5 if it is given for adjustment:-

a) Deduct the amount of rebate from Interest and discount in Schedule No. 13

b) Show the amount of rebate in other liabilities and provisions in Schedule No. 5

If it is overvalued then deduct from rebate amount and add in interest and discount in Schedule No. 13

If it is under - valued then add the amount in rebate and deduct from the interest and discount in Schedule-13

3) Provision for bad and doubtful debts :

Deduct the amount of provision from loans, cash credit and overdrafts in Schedule No. 9 and put the amount of provision in P & LA/c under the head provision

4) Provision for taxation :

Show the amount of provision for tax in profit & loss account (Form 'B') under provision or other provisions and show the same amount of Provision in Schedule No. 5 (other Liab. and Provisions)

5) Statutory Reserve :

To transfer to statutory reserve is a statutory provision and hence not clearly stated in adjustments: Therefore every year transfer 20% of current years profit to statutory reserve.

Firstly add in statutory reserve in Schedule No. 2 and then show in appropriations (P & L A/c)

6) Acceptances, Endorsements on behalf of Customers :

It is a contingent liability and not actual liability hence it is shown only in Schedule No. 12 as it has no effect on tally of Balance Sheet.

7) Bills for Collection :

These are bill send by customers to bank for collection. These are not asset or liabilities of bank. Bank is just acting as an agent in this regard. It is shown outside the Balance Sheet just below the contingent liability.

8) Gold/Silver :

Gold is shown in Schedule NO. 8 (Investment) while silver is shown in Schedule No. 11 (Other Assets)

9) Accrued Interest on investment-

If it is given in trial balance, show it in Schedule No. 11 (Other Assets)

If it is given for adjustment then show in Schedule No. 13 and Schedule No. 11

1.11 Key Words :

1) Non banking assets :

The assets which are not required for banking operation are called as non banking assets. These are acquired by bank against security of loans advanced.

2) Money at call and short notice :

Such loans are advanced by banks from surplus cash to the needy banks loans repayable within 24 hours are termed as 'Money at Call'. Loans repayable by a notice of seven days are termed as 'Money at Short Notice'.

3) Bad debts :

Such part of advances, which is irrecoverable from clients.

4) Rebate on bills discounted :

This is a amount of discount received in advance. Bank discounts the bill, gets discount on it, but some amount received on discounting of bill may relate to next year. Such amount of discount related to next year but received in current year is treated as rebate on bills discounted.

5) Contingent Liabilities :

This is a liability, which is not actual liability but may occur in future.

6) Letter of Credit :

It is a letter addressed by a banker certifying that a person named therein is entitled to draw on him a credit up to certain limit. Unpaid balance of this letter on the Balance Sheet date form s liability of the issuing bank.

7) Unclaimed Dividends :

It is a amount of dividend which is declared by bank but not collected by share holders it forms part of liability of a bank.

1.12 Self Study Questions :

Exercise – 1

The following Trial Balance has been extracted from the books of Commercial Bank Ltd. as on 31st March, 2015.

Particulars	Debit Rs.	Credit Rs.
Cash with RBI	5,00,000	
Cash in Hand	3,70,000	
Current and Contingency A/c		26,00,000
(before setting off overdraft of Rs. 1,00,000)		
Savings Bank Account		40,00,000
Fixed Deposit Account		15,00,000
Bills Purchased and Discounted	20,00,000	
Loans, Cash Credits including overdrafts	91,00,000	
Rebate on Bills Discounted		1,50,000
Bills Payable		2,50,000
Investments in Securities	16,00,000	
Reserve Fund		12,00,000
Non-Banking Assets acquired	1,00,000	
Gold	2,00,000	
Furniture	1,25,000	
Premises	3,75,000	
Profit and Loss A/c.		1,40,000
Interest Accrued	40,000	
Outstanding Liabilities		60,000
Borrowings from Banks		2,00,000
Margin Money held against letter of credit issued		70,000
Issued and fully paid up Equity Share Capital		42,40,000
	1,44,10,000	**1,44,10,000**

With the help of the above trial balance, prepare the Balance Sheet as on 31st March 2015, Provide Rs. 5,50,000 for Doubtful Debts.

Bills for Collection outstanding on 31-3-2015 Rs. 2,25,000

Authorised Capital consists of 8,48,000 Equity Shares of Rs. 10 each. Acceptances, Endorsements and other obligations Rs. 3,00,000. Contingent liability for public issue of shares underwritten Rs. 4,00,000.

Exercise – 2

From the following balances which are extracted from the books of Hindustan Bank, prepare the Profit and Loss Account for the year ending 31 March 2015 and a Balance Sheet as on that date.

Particulars	Rs.
Share Capital : 2,000 Shares of Rs. 500 each Rs. 200 per Share paid up	4,00,000
Bad debts written off	25,742
Reserve fund investments	2,00,000
General expenses	36,484
Current Accounts	40,48,844
Interest paid on Deposits	32,104
Deposit Accounts	13,84,046
Profit and Loss A/c (Cr.)	45,868
Particulars	**Rs.**
Acceptance for customers	3,08,564
Discount	48,752
Endorsements and Guarantee	14,804
Commission, Exchange and Brokerage	8,848
Cash 45,308	
Interest received	1,06,452
Cash with Reserve Bank	4,02,420

(Conted. on next page)

Endorsements and Guarantee as per Contra	14,804
Owing by Foreign correspondent	40,088
Customers Liabilities for Acceptances	3,08,564
Borrowings from other Banks	12,96,412
Loans and Advances to customers	30,91,340
Investments	19,76,508
Bills discounted	12,45,648
Premises	4,43,580
Statutory Reserve	2,00,000

The following information is relevant:

a) Reserve Rs. 6,438 as Rebate on bills discounted.

b) Provide Rs. 15,000 for taxation reserve.

Exercise - 3

Following balances were extracted from the books of Sadhana Bank Ltd. as on 31st March 2015.

Particulars	Rs.
Share Capital	6,00,000
Share Premium	1,80,000
Buildings	1,30,000
Deposits with RBI	1,50,000
Cash in Hand	22,700
Cash with other Banks	50,000
Investment in Government Securities	3,88,000
Other Investments	3,12,000
Gold Bullion	30,260
Bills for collection	87,000
Interest accrued on Investment	49,240

(Conted. on next page)

Loss on sale of Investment	60,000
Employees Security Deposits	30,000
Savings Deposits	14,840
Current Deposits	1,94,000
Fixed Deposits	46,100
Profit on Bullion	2,400
Acceptance and Endorsements	1,13,000
Miscellaneous Income	5,400
Non-Banking Assets	4,000
Statutory Reserve	2,80,000
Furniture	10,000
Postage and Telegram	100
Managing Directgr's Remuneration	24,000
Borrowings from other Banks	1,54,460
Money at Call and Short Notice	52,000
Director's Fees	2,400
Interest (Dr)	15,900
Advances	4,00,000
Loss on Sale of Furniture	2,000
Bills discounted and Purchased	25,000
Interest (Credit)	1,44,000
Discount (Credit)	84,000
Audit Fees	10,000
Salaries	42,400
Commission and Brokerage	50,600
Rent (Cr.)	1,200
Profit and Loss A/c. (Cr.)	13,000

Prepare Profit and Loss Account and Balance Sheet after considering the following :

1. Provide for Taxation Rs. 20,000.
2. Claim by employees for Bonus Rs. 30,000 is to be provided.
3. As security of current deposits reveals that there are three accounts overdrawn to the extent of Rs. 50,000 and total of credit balance is Rs. 2,44,000
4. Allow 5% depreciation on buildings.
5. Provision for bad and doubtful debts is required amounting to Rs. 20,000.

Exercise – 4

From the following you are required to prepare the Profit and Loss Account and the Balance Sheet of the Shivaji Bank Limited as on 31 st March 2015 in prescribed form :

Particulars	Debit Rs.	Credit Rs.
Issued Capital 20,000 shares of Rs. 100 each		20,00,000
Money at call and short notice	8,00,000	
Reserve Fund		7,00,000
Cash in hand and with RBI	6,50,000	
Deposits		
a) Saving		10,00,000
b) Current		5,00,000
c) Fixed		10,00,000
Cash with other Banks	9,50,000	
Borrowing from SBI		5,00,000
Investment in Government Securities	9,00,000	
Secured Loans	15,00,000	

Cash Credits	5,00,000	
Premises less depreciation	5,80,000	
Furniture less depreciation	1,20,000	
Rent	5,000	60,000
Interest and discount		8,00,000
Interest paid on deposits	3,00,000	
Commission and brokerage		70,000
Salaries to the staff	1,50,000	
Interest paid on borrowings	50,000	
Audit Fees	10,000	
Directors Fees	8,000	
Bill discounted	80,000	
Depreciation on Bank's property	13,000	
Printing and Stationery	8,000	
Postage	6,000	
	66,30,000	**66,30,000**

Adjustments:

a) Provide Rs. 20,000 for doubtful debts.

b) Acceptances and endorsements on behalf of customers amounting to Rs. 4, 00, 000.

c) Provide Rs. 60,000 for taxation reserve.

d) Provide Rs. 1 0,000 on bill discounted but not matured on 31 March 2015

Exercise - 5

From the following balances extracted from the books of Laxmi Vishnu Bank Ltd., Solapur prepare the Profit and Loss Account for the year ended 31 st March 2015 and the Balance Sheet as on that date.

Particulars	Rs.
Share Capital (Authorised and Issued)	
10,000 shares of Rs. 50 each, Rs. 30 paid	3,00,000
Reserve Fund	1,00,000
Money at call and Short Notice	1,25,000
Investment at cost	10,00,000
Interest paid on Deposits and Borrowings	70,000
Law Charges	3,000
Postage and telegrams	2,000
Salaries (including remuneration to Managing Director	
Rs. 10,000 and Directors Fees Rs. 6,000)	45,000
Rent, Taxes and Insurance	4,000
General Expenses (Including Statinery Rs. 3,000	
auditor's fees Rs. 5,000 and other expenditure Rs. 2,000)	10,000
Deposits : a) Fixed	5,00,000
b) Saving	2,00,000
b) Current	23,00,000
Premises (after Depreciation upto 31-3-2014 Rs. 25,000)	1,75,000
Furniture (after Depreciation upto 31-3-2014 Rs. 5,000)	15,000
Cash in Hand	35,000
Cash with RBI	2,00,000
Cash with other Banks	3,00,000
Borrowings from other Banks	3,50,000
Interest and Discount	2,23,250
Profit and Loss Account (Credit balance on 1-4-2014)	50,000
Dividend for the year 2013-2014	30,000
Loans, Cash Credit and Overdrafts	16,14,250
Bills Payable	25,000
Bills discounted and Purchased	3,50,000

Unclaimed Dividend	5,000
Branch Adjustment (Cr.)	12,500
Commission and Exchange	22,500
Library Books	6,000
Repairs to Bank Property	4,000
Non-Banking Assets	25,000
Gold Bullion	75,000

Adjustments :

1. Provide depreciation at 5% on Premises and at 10% on Furniture. (On original cost of the assets in question)
2. Provide Rs. 20,000 for Bad and Doubtful Debts.
3. Provide Rs. 25,000 for Taxation.
4. Rebate on Bills Discounted for unexpired period amounted to Rs. 750
5. The Bank has accepted on behalf of customers bills worth Rs, 1,00,000 and has Bills for collection being bills receivables, worth Rs. 50,000.

Exercise – 6

From the following balances extracted from the books of Dhanlaxmi Bank Ltd., Solapur prepare the Profit and Loss Account for the year ended 31 st March 2015 and the Balance Sheet as on that date.

Particulars	Rs.
Share Capital (Authorised and Issued)	
20,000 shares of Rs. 50 each, Rs. 30 paid	6,00,000
Reserve Fund	2,00,000
Money at call and Short Notice	3,00,000
Investment at cost	20,00,000
Interest paid on Deposits and Borrowings	1,40,000
Law Charges	6,000

Postage and telegrams	4,000
Salaries (including remuneration to Managing Director Rs. 20,000 and Directors Fees Rs. 12,000)	90,000
Rent, Taxes and Insurance	8,000
General Expenses (Including Statinery Rs. 6,000 auditor's fees Rs. 10,000 and other expenditure Rs. 4,000)	20,000
Deposits : a) Fixed	10,00,000
b) Saving	4,00,000
c) Current	46,00,000
Premises (after Depreciation up 3*1-3-2014 Rs. 50,000)	3,50,000
Furniture (after Depreciation upto 31-3-2014 Rs. 10,000)	30,000
Cash in Hand	70,000
Cash with RBI	4,00,000
Cash with SBI	6,00,000
Borrowings from Bank of India	7,50,000
Interest and Discount	4,46,500
.Profit and Loss Account (Credit Balance on 1-4-2014)	1,00,000
Dividend paid for the year 2013-14	60,000
Loans, Cash-Credits and Overdrafts	32,28,500
Bills Payable	50,000
Bills Discounted and Purchased	7,50,000
Rebate on Bills Discounted (on 31-3-2014)	10,000
Branch Adjustments (Cr.)	25,000
Commission, Exchange received	45,000
Library - Books	12,000
Repairs to Bank Property	8,000
Gold Bullion	1,50,000

Adjustments :

1. Provide depreciation at 5% on Premises and at 10% on Furniture. (On original cost of the assets)
2. Provide Rs. 58,000 for Bad and Doubtful Debts.
3. Rebate on Bills Discounted as on 31-3-2015 amounted to Rs. 16,500 for unexpired period.
4. Loans advanced by bank included a sum of Rs. 1,00,000 due from a customer against the mortgage of his machinery. As the client is unable to pay the amount, the bank takes over the machinery at the market value of Rs. 70,000 in full satisfaction of its claim on the date of Trial Balance.

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Unit-2

a) Farm Accounting

2.0 Objective

After studying this unit you will be able to understand –

- The objectives of farm accounting.
- The book keeping and preparation of financial statements for farm transactions.
- The special features of depreciation on fixed assets.

2.1 Introduction

Agriculture activity is a predominant activity in India. In the recent years, Commercial farming has been assuming great importance, particularly in States like Punjab, Tamil Nadu, Andhra Pradesh and Haryana. Farming activities now comprises not only of growing crops but also include animal husbandry (rearing of livestock), poultry farming, sericulture (silkworm breeding), pisciculture (rearing of fish), floriculture (growing flowers) etc. As a result of this development, 'farm accounting' has attracted great attention.

2.2 Subject Matter

2.2.1 Meaning of farm accounting

In the recent years, commercial farming has been assuming great importance. Agriculture activity is a predominant activity in India. Farming activity includes animal husbandry, poultry farming, sericulture, pisciculture etc. Corporate entities are entering in the farming business in a big way. Therefore, the Institute of Cost and Works Accountant of India issued a booklet, explaining how the farm books should be kept and how the profit or loss arising from the farming operations should be ascertained.

Features of farm Accounting :

While preparing the farm accounts, one should be guarded about the peculiar features of farm accounting. Some of the features of farm transactions are given below:

1. The farm business is family type. It is confined to the family. The farmer keeps a single bank account for business and for his private purposes.

2. Part of the produce and products of the farm are consumed by the family.
3. The farmer and his family members may work on the farm without receiving any specified wages.
4. Farming activities are not confined to raising crops alone. Besides raising crops, the farmers, engage themselves in other farming activities like poultry, dairying, pig production, rearing fish, growing flowers etc.
5. Inventory valuation of standing crops, cattle, poultry, etc., is the most difficult one.
6. Agriculture operations on a farm are subject to natural calamities such as pests, diseases, floods, weather conditions etc. and variations in Governments policies, market prices of inputs, like, fertilizers, seeds, chemicals.
7. Most of the small farmers are illiterate and they cannot afford the expense of employing someone to maintain the accounts.
8. Even big farmers are not aware of accounting techniques which can prove useful for managerial decisions.
9. The collection of statistical data is done in a conventional manner.
10. Agriculture sector in India is unorganized and dominated by small farmers. The average size of holding land is very small etc.

Objectives of Farm Accounting

Following are the objectives of maintaining farm accounts;

1. To ascertain the financial position of the farming operations at any time.
2. To provide acceptable accounting records which can form the basis for securing finance from financial institutions.
3. To understand the Crop-wise performance so that the profitable and unprofitable activities can be segregated.
4. To provide reliable and useful information for assessment of agriculture income tax.
5. To have better control over farming activities.
6. To provide useful information for claiming compensation from government or insurance companies in case of loss suffered due to natural calamities etc.

Accounting for farms :

There are four types of transactions relating to farm activities i.e. Cash, Credit, exchange and national. The cash and credit transactions are recorded as usual. The exchange transactions, in the nature of barter, are normally recorded at opportunity cost that is the price in the open market. Notional transactions means the transactions which take place between the members of owner's family and the farm.

The performance of each crop shall be found out separately to understand the profitability of crops. The direct cost clearly identifiable with a crop shall be charged accordingly. The common cost should be suitable allocated on some accepted basis.

Books of Accounts :

Following books of accounts are maintained under farm accounting :

1. Cash Book for recording cash transactions. Analytical column cash book is prepared.
2. Debtors and Creditors Register to record credit transactions.
3. Stock Register is prepared for recording opening, purchase, sale and stock remained at the end.
4. Fixed Assets Register which contains the details of cost of asset, depreciation on it and closing balance.
5. Loan Register is prepared for recording loan amount and interest on it.
6. Register for National Transactions is prepared to record the transactions between farm and farm household.
7. Cost analysis Register for keeping record of each farming activity to know the profit of each activity etc.

Cost and Revenues:

Expenses and incomes associated with farming activities, other than agriculture activities are given below.

Farming Activities	Cost/Expenses	Revenues/Incomes
Poultry	Chicken feed, hay, packing, boxes, cost of shed, medicines, salaries and wages.	Sale of eggs, chickens, broilers, hens, sale of manures.

Dairy	Cattle feed, hay, cost of cultivation of feed crop, insecticides, salaries and wages, cost of maintaining milk processing facilities	Sale of milk, milk products, calves, dairy cattle and slaughtered cattle
Fisheries	Cost of seed and water, fish feed, cost of tanks, catching expenses depreciation on assets, salaries and wages	Sale of fish

Preparation of Final Accounts :

Farm final accounts can be prepared according to any of the two methods i.e. Single entry method and Double entry method.

Single Entry Method : Under this method two statements are prepared one in the beginning of the year and another at the end of the accounting year. The excess of assets over liabilities is considered as a net worth of the business and the profit or loss made by business during a period can be ascertained by comparing the net worth of the business on two dates after making the adjusting entries of drawings, introduction of additional capital etc.

Double Entry method : Under this method farm account is prepared by following the principles of double entry system. This accounts is debited with opening stock and the relevant expenses incurred and credited with the sale proceeds and closing stock. The difference between debit and credit is show profit or loss. For every farm activity a separate columns are provided. The profit or loss of each activity is transferred to Balance Sheet.

Illustration 1 :

From the information given below prepare a 'Crop Account' to ascertain the gross profit made by this section of the farm :

Opening Stocks:	Rs.
Grains	8,000
Seeds	600
Fertilizers	3,000
Purchases :	
Seeds	8,200

Fertilizers	32,000
Sale of grain	
Grain distributed as wages	3,000
Wages paid in cash	3,700
Grains used by the proprietor	4,300
Grains consumed by the live stock section	2,700

Solution :

Dr. Crop Account Cr.

Particulars		Rs.	Particulars		Rs.
To Opening Stock			By Sales of Grain		32,000
Grains	8,000		Wages		3,300
Seeds	600		(Grains distributed)		
Fertilizers	3,000		Drawings		4,300
		11,600	Grains used by the Proprietor) Live stock section (grains consumed)		2,700
To Purchases :			Closing Stock :		
Seeds	1,800		Grains	3,700	
Fertilizers	8,200		Seeds	300	
		10,000	Fertilizers	400	
					4,400
To Wages :					
Cash	3,700				
Grains	3,300				
		7,000			
To Repairs and Maintenance		1,900			
To Depreciation Farm Machinery		2,500			
To Crop Insurance		600			
To Profit from Crops		13,100			
		46,700			46,700

Illustration 2 :

From the following information, prepare "Crop Account" to find out the profit made by the crop section of the farm.

	Rs.	Rs.
Opening Stocks :		
Grain	2,600	
Seeds	600	
Fertilizers	400	
		3,600
Purchases :		
Seeds	400	
Fertilizers	600	
		1,000
Wages paid in cash		3,500
Wages paid in kind by given grain		2,500
Sale of grain		25,400
Grain consumed by the proprietor		600
Grain consumed by the live stock section		2,400
Depreciation on farm machinery		1,000
Repairs and maintenance of farm machinery		2,000
Closing Stock		
Grain	2,000	
Seeds	400	
Fertilizers	600	
		3,000

Solution :

Dr. Crop Account Cr.

Particulars		Rs.	Particulars	Rs.
To Opening Stock			By Sales of Grain	25,000
Grains	2,600		By Wages in kind (contra)	2,500
Seeds	600		By Grain consumed by	
Fertilizers	400		live stock section	2,400
		3,600	By Grain consumed by the	
To Purchases :			proprietor (Drawings)	600
Seeds	400		By Closing Stocks:	

Fertilizers	600		Grain	2,000	
		1,000	Seeds	400	
			Fertilizers	600	3,000
To Wages :					
In Cash	3,500				
In Kind	2,500				
		6,000			
To Depreciation		1,000			
To Repairs and Maintenance		2,000			
To Crop profit transferred to Profit and Loss A/c		20,300			
		33,900			33,900

Illustration 3 :

From the following information prepare Cattle Account to ascertain the profit made by the cattle division.

	No.	Value Rs.
Opening Stock of live stock	100	2,00,000
Closing stock of live stock	118	2,42,000
Opening stock of cattle food		4,000
Closing stock of cattle food		5,000
Purchases of cattle during the year	180	3,70,000
Sales of cattle during the year	175	4,38,000
Sales of carcasses	5	1,000
Purchases of cattle food		40,000
Wages of rearing cattle		10,000

Crop worth Rs. 11,000 grown in the farm was used for feeding the cattle. Out of the calves born 4 died and their carcasses realised Rs. 100.

Solution :

Dr. Cattle Account Cr.

Particulars	No	Amount Rs.	Particulars	No.	Amount Rs.
To Opening Stock			By Sale of Cattle	175	4,38,000
of live stock	100	2,00,000	By Sales of carcasses	5	1,000
To Purchase of cattle	180	3,70,000	By Sales of carcasses of		
To Calves born (Bal. fig.)	22	---	calves	4	100
To Cattle food :			By Closing stock of		
Opening Stock 4,000			live stock	118	2,42,000
Purchases 40,000					
44,000					
Less Closing stock 5,000					
		39,000			
To Wages for rearing cattle		10,000			
To Crop Account-Crop grown in the farm used for feeding cattle		11,000			
To Net profit transferred to General profit and Loss Account		51,000			
	302	6,81,100		302	6,81,100

Illustration 4 :

From the information given below, prepare a "Crop Account" to ascertain the gross margin made by this division of the farm.

Opening Stock	Rs.
Grain	3,000
Seeds and fertilizers	2,000
Purchases :	
Seeds	500
Fertilizers	1,500
Sale of grain	15,000
Grain distributed as wages	2,000

Wages paid in cash	3,000
Grain consumed by the proprietor	2,000
Grain consumed by the live stock section	1,500
Repairs and maintenance of farm machinery	1,200
Depreciation on farm machinery	300
Crop insurance	500
Closing Stock :	
Grain	6,000
Seeds and fertilizers	3,000

Solution :

Dr. Crop Account Cr.

Particulars		Rs.	Particulars		Rs.
To Opening Stock			By Sale of grain		15,000
Grain	3,000		By Wages (contra)		2,000
Seeds and fertilizers	2,000		By Drawings – grain consumed		
		5,000	by proprietor		2,000
To Purchases :			By Live stock section-grain		
Seeds	500		consumed by animals		1,500
Fertilizers	1,500				
		2,000	By Closing Stock		
To Wages			Grain	6,000	
Cash	3,000		Seeds and fertilizers	3,000	
Grain	2,000				9,000
		5,000			
To Crop insurance		500			
To Repairs and maintenance		1,200			
To Depreciation		300			
To Profit transferred to general profit and loss account		15,500			
		29,500			29,500

Illustration 5 :

From the following Trial Balance extracted from the books of Suraj Farms draw up the final accounts for the year ended 31st March, 2015 and the Balance Sheet as on the date :

Debit Balances		Rs.	Credit Balances		Rs.
Stock on 1-4-2014			Sales		
Live stock	1,50,000		Live Stock	48,000	
Paddy	60,000		Paddy	2,12,000	
Cattle feed	11,000		Milk	1,57,000	4,17,000
Fertilizers	5,000		Sundry Creditors		26,000
Seeds	3,000	2,29,000	Outstanding expenses		4,000
Purchases :			Capital Account		4,41,800
Live Stock	30,000				
Cattle feed	60,000				
Fertilizers	16,000				
Seeds	5,800	1,11,800			
Sundry Debtors		21,000			
Repairs and Maintenance of Farm equipments		12,000			
Farm equipments		1,50,000			
Crop expenses		50,400			
Live stock expenses		12,500			
General expenses		11,700			
Cash in hand		7,300			
Cash at Bank		8,500			
Land		2,75,000			
		8,89,200			8,89,200

Additional Information :

1. Closing stock as on 31-03-2015

   Live stock Rs. 1,32,000; Paddy Rs. 30,000; Cattle feed Rs. 6,000; Fertilizers Rs. 3,500; Seeds Rs. 2,700.

2. The consumption of the farm output by the proprietor:

   Milk etc., Rs. 6,000

   Paddy Rs. 9,500

3. Provide 10% depreciation on Farm Equipments and 2% on Land and Buildings.

Solution :

Trading and Profit and Loss Account

Dr. for the year ended 31-03-2015 Cr.

Particulars	Rs.	Rs.	Particulars	Rs.	Rs.
To Opening Stock			By Sale of Cattle		
Live stock	1,50,000		Live stock	48,000	
Paddy	60,000		Paddy	2,12,000	
Cattle feed	11,000		Milk	1,57,000	4,17,000
Fertilizers	5,000				
Seeds	3,000	2,29,000	By Produce consumed		
			by proprietary		
To Purchase			Milk	6,000	
Live stock	30,000		Paddy	9,500	15,500
Cattle feed	60,000				
Fertilizers	16,000		By Closing Stock :		
Seeds	5,800	1,11,800	Live stock	1,32,000	
			Paddy	30,000	
To Crop expenses		50,400	Cattle feed	6,000	
To Live stock expenses		12,500	Fertilizers	3,500	
To Gross Profit		2,03,000	Seeds	2,700	1,74,200
		6,06,700			6,06,700
To General expenses		11,700	By Gross Profit		2,03,000
Repairs and Main.		12,000			
Depreciation					
From Equipments	15,000				
Land & Buildings	5,500	20,500			
To Net Profit		1,58,800			
		2,03,000			2,03,000

Balance Sheet

as on 31-03-2015

Particulars	Rs.	Amt.	Particulars	Rs.	Amt.
Sundry Creditors		26,000	Cash in hand		7,300
Outstanding exp.		4,400	Cash in Bank		8,500
Capital A/c	4,41,800		Sundry Debtors		21,000
Less : Produce consumed	15,500		Closing Stocks :		
	4,26,300		Live Stock	1,32,000	
Add : Net Profit	1,58,800	5,85,100	Paddy	30,000	
			Cattle feed	6,000	
			Fertilizers	3,500	
			Seeds	2,700	1,74,200
			Farm equipments	1,50,000	
			Less : Depreciation	15,000	1,35,000
			Land & Buildings	2,75,000	
			Less : Depreciation	5,500	2,69,500
		6,15,500			6,15,500

Illustration 6 :

Mr. Gopal has a five acres farm land. He grows rice on four acres. The balance area has mango trees. Other particulars about his activities, during 2014-15 are :

	Amount Rs.
Opening stock of fertilizers	30,000
Rice saplings purchases	50,000
Water Charges	12,000
Sprinkler system	60,000
Pump	30,000
Fertilizer purchases	90,000
Insecticide spraying charges`	9,000
Wooden boxes purchased during the year	6,000

Jute bags purchased during the year	48,000
Agriculture labour wages	60,000
Orchard labour wages	24,000
Threshing Machine	10,000
Dead trees sold	5,000
Salary to Manager	6,000

During the year, he obtained 90,000 mangoes from his trees, which he disposed off at Rs. 10 per dozen. All the boxes were used for packing.

He also obtained 100 quintals rice per acre, half of which fetched him Rs. 7 per kilo and the rest Rs. 5 per kilo. One-tenth quantity of the bags purchased, remained unutilized. Fertilizers, worth Rs. 20,000 remained in stock at the end of the year. Depreciation is to be provided at 10 per cent. Rural development authority of his region monitors his performance and he needs to provide product wise Profit and Loss Account to them. He apportions common expenses in proportion of the area under each product. Insecticide is required to be sprayed once in every three years on mango trees to keep them free from harmful insects.

Prepare product wise Profit and Loss Accounts.

Solution :

In the Books of Mr. Gopal

Profit and Loss Account

Dr. for the year ended 31-03-2015 Cr

Particulars	Rice	Mango	Particulars	Rice	Mango
To Purchases			By Sales	2,40,000	75,000
Rice Saplings	50,000	--	By Scrap sale		
To Fertilizers consumed	80,000	20,000	Sale of dead trees	---	5,000
To Jute Bags consumed	43,200	---			
To Wooden Boxes	---	6,000			
To Labour Wages	60,000	24,000			
To Salary to Manager	4,800	1,200			
To Water Charges	9,600	2,400			
To Depreciation on					
Sprinkler					

system @ 10%	4,800	1,200			
To Water Charges	9,600	2,400			
To Depreciation on					
Sprinkler					
system @ 10%	4,800	1,200			
Pump @ 10%	2,400	600			
Thresher @ 10%	1,000	---			
To Insecticide					
Spraying		3,000			
To Profit c/d		21,600	By Loss c/d	15,800	
	2,55,800	80,000		2,55,800	80,000

2.3 Summary :

Farming is similar to any other business, occupation etc. However, it has some special peculiar features. These features deserve special attention while designing farm accounting or accounting practices. Agriculture sector in India is most unorganized. Even big farmers are not fully aware of accounting techniques of farm accounting. However, efforts should be made to make farm accounting more popular so that advantages of farm accounting may be obtained by Indian farmers.

2.4 Check your Progress

A) Fill in the gaps.

1. .... Activity is a predominant activity in India.
2. .... is the application of accounting practices in agriculture operations.
3. Land development expenses is included in the cost of ....
4. .... is usually not depreciated because its monetary value tends to increase with the passage of time.
5. .... transactions are those that take place between the members of the owner's family and the farm.

B) State the following statements are true or false.

1. Farming sector in India is by and large, unorganized.
2. Only big farmers in India are aware of accounting techniques related to farm accounting.

3. When farm products are consumed by farm workers it is debited to wages accounting.

4. Farm accounting is still in its infant stage of development in India.

5. The collection of data of farm accounting is done in a conventional manner.

2.5 Key Terms

- **Land development expenses :** A business may purchase land for cultivation. When virgin land is to be cultivated, a big sum has to be spent for clearing the land, leveling, bunding and providing irrigation and drainage facilities. All these expenses are termed as 'land development expenses' and should preferable be added to the cost of land.
- **Depreciation on assets :** Depreciation must be provided on farm assets but not depreciation is provided on land because its monetary value tends to increase with the passage of time.
- **Drawings :** The treatment of drawings in kind (i.e. dairy products and crop products consumed by the family) is done by making the following entry;

  Drawing A/c Dr.

  To Milk/Crops A/c

The wages paid in kind of labours :

Wages A/c

To Milk/Crops A/c

2.6 Answer to check your progress

A) 1. Farm 2. Farm accounting 3. Land 4. Land 5. National

B) 1. True 2. False 3. True 4. True 5. True

2.7 Exercise :

(Theory and Practical Problems)

A) Write short notes

a) Features of farm Accounting

b) Objectives of farm Accounting

c) Crop Accounts

d) Accounting for farms

Exercise-1

From the following Trial Balance, extracted from the books of Raj Farms, draw up the final accounts for the year ending 30th March, 2014.

Debit Balances		Rs.	Credit Balances		Rs.
Stock on 1-4-2013		26,000	Sundry Creditors		2,600
Live Stock	15,000		Outstanding expenses		400
Paddy	6,000		Sales :		
Cattle feed	1,000		Live stock	4,800	
Fertilizers	500		Paddy	42,500	
Seeds	500	23,000	Milk	25,700	73,000
Purchases :			Capital Account		50,300
Live stock	3,000				
Cattle feed	10,800				
Fertilizers	1,600				
Seeds	500	15,900			
Sundry Debtors		2,100			
Repairs and maintenance of farm machinery		2,200			
Farm Machinery		15,000			
Crop expenses		5,400			
Live stock expenses		3,800			
General expenses		3,900			
Cash in hand		1,500			
Cash at bank		8,500			
Land		45,000			
		1,26,300			1,26,300

Additional Information :

1. Closing stocks : Live stock, Rs. 10,000; Paddy Rs. 5,000; Cattle feed Rs. 600; Fertilizers Rs. 400.
2. Mr. Raj has consumed the following items out of his farm output :

Milk	Rs. 3,000
Paddy	Rs. 500

Provide 10% depreciation on farm machinery.

Exercise-2

From the following Trial Balance of Viraj, prepare trading and profit and loss account for the year ending 31st March, 2015 and a balance sheet as on that date.

Debit Balances		Rs.	Credit Balances	Rs.
Opening Stock			Sales :	
Paddy	500		Paddy	3,000
Potatoes	800		Potatoes	2,000
Cattle	1,000		Sugar cane	3,000
Sheep	700	3,000	Cattle	10,000
			Milk etc.	2,000
Purchases :			Sheep	3,000
Cattle	8,000		Loan from Land	
Sheep	1,000		Development Bank	8,700
Seeds	500		Capital Balance	20,000
Manures	1,000		Creditors for supplies	2,000
Cattle feed	1,000	11,500		
Crop expenses :				
Labour	400			
Other expenses	300	700		
Live stock expenses :				
Veterinary and medicines	500			
Labour	200			
Dairy expenses	300	1,000		
Expenses of machinery				
Repairs	300			
Diesel and oil	500			
Electricity	200	1,000		
General overheads :				
Rent and rates	1,000			
Insurance	200			
Wages for permanent labour	800			
Bank interest	500	2,500		

Farm Machinery	10,000		
Cash in hand	1,000		
Cash at Bank	3,000		
Land	20,000		
	53,700		53,700

Additional Information :

1. Closing stock : Rs.
   - Paddy 1,000
   - Potatoes 600
   - Cattle 1,500
   - Sheep 1,000
2. 50% of rent and rates may be taken as the share of Mr. Viraj for his residence.
3. Mr. Viraj has consumed the following from out of farm output:
   - Milk etc. 200
   - Potatoes 100
   - Paddy 700
4. Provide 10% depreciation on machinery.

Exercise-3 :

From the following trial balance of Sandhya Farm, prepare Corp Account, Live-stock Account, Profit & Loss Account for the year ended 31st March, 2015, and Balance Sheet as on that date.

Trial Balance

Debit Balance	**Rs.**	**Credit Balance**	**Rs.**
Opening Stock :		Sundry Creditors	7,500
Growing Crops	5,000	Bank Overdraft	1,500
Wheat	2,500	Managers Personal Account	1,000
Fertilizer	2,500	**Sales :**	
Live-stock	12,500	Wheat	17,500
Feeding Materials	3,000	Live-stock	37,500
Crop Expenses	5,000	Loan	30,000

Live-stock Expenses	14,150	Provision for Depreciation	15,000
Farm House Expenses	600	Profit & Loss A/c	5,000
Interest on Loan (Crop)	2,000	Capital	1,35,000
Salaries & Wages :			
Manager's Salary	3,000		
Farm Labour	2,500		
Staff Meals	250		
Loan & Building	1,05,000		
Farm Machinery	54,000		
Sundry Debtors	15,000		
Cash in Hand	13,000		
Repairs to Machinery	500		
Tools & Implements	1,250		
Office Expenses	2,000		
Live-stock Purchases	6,250		
	2,50,000		2,50,000

Additional Information :

(a) Stock on 31st March, 1994 Growing crops Rs. 2,000; Wheat Rs. 2,000; Fertilizer Rs. 1,000; Live-stock Rs. 20,000; Feeding materials Rs. 500; Tools and Implements Rs. 1,000.

(b) Depreciation on Tools & Implements is to be allocated between Crop and Live-stock equally.

(c) Manager's salary and staff meals are charged 30% to the Live-stock Account and 80% to the Crop Account.

(d) Farm product worth Rs. 500 is consumed by cattles.

(e) Farm house expenses and Farm Labour distributed between Crop and Live-stock in the ratio of 3 : 2.

Exercise-4 :

From the following prepare : (i) Crop A/c, (ii) Live-stock A/c, (iii) Profit & Loss A/c for the year ended 31-3-2015 and (iv) Balance Sheet as on that date.

Particulars	Debit Rs.	Credit Rs.
Stocks (1-4-2014)		
Live-stock	6,000	--
Crops	4,000	--
Feed	200	--
Farm House Expenses	240	--
Crop Expenses	2,000	--
Live-stock Expenses	5,500	--
Live-stock Purchases	2,500	--
Salaries & Wages		
Farm Labour (Crop)	1,000	--
Manager's Salary	1,200	--
Legal Fees	600	--
Office Expenses	200	--
Staff Meals	100	--
Sundry expenses (Live-stock)	160	--
Repairs to Machinery	400	--
Repairs & Maintenance (Live-stock)	100	--
Interest on Loan (Crop)	600	--
Cash in Hand	2,800	--
Sundry Debtors	8,000	--
Tools & Implements	300	--
Sheds (Live-stock)	100	--
Farm Machinery	22,000	--
Land & Building	40,000	--
Sales :		
Live-stock	--	15,000
Corn & Strand	--	7,000
Provision for Depreciation	--	8,000

Manager's Personal Account	--	100
Sundry Creditors	--	1,000
Bank Overdraft	--	900
Loan	--	10,000
Capital	--	56,000
	98,000	98,000

Adjustments :

1. Depreciate machinery by Rs. 100 and charge it to Crop A/c only.
2. Crop worth Rs. 400 was used for feeding Live-stock.
3. Office expenses and legal fees are purely of Administrative nature.
4. Charge 10% of salaries and staff meals to Live-stock A/c.
5. Depreciation on tools and implements is to be apportioned between Crop and Live-stock in the ratio of 3 : 1.
6. The manager of the farm resides in the Farm House as Free Residence but chargeable only 1/3 of the Farm House Expenses and is also entitled to a commission of 5% on profit made by Live-stock A/c before his commission.
7. Closing Stocks on 31-3-2015 were :

Growing Crops	Rs.	2,000
Tools & Implements	Rs.	100
Live-stock	Rs.	8,000
Feed	Rs.	400

2.8 Further Readings

1) Advanced Accountancy – Shukla & Grewal
ii) Advanced Accountancy – Chakrab horthy
iii) Advanced Accountancy – R. R. Gupta
iv) Advanced Accountancy – R. L. Gupta
v) Advanced Accountancy – Tulsian
vi) Steps in Advanced Accounting – Maheshwari

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Unit - 2

b) Hire Purchase System

Excluding Hire Purchase Trading Account

Objectives :

After studying this unit students should be able to understand :

- Meaning and nature of Hire Purchase System.
- Difference between Hire purchase and Installment.
- Different Methods of calculation of Interest.
- Accounting entries to record hire purchase transactions.
- Accounting treatment after default in payment of installments.

Structure of Unit :

2.1 Meaning and Legal Position

2.2 Hire Purchase Agreement

2.3 Distinction between Hire Purchase and Installment

2.4 Terms used in Hire purchase

2.5 Accounting Entries in the books of Hire Purchaser and Vendor

2.6 Methods of calculation of interest.

2.7 Default and Repossession

2.8 Summary

2.9 Key words

2.10 Self Assessment Questions

2.1 Meaning and Legal Position :

Hire purchase means a transaction where goods are purchased or sold with the stipulation that (a) payment will be made by installments; (b) each installment will be treated as hire so that if default is made in the payment of even the last installment, the seller will be entitled to take away the goods without compensating the hire purchaser in any way; and (c) in case all instalments are paid, the goods will be treated as sold and property will pass to the purchaser. The property in the goods does not pass to the purchaser or hirer till the final instalment is paid.

He is free to return the goods without having to pay the instalment falling due after the return. In case of the instalment system, the property in the goods passes to the purchaser immediately the contract is signed and, if default is made in the payment of any instalment, the remedy open to the seller is to sue the purchaser for payment of the instalments due and not to take possession of the goods. This is the legal position but the intention of both the parties is, in both cases, to buy and sell, the payment being made in instalments.

The total payment made in case of hire purchase or instalment is more than the case price-naturally because in addition to case price, interest is also payable. It is necessary to calculate the interest so that the amount paid for interest is charged to revenue and the asset is capitalized only at the case price.

2.2 Hire Purchase Agreement :

Hire purchase agreement means an agreement under which goods are let on hire and under which the hirer has on option to purchase them in accordance with the terms of the agreement and includes the agreement under which :

i) Possession of goods is delivered by the owner thereof to a person on condition that such person pays the agreed amount in periodical instalments.

ii) The property in the goods (i.e. ownership of goods) is to pass to such a person on the payment of the last instalment; and

iii) Such a person has a right to terminate the agreement at any time before the property so pass.

2.3 Distinction between Hire purchase system and Instalments system :

Basis of Distinction	Hire Purchase System	Instalment System
1) Act Governing	It is governed by Hire Purchase Act 1972	It is governed by the Sale of Goods Act 1930
2) Nature of contact	It is an agreement of hiring.	It is an agreement of sale.
3) Passing of Title (ownership)	The title of goods passes on last payment.	The title of goods passes immediately.
4) Right to reposses	The seller may take possession of the goods if hirer is in default.	The seller can sue for price if the buyer is in default. He cannot take possession of the goods.
5) Right to Dispose off	Hirer can not hire out, sell, pledge or assign entitling transferee the goods till the payment of last instalment.	The buyer may dispose off the goods and give good title to bonafied purchaser.
6) Accounting	Asset account is debited step by step as and when instalments are paid.	The asset account is debited with full cash value immediately upon the agreement.

2.4 Terms used in Higher purchase Agreement :

a) **Hirer / Hire Purchaser :** A 'Hirer' means a person obtains possession of the goods from an owner under a hire purchase agreement.

b) **Hire vendor :** Hire Vendor means a person who delivers the possession of goods to the hirer under a hire purchase agreement.

c) **Cash Price :** Cash price means the price at which the goods may be purchased by the hirer for cash.

d) **Down Payment :** Down payment means an initial payment payable by the hirer on signing the hire purchase agreement.

e) **Hire Purchase Price :** Hire purchase price means the total sum payable by the hirer to the hire vendor. The hire purchase price includes cash price of the goods plus interest on outstanding balances.

Hire purchase price = Cash price + Interest on outstanding Balances.

2.5 I) Accounting Entries in the Books of Hire Purchaser :

Following are the two methods of recording the hire purchase transactions the books of hire purchase.

a) Part cash price method.

b) Full cash price method.

Part cash price method is generally used to record hire purchase transaction but if there is repossession of goods for non-payment of instalment by the hire vendor the full cash price method is suitable.

a) Part cash price method :

Performa Journal Entries :

Sr.No.	Nature of transaction	Journal Entry	
1.	For cash down (On signing the agreement) Payment becomes due	Asset A/c To vendor's Ac/ (with cash down payment)	Dr.
2.	For payment of cash down	Vendor's A/c To Cash / Bank A/c	Dr.
3.	When subsequent instalments Falls due	Asset A/c (with cash price) Interest A/c (with interest) To vendor's A/c (with amount of instalents)	Dr. Dr.
4.	When instalment is paid	Vendor's A/c To Cash / Bank A/c.	Dr.

(Conted. on next page)

5.	For charging depreciation At the end of the year	Depreciation A/c Dr. To asset A/c (At the given rate on full cash price)
6.	For closing of depreciation and interest A/c	Profit & Loss A/c Dr. To Depreciation A/c To Interest A/c

Notes :

i) The first entries are made only if cash down / advance payment is made at the time of singing the agreement.

ii) The entries 3 to 6 are to be repeated every year till the last year.

b) Full Cash price Method :

Under this method, the asset A/c is debited with full cash price on signing the agreement as if asset is purchased on credit Performa Journal Entries.

Sr.No.	Nature of transaction	Journal Entry
1.	On signing the agreement	Asset A/c Dr. To Vendor's A/c (with full cash price of asset)
2.	For payment of cash down amount	Vendor's A/c Dr. To cash / Bank A/c (with cash down amount)
3.	For instalments becomes Due	Interest A/c Dr. To vendor's A/c (with interest amount in instalment)
4.	For payment of instalments	Vendors A/c Dr. To Cash / Bank (with amount of instalments)

(Conted. on next page)

5.	For charging depreciation Of the end of the year	Depreciation A/c Dr. To Asset A/c. (with amount of depreciation)
6.	For transfer in interest and Depreciation to P & L A/c	Profit & Loss A/c Dr. To Interest A/c. To Depreciation A/c

Note : Entries 3 to 6 are to be repeated every year.

II) Accounting Entries in the books of Vendor :

Sr.No.	Nature of transaction	Journal Entry
1.	On singing the agreement	Hire purchaser's A/c Dr. To sales A/c (with Full cash price)
2.	For receipt of cash down Payment	Cash / Bank A/c Dr. To Hire purchaser's A/c (with cash down amount)
3.	When instalments becomes due	Hire purchaser's A/c Dr. To Interest A/c (with interest included in instalments)
4.	For receipt of instalment	Cash / Bank A/c Dr. To Hire purchaser's A/c (with the amount of instalments)
5.	For transfer of interest to P & L. A/c.	Interest A/c Dr. To profit & Loss A/c.

2.6 Methods of Calculation of Interest :

I) When Cash price, Hire Purchase Price and Rate of Interest are given :

When cash price, hire purchase price and rate of interest are given in the problem it is simple method. Interest at a given rate is calculated on the outstanding balance of cash price at the being of each year. Following are the illustrations.

Illustration – 1

On 1st April 2004, Sandeep purchased a machine for Ashok on hire purchase basis. The particulars are as follows :

i) Cash price of machne Rs. 20,000/-

ii) Cash down payment Rs. 8,000/-

iii) Balance in three annual instalment of Rs. 4,000/- plus interest.

iv) Interest to be charged on outstanding balance at 5% p.a.

v) Depreciation at 10% on reducing balance method.

For the above particulars pass journal entries in the books of both the parties and given necessary ledger accounts.

Solution :

In this problem cash price is given Rs. 20,000/- and total instalments is given also Rs. 20,000/- The rate of interest is 5% p.a. therefore we have to calculate the interest amount at the end of each year.

Installments Analysis Table :

Date	Outstanding Balance Cash price	Date of Payment	Instalment Advance	Interest	Portion of cash price	Depreciation of 10% on WDV
1-4-2004	20,000	1-4-2004	8,000	—	8,000	—
1-4-2004	12,000	31-3-2005	4600	600	4000	2000
1-4-2005	8,000	31-3-2006	4400	400	4000	1800
1-4-2006	4000	31-3-2007	4200	200	4000	1620

In the books of Sandeep (Hire Purchaser)

Journal Entries (Part Cash Method)

Date	Particulars		L.F.	Debit Rs.	Credit Rs.
1-4-2004	Machine A/c	Dr.		8,000	
	To Ashok A/c				8,000
	(Amount payable to Ashok on signing the agreement)				
1-4-2004	Ashok A/c.	Dr.		8,000	
	To Aash				8,000
	(Cash down payment made to Ashok)				
31-3-2005	Machine A/c	Dr.		4,000	
	Interest A/c	Dr.		600	
	To Ashok A/c				4,600
	(Instalment including interest payable to Ashok)				
31-3-2005	Ashok A/c	Dr		4,600	
	To Cash				4,600
	(Payment of instalment to Ashok)				
31-3-2005	Depreciation A/c	Dr.		2,000	
	To Machine A/c				2,000
	(Charging depreciation @ 10% on WDV basis)				
31-3-2005	P & L A/c	Dr.		2,600	
	To Depreciation A/c				2,000
	To Interest A/c				600
	(Balance on Depreciation & interest is Transferred to Profit & Loss A/c)				

31-3-2006	Machine A/c Dr.		4,000	
	Interest A/c Dr.		400	
	To Ashok A/c			4,400
	(Instalment including interest is payable)			
31-3-2006	Ashok A/c Dr.		4,400	
	To Cash			4,400
	(Payment of instalment)			
31-3-2006	Depreciation A/c Dr.		1,800	
	To Machine A/c			1,800
	(Charging depreciation at 10% on WDV basis)			
31-3-2006	Profit & Loss A/c Dr.		2,200	
	To Depreciation			1,800
	To Interest			400
	(Balance of depreciation and interest transfer to P & L A/c.)			
31-3-2007	Machine A/c Dr.		4,000	
	Interest A/c Dr.		200	
	To Ashok A/c			4,200
	(Instalment including interest is payable)			
31-3-2007	Ashok A/c Dr.		4,200	
	To cash			4,200
	(Payment of Instalment)			
31-3-2007	Depreciation A/c Dr.		1,620	
	To machine A/c			1,620
	(charging depreciation at 10% on WDV basis)			
31-3-2007	Profit & Loss A/c Dr.		1,820/-	
	To Depreciation A/c			1,620
	To Interest A/c			200
	(Balance of depreciation & interest is transfer)			

Ledger Account :

Dr. **Machine A/c** Cr.

Date	Paticulars	Rs.	Date	Particulars	Rs.
1-4-2004	To Ashok	8,000	31-3-2005	By Depreciation	2,000
1-4-2005	To Asho	4,000	31-3-2005	By Balance c/d	10,000
		12,000			**12,000**
1-4-2005	To balance b/d	10,000	31-3-2006	By Depreciation	1,800
31-3-2006	To Ashok	4,000	31-3-2006	By Balance c/d	12,200
		14,000			**14,000**
1-4-2006	To balance b/d	12,200	31-3-2007	By Depreciation	1,620
31-3-2007	To Ashok	4,000	31-3-2007	By Balance c/d	14,580
		16,200			**16,200**
1-4-2007	To balance b/d	14,580			

Dr. **Ashok A/c (Vendor)** Cr.

Date	Paticulars	Rs.	Date	Particulars	Rs.
1-4-2004	To Cash	8,000	1-4-2005	By Machine A/c	8,000
31-3-2005	To Cash	4,600	31-3-2005	By Machine A/c	4,000
			31-3-2005	By Interest	600
		12,600			**12,600**
1-3-2006	To Cash	4,400	31-3-2006	By Machine	4,000
			31-3-2006	By Interest	400
		4,400			**4,400**
31-3-2007	To Cash	4,200	31-3-2007	By Machine	4,000
			31-3-2007	By Interest	200
		4,200			**4,200**

Dr. **Depreciation A/c** Cr.

Date	Paticulars	Rs.	Date	Particulars	Rs.
31-3-2005	To Machine	2,000	31-3-2005	By Profit & Loss A/c	20,000
31-3-2006	To Machine	1,800	31-3-2006	By Profit & Loss A/c	1,800
31-3-2007	To Machine	1,620	31-3-2007	By Profit & Loss A/c	1,620

Dr. **Interest A/c** Cr.

Date	Paticulars	Rs.	Date	Particulars	Rs.
31-3-2005	To Ashok	600	31-3-2005	By Profit & Loss A/c	600
31-3-2006	To Ashok	400	31-3-2006	By Profit & Loss A/c	400
31-3-2007	To Ashok	200	31-3-2007	By Profit & Loss A/c	200

Journal Entries in the books of Ashok (Vendor)

Date	Particulars	L.F.	Debit Rs.	Credit Rs.
1-4-2004	Sandeep A/c Dr.		20,000	
	To Sales			20,000
	(Sale of machine to Sandeep HP basis)			
1-4-2004	Cash A/c Dr.		8,000	
	To Sandeep A/c			8,000
	(receipt of cash down payment from Sandeep)			
31-3-2005	Sandeep A/c Dr.		600	
	To Interest A/c			600
	(interest receivable from Sandeep)			
31-3-2005	Cash A/c Dr.		4,600	
	To Sandeep A/c			4,600
	(receipt of Instalment including interest)			

(Conted. on next page)

31-3-2005	Interest A/c Dr.		600	
	To Profit & Loss A/c			
	(transfer to balance interest to P & L A/c)			
31-3-2006	Sandeep A/c Dr.		400	
	To Interest A/c			400
	(interest receivable from Sandeep)			
31-3-2006	Cash A/c Dr.		4,400	
	To Sandeep A/c			4,400
	(transfer of balance to P & L A/c			
31-3-2007	Sandeep A/c Dr.		200	
	To Interest A/c			200
	(interest receivable from Sandeep)			
31-3-2007	Cash A/c Dr.		2,200	
	To Sandeep A/c			2,200
	(receipt of instalment including interest)			
31-3-2007	Interest A/c Dr.		200	
	To Profit & Loss A/c			200
	(transfer of balance to P & L A/c)			

Ledger Accounts :

Dr. **Sandeep A/c (Hire Purchaser's)** Cr.

Date	**Paticulars**	**Rs.**	**Date**	**Particulars**	**Rs.**
1-4-2004	To Sales	20,000	1-4-2004	By Cash	80,000
31-3-2005	To Interest	600	31-3-2006	By Cash	4,600
			31-3-2005	By Balance c/d	8,000
		20,600			**20,600**

(Conted. on next page)

1-4-2005	To balance b/d	8,000	31-3-2006	By Cash	4,400
31-3-2006	To Interest	400	31-3-2006	By Balance c/d	4,000
		8,400			**8,400**
1-4-2006	To Balance	4,000	31-3-2007	By Cash	4,200
31-3-2007	To Interest	200			
		4,200			**4,200**

Dr. **Interest A/c** Cr.

Date	Paticulars	Rs.	Date	Particulars	Rs.
3-1-2005	To Profit & Loss A/c	600	31-3-2005	By Sandeep	600
31-3-2006	To Profit & Loss A/c	400	31-3-2006	By Sandeep	400
31-3-2007	To Profit & Loss A/c	200	31-3-2007	By Sandeep	200

Illustration – 2 :

On 1st Apri 2005, Asian Ltd., purchased a machine on hire purchase system from Sunshine Ltd., The Cash price of the machine was Rs. 74,500/- and the payment was to be made as follows :

Rs. 20,000/- was to be made on signing to agreement and the balance in three annual instalments of Rs. 20,000/- each at the end of each year. 5% interest is charged by Sunshine Ltd., per annum. Asian Ltd., was decided to write off 10% depreciation per annum on reducing value of the machine. Prepare necessary ledger accounts in the books of Asian Ltd.,

Solution :

Calculation of Interest Chart

Date	Advance Instalment	Interest @ 5% on outstanding Cash price	Cash price included in Instalment	Cash price unpaid	Depreciation @ on WDV
1-4-2005	—	—	—	74,500	74,500
1-4-2005	20,000	—	20,000	54,500	—
31-3-2006	20,000	5% on 54,500 = 2725	17,275	37,225	74,500 – 7,450 = 67,050
31-3-2007	20,000	5% on 37,225 = 1,861	18,139	19,086	67,050 – 6,705 = 60,345
31-3-2007	20,000	Bal figure = 914	19,086	—	60,345 – 6,035 = 54,310

Note :

In the above problem cash price of the machine is given Rs. 74,500/- and hire purchase price is also given Rs. 80,000/- (i.e. 20,000/- Adv. + instalments of Rs. 20,000 each). Therefore the difference of Rs. 5,500/- (80,000 – 74,500) is interest payable.

Ledger Accounts in the books of Asian Ltd.,

Dr. **Interest A/c** Cr.

Date	**Paticulars**	**Rs.**	**Date**	**Particulars**	**Rs.**
31-3-2006	To Sunshine Ltd.	2,725	31-3-2006	By Profit & Loss A/c	2,725
31-3-2007	To Sunshine Ltd.	1,861	31-3-2007	By Profit & Loss A/c	1,861
31-3-2008	To Sunshine Ltd.,	914	31-3-2008	By Profit & Loss A/c	914

Dr. **Machine Account** Cr.

Date	Paticulars	Rs.	Date	Particulars	Rs.
1-4-2005	To Sunshine Ltd.,	20,000	1-4-2005	By Depreciation	7,450
31-3-2006	To Sunshine Ltd.,	17,275	31-3-2006	By balance C/d	29,825
		37,275			**37,275**
1-4-2006	To balance b/d	29,825	31-3-2007	By Depreciation	6,705
31-3-2007	To Sunshine Ltd.	18,139	31-3-2007	By Balance A/c	41,259
		47,964			**47,964**
1-4-2007	To balance Ltd.	41,259	31-3-2007	By Depreciation	6,035
31-3-2008	To Sunshine	19,086		By Balance c/d	54,310
		60,345			**60,345**

Dr. **Sunshine Ltd., (Vendor) A/c** Cr.

Date	Paticulars	Rs.	Date	Particulars	Rs.
1-4-2005	To cash	20,000	1-4-2005	By Machine	20,000
31-3-2006	To Cash	20,000	31-3-2006	By Machine	17,275
			31-3-2006	By Interest	2,725
		40,000			**40,000**
31-3-2007	To Cash	20,000	31-3-2007	By Machine	18,139
			31-3-2007	By Interest	1,861
		20,000			**20,000**
31-3-2008	To Cash	20,000	31-3-2008	By Machine	19,086
			1-3-2008	By Interest	914
		20,000			**20,000**

II) When Hire purchase price and rate of interest are given but cash price is not given :

In this method though the rate of interest is given the total interest payable can not be calculated, as the cash price of asset is not given. Therefore at the start cash price of the asset should be ascertained. To do this calculation the analysis of instalment will start from the last instalment. Hence this method is called 'Reverse Method'

Illustration – 3 :

Aniket purchased a motor car on hire purchase system from Sahyadri Motors on 1-4-2004 on paying Rs. 12,000 down. The balance amount (including 10% p.a.) was paid at the end of each year as under. 31-3-2005 Rs. 25,600/- 31-3-2006 Rs. 19,600/- 31-3-2007 Rs. 14,000/-, 31-3-2008 Rs. 8,800/-.

Depreciation was charged by Aniket @ 10% under fixed instalment syste system. Show calculation of interest in each instalment and ledger accounts in the books of Aniket and Sahyadri Motors.

End of the year	Amount Due	Interest = 10 $\frac{10}{110}$ = 1/11	Cash at the beginning (100)	Beginning of the year
31-3-2008	8800	8800 x 1/11 = 800	8,000	1-4-2007
31-3-2007	8000 + 14000	22000 x 1/11 = 22000	20,000 = 2,000	1-4-2006
31-3-2006	20,000 + 19,600	39,600 x 1/11 = 39,600	36000 = 36,600	1-4-2005
31-3-2005	36,000 + 25,600	61,600 x 1/11 = 61,600	56,000 = 5,600	1-4-2004
1-4-2004	56,000 + 12,000 = 68,000	68,000 x Nil = --	68,000	1-4-2004
		12,000	68,000	

Thus the cash price of motor at the beginning is Rs. 67,000/- and total interest payable is Rs. 12,000/- Advance payment is made on the day of signing the agreement, hence it does not includes interest.

Dr. **Motor Car A/c** Cr.

Date	Paticulars	Rs.	Date	Particulars	Rs.
1-4-2004	To Sahyadri Motor	68,000	31-3-2005	By Depreciation	6,800
			31-3-2005	By balance c/d	61,200
		68,000			**69,000**
1-4-2004	To balance b/d	61,200	31-3-2006	By Depreciation	6,500
			31-3-2006	By balance c.d	54,400
		61,200			**61,200**
1-4-2005	To balance b/d	54,400	31-3-2006	By Depreciation	6,800
			31-3-2006	By Balance c/d	47,600
		54,400			**54,400**
1-4-2007	To balance b/d	47,600	31-3-2008	By Depreciation	6,800
			31-3-2008	By Balance c/d	40,800
		47,600			**47,600**

Dr. **Sahyadri Motors A/c.** Cr.

Date	Paticulars	Rs.	Date	Particulars	Rs.
1-4-2004	To Cash	12,000	1-4-2004	By Motor Car	68,000
31-3-2005	To Cash	25,600	31-3-2005	By Interest	5,600
31-3-2005	To Balance c/d	36,000			
		73,600			**73,600**
31-3-2006	To Cash	19,600	1-4-2005	By Balance B/d	36,000
31-3-2006	To Balance c/d	20,000	31-3-2006	By Interest	3,600
		39,600			**39,600**

31-3-2006	To Cash	14,000	1-4-2006	By balance b/d	20,000
31-3-2007	To balance c/d	8,000	31-3-2007	By Interest	2,000
		22,000			**22,000**
31-3-2008	To Cash	8,800	1-4-2007	By Balance	8,000
			31-3-2008	By Interest	800
		8,800			**8,800**

In the Books of Sahyadri Motors

Dr. **Sunshine Ltd., (Vendor) A/c** Cr.

Date	**Paticulars**	**Rs.**	**Date**	**Particulars**	**Rs.**
1-4-2004	To Sales	68,000	1-4-2004	By Cash	12,000
31-3-2005	To Interest	5,600	31-3-2005	By Cash	25,600
			31-3-2005	By Balance c/d	36,000
		73,600			**73,600**
1-4-2005	To Balance b/d	36,000	31-3-2006	By Cash	19,600
31-3-2006	To Interest	3,600	31-3-2006	By Balance c/d	20,000
		39,600			**39,600**
1-4-2006	To Balance b/d	20,000	31-3-2007	By Cash	14,000
31-3-2007	To Interest	2,000	31-3-2007	By Balance b/d	8,000
		22,000			**22,000**
1-4-2007	To Balance b/d	8,000	31-3-2008	By Cash	8,800
31-3-2008	To Interest	800			
		8,800			**8,800**

Dr. **Interest A/c** Cr.

Date	Paticulars	Rs.	Date	Particulars	Rs.
31-3-2005	To Profit & Loss A/c	5,600	31-3-2005		5,600
31-3-2006	To Profit & Loss A/c	3,600	31-3-2006		3,600
31-3-2007	To Profit & Loss A/c	2,000	31-3-2007		2,000
31-3-2008	To Profit & Loss A/c	800	31-3-2008		800

Illustration - 4

On 1st April, 2005 the Unique transports Ltd., purchased a Mini Truck from Hindusthan Motors Ltd., on hire purchase basis. The payment was made as under -

Rs. 50,000 on signinging the agreemal Rs. 65,000 on 31-3-2006

Rs. 60,000 on 31-3-2007 Rs. 55,000 on 31-3-2008

Interest includes in cash price @10% p.a. Unique depreciates the truck at 20% on WDV. Given hedger Accounts in the books of Unique Ltd.,

Solution :

The hire purchase price is given Rs. 2,30,000 and rate of interest is 10% but cash price is not given. Suppose cash price is Rs. 100 the interest is 10, then the total amount due is Rs. 110 (100 + 10).

Therefore when the total amount due is Rs. 110, the interest is Rs. 1-. So, when the total amount due is Re. 1 interest is 10/110 = 1/11

End of the year	Amount Due	Interest = 10 $\frac{10}{110}$ = 1/11	Cash price at the beginning	Beginning of the year
31-3-2008	55000	55,000 x 1/11 = 5,000	50,000	1-4-2007
31-3-2007	50,000 + 60,000 = 1,10,000	1,10,000 x 1/11 10,000	1,00,000	1-4-2007
31-3-2006	1,00,000 + 1,65,000 = 1,65,000	1,65,000 x 1/11 = 15,000	1,50,000	1-4-2005
1-4-2005	1,50,000 + 50,000 = 2,00,000	2,00,000 x -- = 30,000	2,00,000 2,00,000	1-4-2005
		30,000	2,00,000	

Thus the total purchase price is Rs. 2,30,000 the total interest included in instalment is Rs. 2,00,000 and cash price is Rs. 2,00,000/-

In the books of Unique Transports Ltd.,

Dr. **Mini Truck A/c (Part Cash Method)** Cr.

Date	Paticulars	Rs.	Date	Particulars	Rs.
1-4-2005	To Hindustan Motors	50,000	31-3-2006	By Depreciation	40,000
31-3-2006	To Hindustan Motors	50,000	31-3-2006	By Balance c/d	60,000
		1,00,000			**1,00,000**
1-4-2006	To Balance b/d	60,000	31-3-2007	By Depreciation	32,000
31-3-2007	To Hindustan Motors	50,000	31-3-2007	By Balance c/d	78,000
		1,10,000			**1,10,000**
1-4-2007	To Balance b/d	78,000	31-3-2008	By Depreciation	25,600
31-3-2005	To Hindustan Motors	50,000	31-3-2008	By Balance c/d	1,02,400
		1,28,000			**1,28,000**
1-4-2008	To Balance b/d	1,02,400			

Dr. **Hindustan Motors A/c** Cr.

Date	Paticulars	Rs.	Date	Particulars	Rs.
1-4-2005	To Cash	50,000	1-4-2005	By Mini Truck	50,000
31-3-2006	To Cash	65,000	31-3-2006	By Mini Truck	50,000
			31-3-2006	By Interest	15,000
		1,15,000			**1,15,000**
31-3-2007	To Cash	60,000	31-3-2007	By Mini Truck	50,000
			31-3-2007	By Interest	10,000
31-3-2008	To Cash	55,000	31-3-2008	By Mini Truck	50,000
			31-3-2008	By Interest	5,000
		55,000			**55,000**

III) Ratio Method :

Sometimes Cash price of the asset and hire purchase price of the asset are given but rate of interest is not mentioned. In such cases the total interest (H. P. Price – Cash price) is apportioned in the ratio of outstanding balances of H.P. price at the beginning of each period.

Illustration – 5 :

Mr. Ravishankar purchased a machine on hire purchase basis from the Telco Machines Ltd. On 1st April 2005. The cash price of the machine was Rs. 1,00,000/-. Mr. Ravishnakar paid Rs. 20,000/- on signing the agreement and took the delivery of the machine. The balance amount was paid in four equal Installments of Rs.24,000/- each at the end of the each year.

Depreciation is charged @10% p.a. on the WDV basis.

Prepare Machine A/c and Telco Machine A/c in the books of Revishankar.

Solution :

In this hire purchase price of the machine is given Rs. 16,000/- (20,000 + 16,000)

Instalment Analysis Table

Date	Advance Installment paid	Instalment outstanding	Ratio of Instalment	Interest included Instalment instalment	Cash price included in WDV basis	Depreciation at 10% on
1-4-2005	20,000	--	--	--	20,000	Cash price 100000
31-3-2006	24,000	96,000	4	16000 x 4/10 = 64,000	176600	100000-100000 = 90000
31-3-2007	24,000	72,000	2	16000 x 3/10 = 4800	19200	90000 – 9000 = 81000
31-3-2008	24,000	48,000	3	16000 x 2/10 = 3200	20800	81000 - 8100 = 72900
31-3-2009	24000	24000	1	16000 x 1/10 = 16000	22400	72900 - 7290 =65,610
			10	16000	100000	

In the books of Ravishankar (Part Cash Method)

Dr. **Machine A/c** Cr.

Date	Paticulars	Rs.	Date	Particulars	Rs.
1-4-2005	To Telco Machnes	20,000	31-3-2006	By Depreciation	10,000
31-3-2006	To Telco Machine	17,600	31-3-2006	By Balance c/d	27,600
		37,600			**37,600**
1-4-2006	To Balance b/d	27,600	31-3-2007	By Depreciation	9,000
31-3-2007	To Telco Machines	19,200	31-3-2007	By Balnace c/d	37,800
		46,800			**36,800**
1-4-2007	To Balance b/d	37,800	31-3-2008	By Depreciation	8,100
31-3-2008	To Telco Machine	22,400	31-3-2009	By Balance b/d	65,610
		72,900			**72,900**

Dr. **Telco Machine A/c** Cr.

Date	Paticulars	Rs.	Date	Particulars	Rs.
1-4-2005	To Bank	20,000	1-4-205	By Machine	20,000
31-3-2006	To Bank	24,000	31-3-2006	By Machine	17,600
			31-3-2006	Interest	6,400
		44,000			**44,000**
31-3-2007	To Bank	24,000	31-3-2007	By Machine	19,200
			31-3-2007	By Interest	4,800
		24,000			**24,000**
31-3-2008	To Bank	24,000	31-3-2008	By Machine	20,800
			31-3-2008	By Interest	3,200
		24,000			**24,000**
31-3-2008	To Bank	24,000	31-3-2009	By Machine	22,400
			31-3-2009	By Interest	1,600
		24,000			**24,000**

2.7 Default and Repossession :

If a hire purchaser fails to pay an installment on the stipulated date, the hire purchaser is said to be at default. In such case, the hire vendor may reposes the goods. Repossession means taking back the possession of goods by the hire vendor. Subject to agreement, the repossession may be complete or partial.

2.7.1 Complete Repossession :

In case of complete or full repossession the hire vendor take back the possession of all the goods and forfeit the installments already paid by the hire purchaser.

Accounting treatment :

In the books of hire purchaser

i) All entries till the date of default are passed in the usual manner.

ii) On the date of default for transfer of Vendor A/c balance.

a. Hire Vendor A/c Dr. (with entire balance in
To Asset A/c (vendor A/c)

b. For transfer of balance on asset A/c to Profit & Loss A/c
Profit & Loss A/c Or (with entire balance requiring
To Asset A/c in Asset A/c

In the books of Hire Vendor

i) All entries the date of default are passed in the usual manner.

ii) On the date of default

a. For repossession of goods :
Goods repossessed A/c Dr. (with balance in hire
To Hire Purchaser's A/c Purchaser's A/c)

b. For amount spent for repairs of goods repossessed.
Goods repossesed A/c Dr. (with amount spent on repairs
To Cash / Bank

c. For sale of goods reposed
Cash / Bank A/c Dr. (With sale proceeds of
To goods repossessed A/c goods repossessed)

d) For transfer to profit on sale of goods repossessed

Goods repossessed A/c Dr.

To Profit and Loss A/c

(In case of loss on sale, reverse entry will be passed)

Illustration : 6

On 1-4-2005 Shahu Traders acquired two Motor Cycle each costing Rs. 37,300/- for M/s. Hind Motors Ltd. On hire purchase. Payment to be made Rs. 20,000 down and the balance in three equal instalments of Rs. 20,000 each at the end of each year. The interest is charged at 5% p.a. Depreciation to be provided is at 10% p.a. on reducing balance method.

M/s. Shahu Traders after having paid the advance and the first instalment at the end of first year failed to pay the second instalment because of financial difficulties. Hind Motors took the possession of both the Motor cycle and sold them for Rs. 46,500/- after spending Rs. 2800/- for repairs

Write up necessary ledger accounts in the books of both the parties.

Solution :

In the method cash price of the motor cycle is given Rs. 74,600/- (37300 x 2) Hire purchase price is given Rs. 80,000 (20000 adv + 20000 x 3) and the rate of interest is given at 5%. Therefore we have to calculate the interest included in each instalment by simple method.

Instalment Analysis Table

Date	Advocate Instalment	Interest included In instalment	Cash price included in Instalment	Unpaid Cash price	Depreciation of 10% on WDV
1-4-2005	--	--	--	74,600	74,600
1-4-2005	20000	--	20,000	54,600	--
31-3-2006	20,000	5% on 54,600 =2,730	17,270	38,330	74,600-7,460 =67,140
31-3-2007	20,000	5% on 37,330 =1,867	18133	19,197	67,140-6,714 =60,426
31-3-2008	20,000	Bal. figure = 803	19,197	--	60,426-6,043 =54,383
	80,000	5,400	74,600		

Dr. **Motor Cycle Account (Full Cash price Method)** Cr.

Date	Paticulars	Rs.	Date	Particulars	Rs.
1-4-2005	To Hind Motors	74,600	31-3-2006	By Depreciation	7,460
			31-3-2006	By Balance c/d	67,140
		74,600			**74,600**
1-4-2006	To Balance b/d	67,140	31-3-2007	By Depreciation	6,714
			31-3-2007	By Hind Motors (traveller)	39,197
			31-3-2007	By P. & L. A/c	21,229
		67,140			**67,140**

Dr. **Hind Motors Ltd., A/c** Cr.

Date	Paticulars	Rs.	Date	Particulars	Rs.
1-4-2005	To Bank	20,000	1-4-2005	By Motor cycle	74,600
31-3-2006	To Bank	20,000	31-3-2006	By Interest	2,730
31-3-2006	To Balance c/d	37,330			
		77,330			**77,330**
31-3-2007	To Motor cycle	39,197	1-4-2006	By Balance b/d	37,330
			31-3-2007	By Interest	1,867
		39,197			**39,197**

In the Books of Hind Motors

Dr. **Hind Motors Ltd., A/c** Cr.

Date	Paticulars	Rs.	Date	Particulars	Rs.
1-4-2005	To Sales	74,600	1-4-2005	By Bank	20,000
31-3-2006	To Interest	2,730	31-3-2006	By Bank	20,000
			31-3-2006	By Balance c/d	37,330
		77,330			**77,330**

1-4-2006	To Balance b/d	37,330	31-3-2007	By Goods	
31-3-2007	To Interest	1867		Respossed	39,197
		39197			**39197**

Dr. **Goods Repossessed A/c** Cr.

Date	Paticulars	Rs.	Date	Particulars	Rs.
31-3-2007	To Shahu Traders	39,197	31-3-2007	By Bank (Sales)	46,500
31-3-2007	To Bank (Repairs	2,800			
31-3-2007	To P & L A/c	4,503			
		46,500			**46,500**

Alternative Method :

In the books of Shahu Traders (Part Cash Method)

Dr. **Motor Cycle A/c** Cr.

Date	Paticulars	Rs.	Date	Particulars	Rs.
1-4-2005	To Hind Motors	20,000	31-3-2006	By Depreciation	7,460
31-3-2006	To Hind Motors	17,270	31-3-2006	By Balance c/d	29,810
		37,270			**37,270**
1-4-2006	To Balance b/d	29,810	31-3-2007	By Depreciation	6,714
31-3-2007	To Hind Motors	18,133	31-3-2007	By Hind Motors	20,000
			31-3-2007	P & L A/c	21,229
		47,943			**47,943**

Dr. **Hind Motors A/c** Cr.

Date	Paticulars	Rs.	Date	Particulars	Rs.
1-4-2005	To Bank	20,000	1-4-2005	By Motor Cycle	20,000
31-3-2006	To Bank	20,000	31-3-2006	By Motor Cycles	17,270
			31-3-2006	Interest	2,730
		40,000			**40,000**
31-3-2007	To Motor Cyccle	20,000	31-3-2007	By Motor Cycle	18,133
	A/c (Transfer)		31-3-2007	By Interest	1,867
		20,000			**20,000**

Illustration - 7 :

Mr. Kankadas purchased a machine on hire purchase system on 1-4-2006 from Mr. Narayandas for Rs. 11175 and payment was to be made as Rs. 3000 on signing the agreement and the balance in three annual instalments to Rs. 3,000/- each at the end of each year. Interest charged of 5% p.a. Kankadas depreciation the machine at 10% p.a. on reducing balance method.

Mr. Kankdas after having paid down payment and first instalment of the end of first year could not pay second instalment due to financial difficulties and Mr. Narayandas took possession of the machine.

Mr. Narayandas sold the machine for Rs. 7,500 after spending Rs. 800 for repairs of machine. Shown necessary ledger accounts assuming accounts are closed on 31st March every year.

Solution :

The cash price of the machine is given Rs. 11175 and hire purchase pria is given Rs. 12,000. Hence told interest included in instalment is Rs. 825/-. The rate of interest is given 5%.

Interest Calculation Table

Date	Advocate Instalment	Interest included In instalment	Cash price included in Instalment	Unpaid Cash price	Depreciation of 10% on WDV
1-4-2006	--	--	--	11,175	11,175
31-3-2006	3,000	--	3,000	8,175	--
31-3-2008	3,000	8,775 x 5% = 409	22,591	5,584	11,175 - 1,118 = 10,057
31-3-2008	3,000	5,584 x 5% = 280	2,720	2,864	1,005 - 1,006 = 9,051
31-3-2009	3,000	Bal figure = = 136	2,864	--	9,051 - 905 = 8,146
	1,200	825	11,175		

In the books of Mr. Kankadas

(Full cash price method)

Dr. **Machine A/c** Cr.

Date	Paticulars	Rs.	Date	Particulars	Rs.
1-4-2006	To Narayandas	11,175	31-3-2007	By Depreciation	1,118
			31-3-2007	By Balance c/d	10,057
		11,175			**11,175**
1-4-2007	To Balance b/d	10,057	31-3-2008	By Depreciation	1,006
			31-3-2008	By Narayandas (Transfer)	5,864
			31-3-2008	By Profit & Loss A/c	3,187
		10,057			**10,057**

Dr. **Mr. Narayandas A/c** Cr.

Date	Paticulars	Rs.	Date	Particulars	Rs.
1-4-2006	To Bank	3,000	1-4-2006	By Machine	11,175
31-3-2007	To Bank	3,000	31-3-2007	By Interest	409
31-3-2007	To Balance c/d	5,584			
		11,584			**11,584**
31-3-2008	To Machine A/c	5,864	1-4-2007	By Balance b/d	5,584
	(Transfer)		31,3,2008	By Interest	280
		5,864			**5,864**

In the Books of Mr. Narayandas

Dr. **Kankadas A/c.** Cr.

Date	Paticulars	Rs.	Date	Particulars	Rs.
1-4-2006	To Sales	11,175	1-4-2006	By Bank	3,000
31-3-2007	To Interest	409	31-3-2007	By Bank	3,000
			31-3-2007	By Balance c/d	5,584
		11,584			**11,584**
1-4-2007	To Balance b/d	5,584	31-3-2008	By Goods	5,864
31-3-2008	To Interest	280		Repossessed A/c	
		5,864			**5,864**

Dr. **Goods Repossessed A/c** Cr.

Date	Paticulars	Rs.	Date	Particulars	Rs.
31-3-2008	To Kankdas	5,864	31-3-2008	By CAsh (Sales)	7,500
31-3-2008	To Cash (Repairs)	800			
31-3-2008	To Profit & Loss A/c	1,964			
		7,500			**7,500**

2.7.2 Partial Repossession :

In case of partial repossession the hire vendor takes back the possession of a part of the goods.

Accounting treatment :

In the books of Hire Purchaser

i) All entries till the date of for future are passed in usual manner.

ii) On a date of default following entries are passed.

a. For transfer of agreed value of goods repossessed.

Hire vendor's A/c	Dr.	(with agreed value of
To Asset A/c		goods repossessed)

b. For transfer on default

Profit & Loss A/c	Dr.	(with difference in book value
To asset A/c		and agreed value)

(In case of profit on default reverse entry will be passed)

In the books of Hire Vendor

i) All entries till the date of default are passed in usual manner.

ii) On the date of default following entries are passed.

a. On repossession of goods at agreed values.

Goods Repossessed A/c	Dr.	(with agreed value of goods
To Hire purchaser's A/c		repossessed)

b. For amount spent on repairs of goods repossessed.

Goods Repossessed A/c	Dr.
To cash	

c. For sale of goods repossessed

Cash / Bank A/c	Dr.
To Goods Repossessed A/c	

d. For transfer of Profit on sale of goods reposed

Goods repossessed A/c Dr.

To Profit & Loss A/c

(In case of loss on sale, reverse entry will be passed)

Illustration – 8 :

X Transport Ltd., purchased from Delhi Motors 3 Tempos costing Rs. 50,000/- each on hire purchase system on 1-4-2006. Payment was to be made Rs. 30,000 down and the remainder in 3 equal instalments payable on 31-3-2007, 31-3-2007 and 31-3-2008 together with interest at 9% p.a. X Transport Ltd. Writes of depreciation at the rate of 20% p.a. on the diminishing balance. X Ltd. Paid the instalments due all the end of first year i.e. 31-3-2007 but could not pay the next on 31-3-2008. Delhi Motors agreed to leave tempo with purchaser on 1-4-2008 adjusting the value of the other 2 Tempos against the amount due on 1-4-2008. The Tempos are valued on the basis of 30% depreciation annually on WDV.

Delhi Motors after spending Rs. 2,000 on repairs sold all the 2 Tempos for Rs. 60,000.

Show ledger accounts in the books of X Transport Ltd. & Delhi Motors.

Interest Analysis Table

Date	Advocate Instalment	Interest of 9% on unpaid cash price	Cash Price included in Instalment	Unpaid Cash price	Depreciation of 20% on WDV
1-4-2006	–	–	–	1,50,000	1,50,000
1-3-2006	30,000	–	30,000	1,50,000-30,000 = 1,20,000	–
31-3-2007	50,800	9% on 1,20,000 = 10,800	40,000	1,20,000-40,000 = 80,000	1,50,000-30,000 1,20,000
31-3-2008	47,200	9% on 80,000 =7,200	40,000	80,000-40,000 =40,000	1,20,000-24,000 96,000
31-3-2009	43,600	9% on 40,0000 = 3,600	40,000	30,000-40,000 = Nil	96,000-19,200 = 76,800
	1,71,600	21,600	1,50,000		

In the Books of X Transports Ltd.,

Dr. **Tempos Account** Cr.

Date	Paticulars	Rs.	Date	Particulars	Rs.
1-4-2005	To Delhi Motors	1,50,000	31-3-2007	By Depreciation	30,000
			31-3-2007	By Balance c/d	1,20,000
		1,50,000			**1,50,000**
1-4-2007	To Balance b/d	1,20,000	31-3-2008	By Depreciation	24,000
				By Balance c/d	96,000
		1,20,000			**1,20,000**
1-4-2008	To Balance b/d	96,000	1-4-2008	ByDelhi Motors (Vaue of 2 tempos takon away WN-1)	49,000
			31-3-2009	By P & L. A/c (Loss on Default WN-3)	15,000
			31-3-2009	By Depreciation A/c	6,400
			31-3-2009	By Balance c/d (Tempo retailed W.N.-2)	25,600
		96,000			**96,000**

Dr. **Sunshine Ltd., (Vendor) A/c** Cr.

Date	Paticulars	Rs.	Date	Particulars	Rs.
1-4-2006	To Bank	30,000	1-4-2006	By Tempos	1,50,000
31-3-2007	To Bank	50,800	31-3-2007	By Interest	10,800
31-3-2007	To Balance c/d	80,000			
		1,60,800			**1,60,000**

(Conted. on next page)

31-3-2008	To Balance c/d	87,200	1-4-2007	By Balance b/d	80,000
			31-3-2008	By Interest	7,200
		87,200			**87,200**
1-4-2008	To Tempos	49,000	1-4-2008	By Balance	87,200
1-4-2008	To Balance c/d	38,200			
		87,200			**87,200**

In the books of Delhi Motors

Dr. **X Transports Ltd., A/c** Cr.

Date	Paticulars	Rs.	Date	Particulars	Rs.
1-4-2005	To Sales	1,50,000	1-4-2006	By Bank	30,000
31-3-2007	To Interest	10,800	31-3-2007	By Bank	50,800
			31-3-2007	By Balance c/d	80,000
		1,60,000			**1,60,000**
1-4-2007	To Balance b/d	80,000	31-3-2008	By Balance c/d	87,200
31-3-2008	To Interest	7,200			
		87,200			**87,200**
1-4-2008	To Balance b/d	87,200	1-4-2008	By Goods repossessed	49,000
			1-4-2008	By Balance c/d	38,200
		87,200			**87,200**

Dr. **Goods repossessed A/c** Cr.

Date	Paticulars	Rs.	Date	Particulars	Rs.
1-4-2008	To X Transports	49,000	1-4-2008	By Bank (Sale)	60,000
1-4-2008	To Bank (Reports)	2,000			
1-4-2008	To P & L A/c	9,000			
		60,000			**60,000**

Working Note :

1) Agreed Value of 2 Tempos repossessed

Cash price of Tempos	1,00,000
Less : Dep. At agreed 30% for 1st year	30,000
	70,000
Less : Dep. Of agreed 30% for 2nd year	21,000
Value of reposed temp	49,000

2) Value of One tempo with Hire purchaser

Cash price of one tempo	50,000
Less : Deperciation at 20% for 1st year	10,000
	40,000
Less : Depreciation at 20% for 2nd year	8,000
	32,000
Less : Depreciation at 20% for 3rd year	6,400
Value of one Tempo	25,600

3) Loss of Default

Cost of 2 tempos	1,00,000
Less : Depreciation at 20% for 1st year on WDV	20,000
	80,000
Less : Depreciation at 20% for 2nd year on WDV	16,000
Book value of 2 tempos on date of default	64,000
Less : Agreed value as per WN 1	49,000
Loss on default	15,000

Illustration : 9

Prashant purchased 4 motor cycles of Rs. 56,000 each on hire purchase system on 1-4-2005. The hire purchase price for all 4 motor cycle was Rs. 2,40,000 to be paid Rs. 60,000 down and three instalments of Rs. 60,000 each at the end of each year.

Interest is charged at 5% p.a. Buyer depreciation motor cycle at 10% p.a. on straight line method. After having paid down payment and 1st Instalmant, buyer could not pay 2nd instalment and seller took possession of 3 motor cycles at an agreed value to be calculated after depreciating cars of 20% p.a. on written down value method. One motor cycle was left with the buyer.

Seller after spending Rs. 4,500 on repairs, sold away all the three motor-cycle to Mahesh for Rs. 1,40,000.

Give ledger accounts in the books of both the parties.

Solution :

The cash price of 4 motor cycle is given Rs. 2,24,00 and hire purchase price is given Rs. 2,40,000. Therefore the interest included in instalment is Rs. 16,000. The interest included in 1st instalment Rs. 82,000 (5% on Rs. 1,64,000) 2nd instalment Rs. 5,619 (5% on Rs. 1,12,200), 3rd instalment Rs. 2,190 (balancing figure).

In the books of Prashant

Dr. **Motor Cycle A/c** Cr.

Date	Paticulars	Rs.	Date	Particulars	Rs.
1-4-2005	To Vendor's A/c	2,24,000	31-3-2006	By Depreciation	22,400
			31-3-2006	By Balance c/d	2,01,600
		2,24,000			**2,24,000**
1-4-2006	To Balance b/d/	2,01,600	31-3-2007	By Depreciation	22,400
			31-3-2007	By Vendor A/c (Value of 3 motor cycles taken over)	1,07,520
			31-3-2007	By Profit & Loss A/c (Loss on default)	26,880
			31-3-2007	By Balance c/d Valued one motor cycle)	44,800
		2,01,600			**2,01,600**

Dr. **Vendor's A/c** Cr.

Date	Paticulars	Rs.	Date	Particulars	Rs.
1-4-2005	To Bank	60,000	1-4-2005	By Motor Cycle	2,24,000
31-3-2006	To Bank	60,000	31-3-2006	By Interest	8,200
31-3-2006	To Balance	1,12,200			
		2,32,200			**2,32,200**
31-3-2007	To Motor cycle A/c	1,07,520	1-4-2006	By Balance b/d	1,12,200
31-3-2007	To Balance c/d	10,290	31-3-2007	By Interest	5,610
		1,17,810			**1,17,810**

In the books of Vendor

Dr. **Prashant A/c** Cr.

Date	Paticulars	Rs.	Date	Particulars	Rs.
1-4-2005	To sales	2,24,000	1-4-2005	By Bank	60,000
31-3-2006	To Interest	8,200	31-3-2006	By Bank	60,000
			31-3-2006	By Balance c/d	1,12,200
		2,32,200			**2,32,200**
1-4-2006	To Balance b/d	1,12,200	31-3-2007	By Goods	1,07,520
31-3-2007	To Interest	5,610		repossessed	
			31-3-2007	By Balance b/d	5,610
		1,17,810			**1,17,810**

Dr. **Goods repossessed A/c** Cr.

Date	Paticulars	Rs.	Date	Particulars	Rs.
1-4-2007	To Prashant A/c	1,07,520	31-3-2007	By Bank (Sale)	1,40,000
31-3-2007	To each (repairs)	4,800			
31-3-2007	To Profit & Loss A/c	27,680			
		1,40,000			**1,40,000**

Working Notes :

1) Agreed Value of 3 motor cycle taken over

Cost of 3 motorcycle	1,68,000
Less : Depreciation at 20% on WDV for 1st Year	33,600
	1,34,400
Less : Depreciation of 20% on WDV for 2nd year	26,880
Value date of default	1,07,520

2) Value of one motor cycle with the buyer

Cost of 1 motorcycle	56,000
Less : Depreciation at 10% on straight line	
Method for 1st year	5,600
	50,400
Less : Depreciation of 10% on straight line method	
For 2nd year value of 1 motor cycle	5,600
	44,800

3) Less on date of default

Cost of 3 motor cycle	1,68,000
Less : Depreciation at 10% on straights line	
For 1st year	16,800
	1,51,200
Loss : Depreciation 10% on straight line	
For 2nd year	16,800
	1,34,400
Less : Agreed value as per WN-1	1,07,520
Less : on default	26,880

2.8 Summary :

Hire purchase system is a midway between cash sale system and credit sale system. Cash sale system is the most common method of selling delivering goods only against the prompt payment. In credit sale system goods are sold and delivered immediately but the price is collected on some future date without interest.

In Hire purchase system goods are delivered immediately and price is collected in easy instalments with regular intervals. The instalments so collected are inclusive of interest and unpaid balance of the cash value of goods delivered. Though the goods are delivered immediately to the buyer, the ownership in goods does not pass to the buyer unless all the instalments are paid. Even if only last instalment is not paid, the buyer loses the possession of the goods because seller is thereof owner having right to take away the goods.

2.9 Key Words :

i) **Hire purchaser :** A person obtains possession of the goods from an owner under hire purchase agreement.

ii) **Hire Vendor :** A person who delivers the possession of goods to the hire purchaser under hire purchase agreement.

iii) **Cash Price :** Means the at which the goods may be purchased by the hire purchaser for cash.

iv) **Hire Purchase price :** The total sum payable by the Hire Purchaser to the Hire vendor.

H.P. Price = Cash Price + Interest.

v) **Down Payment / Advance :** An initial payment payable by the hire purchaser on signing the agreement.

2.10 Self Assessment Questions :

- **Objective Type**

State True or False.

i) From the accounting point of view, there is no difference between sale and Hire purchase sale.

ii) In hire purchase transaction the property in the goods passes to the hire purchaser at the payment of the cash down.

iii) The difference between the hire purchase price and cash price is known as interest.

iv) Interest is calculated on the hire purchase price of the given rate.

v) Depreciation an asset is calculated on the cash price of the asset.

vi) In the books of hire purchaser, the asset account is always debited of full cash price of the asset.

vii) The payment of cash down does not offect the amount to be debited to the asset account.

[**Ans. :** i) F, ii) F, iii) T, iv) T, v) T, vi) F, vii) T]

Choose correct alternative :

i) Cash paid down at the time of hire of hire purchase transaction is debited by the hire purchaser to –

a) Asset Account, b) Purchase Account,

c) Hire Vendor Account.

ii) The amount of interest is credited by the buyer to –

a) Interest Account, b) Vendor Account,

c) Asset Account.

iii) When to goods are re-possessed by the vendor, the balance in asset account is transferred to –

a) Hire Vendor Account, b) Goods repossessed Account,

c) Profit and Loss Account.

iv) The depreciation in the books of buyer is charged on

a) The hire purchase price, b) The cash price,

c) whichever is higher out of H.P. Price and Cash price.

v) In hire purchase ownership of goods is transferred only on –

a) Signing the agreement b) Payment of last instalment

c) Payment of first instalment.

[**Ans.:** i) a, i) b, iii) b, iv) b, v) b]

- **Therotical Questions :**

    i) Distinguish between Hire purchase and Instalment System.

Practical Problems :

A) Simple Method (when instalment amount is not given)

1) M/s. Asian Ltd., purchased a machne for Rs. 2,40,000 agreeing to pay Rs. 40,000/ down and four annual instalments of Rs. 50,000 each with 5% interest payable of the end of each year.

M/s Asia Ltd. Depreciates the machine at 5% p.a. on the diminishing method. Show necessary ledger accounts in the books of purchaser and vendor A/c.

b) Simple Method (When cash price, Hire purchase price and instalments are given)

2) Sandwik Ltd., purchased a Motor Truck on Hire purchase system Rs. 90,000 was payable on delivery on 1-4-2000 and the balance by four annual instalments of Rs. 90,000 each on 31 st March. The vendor charged 5% interest on the unpaid balance. The cash price of the truck is Rs. 4,09,500. Depreciation of 10% of straight line was writing off each year.

c) Reverse Method : (When cash price is not given)

3) India Ltd. Purchased a motor car on hire purchase system from Sahyadri Motor on 1-4-2004 and agreed to pay interest 20% p.a. on the unpaid balance of Cash price. India Ltd. Decided to depreciate the car by 20% on reducing balance method. India Ltd. Paid Rs. 55,000 on signing the agreement and the balance in four annual instalments as follows :-

31-3-2005	Rs. 99,000	31-3-2006	Rs. 88,000
313-2007	Rs. 77,000	31-3-2008	Rs. 66,000

Show Motor Car A/c and Vendor A/c in the books of India Ltd.,

4) Small Industries Ltd. Purchased a machinery on hire purchase system on 1-4-2002 from HMT Ltd. With an agreement to pay in five instalments and agreed to pay interest at 10% on the unpaid balance of cash price.

Small Industries decided to depreciate the machinery by 10% on straight line method.

The Instalments paid were as follows.

31-3-2003	Rs. 22,500	31-3-2006	Rs. 18,000
31-3-2004	Rs. 21,000	31-3-2007	Rs. 16,500
31-3-2005	Rs. 19,500		

Prepare machinery A/c and vendor A/c in the books of small Industries.

D) Ratio Method : (When Rate of interest is not given)

5) i) Purchase — Mr. Bhima

ii) Assets Purchased — Tractor

iii) Cash price — Rs. 2,50,000

iv) Seller — M/s. Balwant Agency

v) Date of Transaction — 1-4-2003

vi) Payment on the date of signing — Rs. 50,000

vii) Instalments

On 31-3-2004	Rs.	60,000
On 31-3-2005	Rs.	60,000
On 31-3-2006	Rs.	60,000
On 31-3-2007	Rs.	60,000

viii) Depreciation at 20% on diminishing balance method.

You are required to prepare Tractor A/c and Vendor A/c in the books of Mr. Bhima.

(April 2007)

6) Sagar Hotel Ltd. Purchased a refrigerator from M/s Poonawala under Hire Purchase system. The Hotel cash price of the Refirigerator is Rs. 34,000. Cash paid to the hire vendor is as under.

Date	Rs.	
1-4-2004	10,000	(Against Delivery)
31-3-2005	10,000	
31-3-2006	10,000	
31-4-2007	10,000	

The Sagar Hotel Ltd. Charged depreciation @ 20% under Diminishing Balance Method.

You are required to give Hire Vendor's Account and Refrigerator A/c in the books of Hire Purchaser.

(Oct. 2008)

Default & Repossession :

A) Complete Repossession :

7) On 1st April, 2005 Power Fabrication works purchased a lathe machine on hire purchase. The cash price of the machine was Rs. 5,00,000 and the same was to be paid, commencing from 1-4-2005 in five six monthly instalments together with interest at 10% p.a. The books of accounts are closed on 31st March every year. The rate of depreciation is at 10% p.a. of WDV method.

All the instalments were duly paid upon 1-4-2006 but due to financial difficulty Hire Purchaser could not pay the instalment on 30-9-2006. The vendor repossessed the machine. Show ledger account in the books of Hire purchaser.

8) Bombay Transports Ltd., purchased from Kolkatta Motors. Three Mini Trucks costing Rs. 2,00,000 each on hire purchase system. Payment was to be made in three equal instalments together with interest at 5%. Bombay Transports write of depreciation @ 20% p.a. on the diminishing balance. If paid the instalment due at the end of the first year but could not pay the next instalment.

Hire vendor took the possession of all the three trucks and sold them for Rs. 3,50,000 after spending Rs. 20,000/- for its repairs.

Give necessary ledger accounts in the books of both the parties.

B) Partial Repossession.

9) M/s Radhika Trading Co. purchased two motor cycle from Bajaj Auto Ltd. Costing Rs. 40,000/- each on 1st April 2006 on hire purchase system. The terms of agreement were.

Cash down payment Rs. 10,000/- for each motor cycle, Remaindor in 3 equal instalments together with interest at 10% p.a. to be paid at the end of each year.

Radhika Trading co writes off 25% depreciation each year on diminishing balance method. Radhika Trading Co. paid the installments due on 31st March 2008 but could not pay the final instalment.

Bajaj Auto Ltd. Repossessed one motor cycle adusting its value against the amount due. The repossession was done on the basis of 30% depreciation on diminishing balance method. The vendor spent Rs. 4,280/- for the repairs of the motor cycle and sold it for Rs. 20,000/-

Hire purchaser close its books on 31st March every year.

Write up necessary ledger accounts in the books of both the parties.

10) Adinath Engineering works purchased 5 lathe machine from Ruchi Machines Ltd., on hie purchase system. The cash price of each machine was Rs.1,00,000/-. It was agreed that Rs. 1,25,000 should be paid immediately and the balance in three equal instalments of Rs. 1,50,000 each of the end of each year. The Ruchi machines charges interest at 10% p.a. The buyer depreciates machines at 20% p.a. on the diminishing balance method.

Adinath Engineering works paid cash down and two instalments but failed to pay the last instalment. Ruchi Machines repossessed three machnes, leaving two machines with the buyer and adjusting the value of 3 machines against the amount due. The Repossessed machines were valued on the basis of 30% depreciation p.a. on the written down value. The machines repossessed were sold by the vendor for Rs. 1,50,000 after necessary repairs amounting to Rs. 25,000/-

Show necessary accounts in the books of both the parties.

- **Further Readings :**

1) Advance Accountancy : R. R. Gupata

2) Steps in Advanced Accountancy – S. N. Maheshwari

3) Advance Accountincy – V. A. Patil Dr.P. M. Herekar.

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Unit-3

Insurance Claim

Loss of Profit and Loss of Stock

3.0 Unit Objectives :

The study of this unit will help students to –

- identity the major risks to which a business is exposed.
- compute the amount of loss recoverable from the insurance company against a policy for loss of stock, or consequential loss.
- compute the amount of loss recoverable from the insurance company against a policy for loss of profit.
- make necessary accounting entries.
- explain the meaning of certain key terms.

Structure :

3.1 Introduction :

A fire in a business place destroys a number of assets such as building, furniture, machinery, stock etc. A businessman needs insurance cover to insure against possible loss of assets in the event of occurrence of fire. In the interest of business unit, it is necessary to take fire insurance policy to indemnify itself against such losses resulting from the fire. A fire insurance claim is lodged with insurance company in regard to the following.

1. To cover the loss of stock destroyed by fire.
2. To cover loss of profit during the period of dislocation of normal business operations.

However, the businessman will have to exercise due care and caution in insuring adequately for the loss and stock and loss of profit. In the absence of insurance cover, normal business operations cannot be restored. Insurance cover would enable him to carry on business without any risk.

In the present unit we are mainly concerned with estimating the amount of claim under loss of stock and loss of profit as a result of fire.

3.2 Computation of Insurance claim under Loss of Stock Policy :

A fire insurance policy can be taken for indemnification against loss of fixed assts and loss of stock on account of fire claims in relation with fixed assets are based on the value of these fixed assets if the same are insured against fire or any other hazards. But difficulty arises particularly in case of stock for which no account appears in the books. If proper stock book is maintained for the purpose, claims can be ascertained easily for loss of stock. On the other hand if the stock book is not maintained, the value of stock destroyed by fire will be estimated on the basis of quantity and price of the same as shown by different documents, papers and certain other information. These are two situations in which claims can be ascertained.

3.2.1 When proper records are available and the information of stock lying with the business on the date of fire is known :

Under this situation following would be the steps for lodging claim with insurance company.

i) Ascertain the value of stock lying with business unit on the date of fire.
ii) Ascertain the value of stock salvaged from fire.
iii) Find out stock destroyed by fire by deducting the stock salvaged from the stock value on the date of fire.
iv) The amount of claim would be equal to the stock destroyed by fire. (Provided there is no application of average clause).

3.2.2 When proper records are not available :

The following steps involved for lodging claim with insurance company.

Step - 1 :

Calculate the rate of gross profit on the basis of last accounting year, or on the basis of last few years after adjusting abnormal items if any. This is done by preparing trading account of previous year, which gives the figure of gross profit. The proforma of Trading A/c. is as under:

Dr. Trading Account for the year ended .... Cr.

Particular	Rs.	Rs.	Particular	Rs.	Rs.
To Opening stock		xxx	By Sales	xxx	
To Purchases ...	xxx		- Return Inward	xxx	
Return outward	xxx				xxx
		xxx	By Closing stock		xxx
To wages		xxx			
To Carriage inward		xxx			
To Freight		xxx			
To Gross Profit c/d (Balancing figure)		xxx			
		xxx			xxx

Step - 2

Calculate the gross profit rate from the above.

$$\text{Gross profit rate} = \frac{\text{Gross Profit}}{\text{Sales}} \times 100.$$

Step - 3

Prepare Memorandum Trading Account for the period from the opening date of the year to the date of fire.

In the memorandum Trading A/c. all the figures of opening stock, purchases, wages and sales during the above period are available and given in the problem. The figure of gross profit is ascertained by applying the gross profit percentage of last year as calculated in step no.2 to the sales for the current period. Having obtained the figure of gross profit, the memorandum Trading A/c. is balanced and balancing figure would represent the figure of stock lying with the business unit on the date of fire. The proforma of Memorandum Trading Account is as under :

Memorandum Trading Account.

(for the period from the first day of the year of accounting to the date of fire)

Dr. Cr.

Particulars	Rs.	Rs.	Particulars	Rs.	Rs.
To Opening stock		xxx	By Sales	xxx	
To Purchases	xxx		+ Unrecorded sales	xxx	
+ Unrecorded purchases	xxx			xxx	
	xxx		- Return Inwards	xxx	
- Return outward	xxx	xxx	By closing stock (i.e.		xxx
To wages		xxx	stock destroyed by		
To Carriage & freight		xxx	fire)		xxx
To Gross profit		xxx	(Balancing figure)		
(...% on...sales)					
		xxx			xxx

Step – 4 : Prepare a statement of fire claim lodged with insurance company.

Company – For calculating the amount of claim for loss of stock, salvaged stock, if any should be deducted from the value of stock destroyed by fire.

Amount of claim for loss of stock	Rs.
Value of closing stock on the date of fire...... (as per memorandum Trading Account)	xxx
Less – value of stock salvaged	xxx
Amount of claim :	xxx

Step – 5 : Application of Average Clause :

Average clause applies if actual loss exceeds the amount of the insured value; the amount of claim is to be limited after applying the average clause. Average clause means the claim for the loss of stock is proportionately reduced having regard to the under-insurance of stock. Under-insurance means the business unit has not been adequately covered the stock values for the purpose of insurance, i.e. the policy amount taken by the business unit is less as compared to the normal stock holding. Therefore, the amount of claim is proportionately reduced by keeping in view the extent of under insurance. The following equation is used for calculating the claim by applying Average clause.

$$\text{Claim} = \frac{\text{Amount of Policy}}{\text{Value of stock on the date of fire}} \times \text{Loss of stock destroyed by fire.}$$

Notes :

1) It must be remembered that the amount of actual loss is less than the insured value of actual goods (i.e. policy amount), then the amount of claim would be equal to the stock, destroyed by fire.

2) If the gross profit rate remains constant from year to year provided it is not disturbed by abnormal happenings. Normally there is reasonably consistency in the gross profit rate, the gross profit percentage is taken as the basis for further calculation. If it is fluctuating, it is better to make an estimated rate of gross profit based on the available information.

3) Existence of Abnormal items of purchase and sales disturb the gross profit rate. Abnormal item means items, which do not carry normal price tag due to reasons that they are defective or poor quality or slow moving items etc. Such items therefore, required to be separated from other normal items so as to reflect the correct gross profit percentage. While preparing Trading A/c., the existence if such abnormal items are separated with two purposes. One to ascertain the profit or loss on such items and stock such items on the date of fire. Second is to render the normal gross profit rate undisturbed or undiluted.

3.2.3 Problems on Loss of Stock Policy :

Illustration – 1 : A fire occurred in the business premises of Calcutta Traders on 15 May 2015 destroying a great part of his stock. On 1st January 2014, it appeared in the books as Rs.30,000/-. The value of stock salvaged was Rs.18,000/- the Gross Profit on the sales was 30% and sales amounted to Rs.1,50,000/- from January 2014 to the date of fire, while for the same period the purchases amounted to Rs.1,47,000/-.

Prepare statement of claim for submission to Insurance Co.

Solution : Given rate of Gross profit – 30%.

I Preparation of Memorandum Trading A/c. to find out closing stock on the date of fire.

Memorandum Trading A/c.

(for the period from 1st Jan 2015 to 15th May, 2015)

To Opening stock.........	30,000	By Sales	1,50,000
To Purchases	1,47,000	By Closing stock	
To Gross Profit c/d.	45,000	(on 15th May, 2005)	72,000
(30% on sales Rs.150000)		(Balancing figure)	
	2,22,000		2,22,000

II Preparation of statement of fire insurance claim.

Statement of fire claim.	Rs.
Value of closing stock at the date of fire.............. (as per memorandum trading A/c.)	72,000
Less : Stock of goods salvaged	18,000
Value of goods destroyed by fire, i.e. fire claim	54,000

Illustration – 2 : A merchant's godown caught by fire on Nov. 3, 2012 at night causing serious damage to stock. The following information is obtained from the books and record salvaged :

		Rs.
Stock at cost on 31.12.2010	....	45,000
Stock at cost on 31.12.2011	....	50,000

Purchases during the year 2011 ……………….. 4,75,000

Sales during the year 2011 ……………………. 5,87,500

Purchases from 15th Jan. to Nov. 3, 2012 …….. 4,40,000

Sales from 1st Jan. to Nov. 3, 2012 ………….. 4,00,000

In June 2012, shop soiled goods of the cost price of Rs.2,000 were thrown away as valueless.

Assuming that the rate of Gross Profit has been the same in 2012 as in 2011, estimate the value of the stock in the godown at the time of fire and a statement of claim for submission to the Insurance Company.

Solution :

I Preparation of Trading Account for the year ending 31st **Dec. 2011 to find out Gross Profit and Rate of Gross Profit Rate.**

Trading Account for the year ended 31.12.2011

To Opening stock	45,000	By Sales	5,87,500
To Purchases	4,75,000	By Closing stock	50,000
To Gross Profit c/d			
(Balancing figure)	1,17,500		
	6,37,500		6,37,500

II. Calculation of Rate of Gross Profit for 2011.

$$\text{Rate of Gross Profit} = \frac{\text{Gross profit}}{\text{Sales}} \times 100$$

$$= \frac{1,17,500}{5,87,500} \times \frac{100}{1}$$

$$= 20\%$$

III. Preparation of Memorandum Trading Account for the period January 2012 to Nov. 3, 2012.

Memorandum Trading Account
(for the period 1st Jan. 2012 to Nov. 3, 2012.)

To Opening stock	50,000	By Sales	4,00,000
To Purchases	4,40,000	By Closing stock	
To Gross Profit	80,000	burnt by fire	1,70,000
(20% on sales)		(Balancing figure)	
	5,70,000		5,70,000

IV. Calculation of Amount of Claim to be submitted.

Value of closing stock at the date of fire	1,70,000
Less- shop-solid goods thrown away	2,000
Amount of claim	1,68,000

Illustration – 3 : Fire occurred in the premises of Alpha & Beta Co. on 1st Sept. 2012 and stock of the value of Rs.1,01,000 was salvaged and business books and records were saved.

The following information was obtained.

Purchases for the year ended 3.3.2012	7,00,000
Sales for the year ended 3.3.2012	11,00,000
Purchases from 1.4.2012 to 1.09.2012	2,40,000
Sales from 1.4.2012 to 1.09.2012	3,60,000
Stock on 3.3.2011	3,00,000
Stock on 3.3.2012	3,40,000

It is also given that the stock on 31.3.2012 was overvalued by Rs.20,000.

Calculate the amount of the claim to be processed to the Insurance Company irrespective of losses. Rate of Gross profit is to be based on the year ended 31.3.2012.

Solution :

I Calculation of Gross Profit for the year ended 31.3.2011.

Trading Account for the year ended 31.3.2011.

To Opening stock	3,00,000	By sales		11,00,000
To Purchases	7,00,000	By Closing stock	3,40,000	
To Gross Profit c/d (Bal. Fig.)	4,20,000	- Over valuation of stock.	20,000	3,20,000
	14,20,000			14,20,000

II Calculation of Rate of Gross Profit for the year 2012.

$$\text{Rate of Gross Profit} = \frac{\text{G.P.}}{\text{Sales}} \times 100$$

$$= \frac{4,20,000}{11,00,000} \times \frac{100}{1}$$

$$= 38.18\%$$

III. Preparation of Memorandum Trading A/c. to find out loss of stock on the date of fire.

Memorandum Trading Account
(for the period from 1.4.2012 to 1.9.2012)

To Opening stock	3,20,000	By	3,60,000
To Purchases	2,40,000	By Closing stock	
To Gross Profit c/d.		lost in fire	3,37,448
(38.18% of Sales Rs.3,60,000)	1,37,448		
	6,97,448		6,97,448

IV. Calculation of statement of claim.

Value of stock on the date of fire (i.e. 1.09.2012)	3,37,448
Less – Value of stock salvaged	1,01,000
Claim for Loss of Stock	2,36,448

Illustration – 4 : A fire occurred on 15th April 2013 and destroyed the business premises of Delhi Electronics Ltd. The books of accounts and stock amounting to Rs.18,000 were saved and the following information was available from the books.

Year	Sales Rs.	Gross Profit Rs.
Year ending Dec. 31, 2008	8,60,000	2,15,000
Year ending Dec. 31, 2009	7,10,000	2,13,000
Year ending Dec. 31, 2010	6,00,000	2,00,000
Year ending Dec. 31, 2011	5,50,000	1,87,000
Year ending Dec. 31, 2012	4,80,000	1,60,000

The stock on Dec. 31, 2012 was valued at Rs.97,000. The purchases, sales and production wages from Jan. 1, 2013 to 14th April 2013 were ascertained at Rs.75,000, 1,59,000/- and Rs.30,000 respectively.

You are to prepare a statement in support of claim against the Insurance Company.

Solution :

I Calculation of rate of gross profit of past years.

$$\text{Rate of Gross Profit} = \frac{\text{Gross Profit}}{\text{Sales}} \times 100.$$

Years	Calculation	Rate of Gross Profit
2008	215000 / 860000 x 100	25%
2009	213000 / 710000 x 100	30%
2010	200000 / 600000 x 100	33.33%
2011	187000 / 550000 x 100	34%
2012	160000 / 480000 x 100	33.33%

Note : The rte of gross profit has been constant over last 3 years hence we expect the rate of gross profit 33.33% during 2013.

II. Preparation of Memorandum Trading Account.

Memorandum Trading Account.

(for the period from 1 Jan. 2013 to 15th April 2013)

	Rs.		Rs.
To opening stock	97,000	By Sales	1,59,000
To purchases	75,000	By Closing stock	96,000
To production wages	30,000	(on 15.4.2013)	
To gross profit (33.33% on sales Rs.1,59,000)	53,000		
	2,55,000		2,55,000

III. Calculation of statement of fix claim.

Value of stock on the date of fire (i.e. 15.4.2013)	96,000
Less : Value of stock salvaged ………………..	18,000
Amount of claim ………..Rs.	78,000

Illustration – 5 : A fire broke out in the warehouse of Mercantile Traders Ltd. on 30th Sept. 2013. The company desires to file a claim with insurance company for loss of stock and give you the following information to enable you to prepare a statement showing the amount to be claimed.

		Rs.
1.	The lost accounts of the Company were prepared on 31st Dec. 2012	--
2.	Sundry Debtors on 31.12.2012	40,000
3.	Sundry Creditors on 30.09.2013	30,000

4. Cash received from Debtors 1,44,000

5. Stock on 31.12.2012 15,000

6. Purchases from 1-1-2013 to 30-9-2013 1,25,000

7. Rate of Gross Profit 25%

Solution :

In this problem figure of sales is missing. To find this missing item the total debtors A/c. is prepared.

I Preparation of Memorandum Trading Account.

Memorandum Trading Account
(for the period from 1.1.2013 to 30.9.2013)

	Rs.		Rs.
To Opening stock	15,000	By Sales	1,34,000
To Purchases	1,25,000	By Closing stock	39,500
To Gross Profit	33,500	(on 30.9.2013)	
(25% on sales- 134,000)			
	1,73,500		1,73,500

II. Preparation of statement of fire claim.

	Rs.
Value of stock on the date of fire (i.e.30.9.2013)	39,500
Less : Value of stock salvaged	Nil
Amount of claim Rs.	39,500

Working Note : 1) Rate of Gross Profit of last year is given.

2) To find out credit sales, a total debtors A/c. is prepared.

Total Debtors Account.

To Opening balance	40,000	By Cash	1,44,000
To Sales (Bal. Figure)	1,34,000	(Cash collected from Drs)	
		By Closing Balance c/d.	30,000
	1,74,000		1,74,000

Illustration – 6 : A fire occurred in the business of Patil Traders on 20.10.2014. From the following particular ascertain the loss of stock and prepare a claim for Insurance applying average clause.

Stock on 1.1.2010	30,600
Purchases from 1.1.2013 to 31.12.2013	1,22,000
Sales from 1.1.2013 to 31.12.2013	1,80,000
Stock on 31.12.2013	27,000
Purchases from 1.1.2014 to 19.10.2014	1,47,000
Sales from 1.1.2014 to 19.10.2014	1,50,000

The stock were always valued at 90% of cost. The stock saved was worth Rs.18,000. The amount of policy was Rs.63,000.

Solution :

I Preparation of Trading A/c. to find out Gross Profit.

Trading Account.
(for the year ended 31.12.2013.)

	Rs.		Rs.
To Opening stock $\left[\frac{30600}{90} \times 100\right]$	34,000	By Sales	1,80,000
To Purchases	1,22,000	By Closing stock $\left[\frac{27000}{90} \times 100\right]$	30,000
To Gross Profit c/d. (Balancing figure)	54,000		
	2,10,000		2,10,000

II Calculation of Rate of Gross Profit.

$$\text{Rate of Gross Profit} = \frac{\text{Gross Profit}}{\text{Sales}} \times 100$$

$$= \frac{54,000}{180000} \times 100$$

$$= 30\%$$

III. Preparation of Memorandum Trading A/c. to find out closing stock on the date of fire.

Memorandum Trading Account

(for the period from 1.1.2014 to 19.10.2014)

To Opening stock	30,000	By Sales	1,50,000
To Purchases	1,47,000	By Closing stock	72,000
To Gross profit c/d (30% of sales Rs.150000)	45,000	(i.e. on the date of fire)	
	2,22,000		2,22,000

IV. Statement of fire claim.

Value of stock on the date of fire	72,000
Less : Value of stock salvaged	18,000
Value of stock destroyed by fire	54,000

V. Calculation of claim by applying Average Clause.

Application of Average Clause.

$$\text{Claim} = \frac{\text{Insurance Policy}}{\text{Stock on the date of fire}} \times \text{Actual loss by fire.}$$

$$= \frac{63,000}{72,000} \times 54,000$$

$$= 47,250$$

Note : If policy amount is given the average clause is applied for calculation of fire claim.

Illustration – 7 : Find out the amount of claim to be lodged with Insurance Company from the following information.

Particulars	2010 Rs.	2011 Rs.	2012 Rs.	2013 Rs. (up to date of fire i.e.20.6.2013)
Opening stock	30000	—	—	—
Purchases	150000	150000	180000	120000
Sales	120000	160000	260000	168000
Wages	6000	10000	12000	8000
Closing stock	40000	80000	100000	—

During the year 2012, the closing stock included goods purchased but not recorded Rs.10000. The salvaged stock was valued at Rs.18000. The amount of Policy was Rs.68000. There was an average clause in the policy. The firm closes its books on 31st Dec. every year.

Solution :

I. Preparation of Trading Account for 3 years to ascertain Gross profit for last three years.

Trading Account

(for the year ended 31st Dec. 2010, 2011, & 2012)

	2000 Rs.	**2001 Rs.**	**2002 Rs.**		**2000 Rs.**	**2001 Rs.**	**2002 Rs.**
To Opening stock	30000	40000	80000	By Sales	120000	160000	260000
To Purchases Add Unrecorded Purchases	100000	150000	190000	By closing Stock	40000	80000	100000
To Wages	6000	10000	12000				
To Gross Profit c/d (Bal.figure)	24000	40000	78000				
	160000	**240000**	**360000**		**160000**	**240000**	**360000**

Note : In the year 2012 there was unrecorded purchases amounted to Rs.10000, therefore the total purchases for 2012 were (180000 + 10000) Rs. 190000.

II. Calculation of Gross Profit Rate.

Gross Profit Rate = $\frac{\text{Gross Profit}}{\text{Sales.}}$

1. 2010 ………….. $\frac{24000}{120000} \times 100 = 20\%$

2. 2011 ………… $\frac{40000}{160000} \times 100 = 25\%$

3. 2012 ………… $\frac{78000}{260000} \times 100 = 30\%$

Hence, average percentage of Gross profit to sale will be :

$$= \frac{20 + 25 + 30}{3} = \frac{75}{3} = 25\%$$

III. Preparation of Memorandum Trading Account for ascertainment of value of closing stock on the date of fire.

Memorandum Trading Account

(for the period 1.1.2013 to 20.6.2013)

	Rs.		Rs.
To Opening stock	1,00,000	By Sales	1,68,000
To Purchases	1,20,000	By Closing stock	1,02,000
To Wages	8,000	(Balancing figure	
To Gross Profit c/d.	42,000	i.e. stock on the date of fire)	
	2,70,000		2,70,000

IV. Calculation of Loss of stock destroyed by fire.

Value of stock on the date of fire …………..	1,02,000
Less : Value of stock salvaged …………….	18,000
Loss of stock by fire …	84,000

V. Calculation of fire claim by applying Average Clause.

Claim by application of the Average Clause.

$$\text{Amount of Claim} = \frac{\text{Insurance Policy}}{\text{Value of stock on the date of fire}} \times \text{Loss of stock destroyed by fire.}$$

$$= \frac{68,000}{102000} \times 84,000$$

$$= 56,000/-$$

Illustration – 8

On 20th Sept. 2008, the premises of Hindustan Lever Ltd. destroyed by fire and a stock of Rs.6000 was salvaged and retained by the insured. The business books and records were saved from which the following information is obtained.

	Rs.
Stock on 1.1.2007	50,000
Stock on 31.12.2007	70,000
Purchases for the year ended 31.12.2007	4,74,000
Sales for the year ended 31.12.2007	6,00,000
Purchases from 1.1.2008 to 20.9.2008	1,50,000
Sales from 1.1.2008 to 20.09.2008	2,05,000

In valuing the stock on 31.12.2007, Rs. 4,000 had been written off, certain stock having cost of Rs.9,000/-.

Half of these goods were sold in July 2008 for Rs.5,000. The balance is estimated to be worth the original cost. Subject to above exception the gross profit had remained at the uniform rate.

On 19th Sept. 2008, goods worth Rs.4,000 had been received by the godown keeper but had not been entered in the purchase A/c. Show the statement of claim for loss of stock.

Solution :

I. Preparation of Trading A/c. for 2007 to find out gross profit.

Trading Account for the year ended 31.12.2007.

	Rs.			Rs.
To Opening stock	50,000	By Sales		6,00,000
To Purchases	4,74,000	By Closing stock	70,000	
		Add:amount written off		
To Gross Profit c/d.	1,50,000	previously	4000	
(Bal figure)				74,000
	6,74,000			6,74,000

II. Calculation of Gross profit rate for 2007.

$$\text{Gross profit rate} = \frac{\text{Gross Profit}}{\text{Sales}} \times 100$$

$$= \frac{1,50,000}{6,00,000} \times 100$$

$$= 25\%.$$

III. Preparation of memorandum Trading A/c. up-to-date of fire to find out stock burnt by fire.

Memorandum Trading Account.

(for the period from 1.1.2008 to 20.9.2008)

To Opening stock	74,000		By Sales		2,05,000
Abnormal item at original	9,000		Less- Sale proceeds abnormal items.	5,000	
		65,000			2,00,000
To Purchases		1,50,000	By closing stock		69,000
+ Unrecorded purchases at cost	4,000		(on the date of fire)		
		1,54,000			
To Gross profit c/d. (25 on sales i.e. Rs. 400000)		50,000			
		2,69,000			2,69,000

IV. Ascertainment of stock destroyed by fire i.e. fire claim.

Statement of fire insurance claim.

	Rs.
Normal stock	69,000
Add : abnormal item at original Cost (1/2 of Rs.9000)	4,500
	73,500
Less : Value of stock salvaged	6,000
Value of stock destroyed by fire	67,500

Note : Fire Insurance claim will be equal to Rs.67,500 in the absence of any average clause.

Fix claim	Rs. 67,500

Illustration – 9

On 15th May 2012 the premises of Pune Ltd. were destroyed by fire but sufficient records were saved from which the following information was obtained.

	Rs.
Stock on 1.1.2011	76,800
Purchases during the year 2011	3,20,000
Sales during the year 2011	4,05,200
Stock on 31.12.2011	63,600
Purchases from 1.1.2012 to 15.5.2012	1,08,000
Sales from 1.1.2012 to 15.5.2012	1,22,800

An item of stock purchased in 2010 at cost Rs.20,000 was valued at Rs.12,000 on 31.12.2010. Half of this stock was sold in 2001 for Rs.5,200, the remaining was valued at Rs.4,800 on 31.12.2011. One fourth of the original stock was sold on 15.3.2012 for Rs.2,800 and remaining stock was considered to be worth 60% of the original cost. The salvaged stock was worth Rs.24,000. The amount of policy was Rs.60,000 and there was an average clause in the policy. Find the amount of claim.

Solution :

I. Preparation of Trading A/c. for the year 2011 to find out Gross profit.

Trading Account for the year ended 31.12.2011.

	Rs.	Rs.		Rs.	Rs.
To Opening stock	76800		By Sales	405200	
Less: Value of			Less: Sale of half		
abnormal Item	12,000	64,000	of abnormal item	5200	4,00,000
To Purchases		3,20,000	By Closing Stock	63,600	
To Gross Profit c/d		74,000	Less : Value of	48,000	
(Balancing figure)			remaining amnormal		
			item	4,800	58,800
		4,58,800			4,58,800

II. Calculation of Gross Profit Rate.

$$\text{Gross profit rate} = \frac{\text{Gross Profit}}{\text{Sales}} \times 100$$

$$= \frac{74{,}000}{4{,}00{,}000} \times 100$$

$$= 18.5\%$$

III. Preparation of Memorandum Trading Account to find out stock burnt on the date of fire.

Memorandum of Trading Account.

(for the period from 1.1.2012 to 15.5.2012, i.e. the date of fire)

	Rs.		Rs.
To Opening stock	58,800	By Sales	1,22,800
To Purchases	1,08,000	Less: Sale of abnormal	
To Gross Profit c/d.	22,200	item(remaininghalf)	2,800
(18.5% on sales			1,20,000
i.e.Rs.120000)		By Closing stock on the	
		date of fire. (balancing figure)	69,000
	1,89,000		1,89,000

IV. Ascertainment of Loss of stock by fire.

	Rs.
Normal stock on the date of fire	69,000
(as per memorandum Trading A/c.)	
Add : Abnormal items (60% of Rs.5000)	3,000
	72,000
Less : Stock salvaged	24,000
Value of stock destroyed by fire, i.e. loss	48,000

V. Application of Average clause to find out net fire claim.

$$\text{Claim} = \frac{\text{Insurance Policy}}{\text{Actual value of stock}} \times \text{Amount of loss.}$$

$$= \frac{60{,}000}{72{,}000} \times 48{,}000$$

$$= 40{,}000$$

Working Note on Abnormal items :

		Rs.
1.	Total Abnormal item of stock	20,000
2.	Half of the stock was sold in 2011	5,200
3.	Half of the remaining half (i.e.1/4 was sold in March 2012 Rs.5,000)	2,800
4.	Remaining ¼ was considered to be valued for claim at 60% of the original cost, i.e. 60% of Rs.5000)	3,000

3.3 Computation of Insurance Claim Under Loss of Profit Policy :

When a fire occurs, the business is dislocated for a certain period of time and the normal business cannot be achieved. During this period of dislocation, the sales are comparatively less than what they are supposed to be under normal working conditions. When sales are reduced, the corresponding profits are also reduced. Consequential loss insurance indemnifies the insured any loss of profit suffered by him, consequent on the destruction of business by fire. An ordinary fire insurance policy does not cover loss of profit due to reduction in sales on account of fire. So a separate policy known as consequential loss policy is taken to cover the following losses due to fire.

1. Loss of profit due to reduction in turnover / output.
2. Payment of standing charges.

3. Increased cost of working (which is necessary to avoid or diminish reduced turnover)

3.3.1 Important Terms :

3.3.1.1 Indemnity Period :

Indemnity period means the period for which the policy is taken. It is the expected period during which the business is likely to be dislocated resulting reduction in sales. The loss of profit on account of reduced sales during the indemnity period only, would be compensated by the insurance company.

3.3.1.2 Short Sales :

The term short sales refer to the loss of sales on account of fire resulting in dislocation of business. This is the difference between the standard sales and actual sales during the period of fire.

3.3.1.3 Standard Sales :

The term standard sales refers to the sales for the period corresponding with the indemnity period during the preceding accounting year adjusted in view of trends noticed during the accounting year in which fire occurred.

3.3.1.4 Gross Profit :

The term Gross profit for loss of profit has got a different meaning than that of what is commonly understood. It refers to the ratio of net profit and insured standing charges to the sales during the preceding financial year.

$$\text{Gross Profit Ratio} = \frac{\text{Net profit + Insured standing charges of last year}}{\text{Sales of the previous year}} \times 100$$

In case of net loss, the rate of gross profit will be determined as under :

$$\text{Gross Profit Rate} = \frac{\text{Insured standing charges - Net loss}}{\text{Sales of the previous year.}} \times 100$$

3.3.1.5 Standing Charges :

It means fixed charges, which continue irrespective of reduction in sales. It is just opposite of variable charges which fluctuate with the sales, e.g. wages and salaries of permanent staff, rent, rate tax and insurance, directors fees and auditors fee etc.

3.3.1.6 Increased Cost of Working :

The insured may have to incur certain additional expenses to keep the business running during the indemnity period. Such increased working expenses will be allowed subject to a limit, which is the least of two figures resulting from the following.

a) $\dfrac{\text{Net Profit + Insured standing charges}}{\text{Net profit + All standing charges.}}$ x Increased cost of working

b) Short sales avoided through increased cost of working + Rate of Gross profit.

3.3.1.7 Saving in Expenses :

Any saving in expenses will have to be deducted from the amount of loss of profit to arrive the Gross claim under Loss of Profit Policy.

3.3.1.8 Average Clause :

The amount of Gross fire claim will be proportionately reduced if the sum insured under the Policy is less than the amount for which the policy should have been taken. The amount for which policy should have been taken is determined by applying the rate of gross profit to turnover for 12 months immediately preceding the date of fire. Such turnover may have to be adjusted keeping in view the trend of sales in the accounting year in which the fire occurs.

3.3.2 Procedure for Calculating the Fire Claim under Loss of Profit :

Following procedure is followed for ascertaining fire claim –

3.3.2.1 : Ascertain the amount of short sales, i.e. excess of standard sales over actual sales during dislocation of business.

Sales in the previous year for a period corresponding to the indemnity period	xxx
Add : Expected increase in the current year, if any.	xxx
	xxx
Less: Actual sales during indemnity period	xxx
Short sales	xxx

3.3.2.2 : Calculate the Gross Profit Rate :

The gross profit rate is found out by applying the following formula-

$$\text{Gross Profit Rate} = \frac{\text{Net Profit of Previous year + Insured standing charges}}{\text{Sales during the previous year.}} \times 100$$

3.3.2.3 : Ascertain the increased cost of working and add it.

If all the standing charges are not insured, the claim in respect of increased cost of working must be reduced proportionately with the help of following formula-

$$\text{Claim} = \frac{\text{Net profit + Insured standing charges}}{\text{Net profit + All standing charges}} \times \text{Increased cost of working.}$$

But the claim in respect of increased cost of working must not exceed the sum produced by applying the rate of Gross profit, the amount of reduction in sales.

3.3.2.4 : Deduct the amount of saving in the insured standing charges during the period of indemnity.

3.3.2.5: Apply the test of Average Clause to the sum ascertained as under:

$$\text{Net Claim} = \frac{\text{Amount of policy}}{\text{Gross profit on annual sales.}} \times \text{Loss of profit.}$$

Note : When the amount of policy is less than the gross profit, it applied average clause.

Alternatively, lower of two following percentages may be applied to short sales in order to ascertain loss of profit due to fire.

1) $$\text{Gross profit Ratio} = \frac{\text{Net profit + Insured standing charges of last accounting year.}}{\text{Sales for the last accounting year.}} \times 100$$

2) $$\text{Indemnity Ratio} = \frac{\text{Policy value.}}{\text{Sales of 12 months immediately preceding fire as adjusted for trend.}} \times 100$$

3.3.3 : Problems on ascertaining fire claim under Loss of Profit Policy:

Illustration – 1 :

Mr.Shashtri had taken a loss of profit policy for Rs.1,20,000. The period of indemnity being 6 months after the fire. On 16th May 2008 his office premises were destroyed by fire. The following information is available from his books.

	Rs.
Net profit for the year ended 2007	72,000
Standing charges for the year ended 2007	24,000
Sales for the year ended 2007	14,40,000
Sales from the year ending on 15 May 2008	15,00,000
Sales from 16th May to 15th Nov. 2007	9,00,000
Sales from 16th May 2008 to 15th Nov. 2008	3,00,000

Calculate the amount of fire claim.

Solution :

I. Calculation of Short sales :

	Rs.
Sales in the previous year, i.e. from 16 May to 15 Nov. 2007	9,00,000
Actual sales, i.e. from 16 May 2008 to 15th Nov.2008	3,00,000
Short sales	6,00,000

II. Calculation of Gross profit Rate or Earning Ratio :

$$\text{Gross Profit Rate} = \frac{\text{Net Profit + Standing charges}}{\text{Sales for the previous year}} \times 100$$

$$= \frac{72{,}000 + 24{,}000}{14{,}40{,}000} \times 100$$

$$= \frac{96,000}{14,40,000} \times 100$$

$$= 6.67\%$$

III. Calculation of Indemnity Ratio.

$$\text{Indemnity Ratio} = \frac{\text{Policy Amount}}{\text{Sales of 12 months immediately preceding the date of fire.}} \times 100$$

$$= \frac{1,20,000}{15,00,000} \times \frac{100}{1}$$

$$= 8\%.$$

IV. Calculation of Loss Profit :

Loss Profit = Short Sales x Lower of the two percentages / ratios.

= 6,00,000 x 6.67%

= 40,200

Claim for Loss of Profit = Rs. 40,020/-

Illustration – 2 :

A businessman took out a Loss of Profit Policy for Rs.90,000 with an indemnity period of Six months. His net profit for the last financial year was Rs.56,000 after deducting standing charges of Rs.14,000, and the sales for that period was Rs.2,80,000.

A fire occurred on 31 March 2009. His turnover for six months immediately following the fire was Rs.1,80,000. As compared with the turnover of corresponding months in the previous year, it was short by Rs.3,20,000. His turnover for 12 months immediately preceding fire was Rs.4,50,000.

Calculate the amount of claim lodged with Insurance Company.

Solution :

I Calculation of Short Sales.

Short sales given in the problem = Rs. 3,20,000

II. Calculation of Gross Profit Rate.

$$\text{Gross Profit Rate} = \frac{\text{Net Profit + Standing charges}}{\text{Sales of the previous year}} \times 100$$

$$= \frac{56,000 \times 14,000}{2,80,000} \times 100$$

$$= \frac{70,000 \times 100}{2,80,000} \times 100$$

$$= 25\%.$$

III. Calculation of Indemnity Ratio.

$$\text{Indemnity Ratio} = \frac{\text{Amount of Policy}}{\text{Sales for 12 months immediately preceding the date of fire.}} \times 100$$

$$= \frac{90,000}{4,50,000} \times 100$$

$$= 20\%.$$

IV. Calculation of Amount of claim under Loss of Profit.

Loss of Profit = Short sales x Lower of the two ratios.

= 3,20,000 x 20%

= 3,20,000 x 20 / 100

= 64,000

✯ Amount of claim lodged with Insurance Company Rs.64,000.

Illustration – 3 :

On 1.7.2013 Modern Furniture Dealers Ltd. Took out a profit Insurance Policy for Rs.1,50,000 with a period of indemnity of six months. Net profit of the company for the year ended 30.6.2013 was Rs.1,20,000 and the turnover for the period was Rs.4,80,000. Standing charges for that period amounted to Rs.24,000 and those were fully insured.

On 30.9.2013 a fire broke out and the normal turnover could not be restored before the end of six months. As a result the reduction in turnover during the period of indemnity was Rs.48,000 when compared with the corresponding period in the previous year. In an effort to maintain the turnover the increased cost of working was ascertained at Rs.7,200 although these had been a saving of Rs.800 in insured standing charges over the same period. Moreover, the turnover for the twelve months ended 30.9.2013 amounted to Rs.4,90,000 indicating an increase in turnover for the 2012-13 financial year. Calculate the claim under loss of profit policy.

Solution :

I. Calculation of short sales during the period of Indemnity.

Short sales given in the problem Rs.48,000.

II. Calculation of Gross Profit Rate.

$$\text{Gross Profit Rate} = \frac{\text{Net Profit + Insured standing charges}}{\text{Turnover for the last year}} \times 100$$

$$= \frac{1,20,000 + 24,000}{4,80,000} \times 100$$

$$= 30\%$$

III. Calculation of amount of Gross Claim.

Gross Profit on short sales. (30% on Rs.48,000)	=	14,400
+ Increased cost of working	=	7,200
		21600
- Saving in insured standing charges	=	800
Amount of Gross Claim	=	20,800

IV. Application of Average Clause.

Turnover for 12 month ending preceding the date of fire	Rs.4,90,000
Gross profit – 30% on sales (30% of Rs.49,000)	Rs.1,47,000
Policy Value	Rs.1,50,000
It is fully covered by the policy hence amount of	Rs. 20,800

Note : There is no application of average clause, since the amount of policy is more than the Gross profit.

Illustration – 4 :

From the following information, calculate the amount of claim under loss of profit policy.

1. Date of fire 1 April 2010.
2. Period of indemnity : 4 months.
3. Policy amount Rs.3,00,000.
4. Sales from 1.1.2009 to 31.12.2009, Rs.18,00,000.
5. Sales from 1.4.2009 to 31.3.2010, Rs.20,00,000.
6. Net profit for the year ended 31.12.2009 – Rs.2,00,000 and standing charges Rs.2,00,000 (out of which Rs.40,000 were uninsured)
7. Sales during the dislocation period Rs.2,00,000 and during the corresponding period in the last year Rs.6,00,000.

Solution :

I. Calculation of short sales during the period of Indemnity.

Sales in previous year i.e. 1-4-2009 to 31-7-2009	Rs. 6,00,000
Less : Actual sales during indemnity period	
(1-4-2010 to 31-7-2010)	Rs. 2,00,000
Short Sales	Rs. 4,00,000

II. Calculation of Gross Profit Rate.

$$\text{Gross Profit Rate} = \frac{\text{Net profit + Insured standing charges}}{\text{Sales of the previous year}} \times 100$$

$$= \frac{2,00,000 + 1,60,000\ (200000\text{-}40000)}{18,00,000} \times 100$$

$$= \frac{3,60,000}{18,00,000} \times 100$$

$$= 20\%.$$

III. Calculation of Loss of Profit on Sale.

Loss of Profit = Short sales x Gross profit Rate.

= 4,00,000 x 20%.

Gross Claim = 80,000.

IV. Calculation of Net claim by applying Average clause.

a) Insurance cover required = 20% on sales for 12 months ending on the date of fire.

= 20% on sales Rs. 20,00,000

= Rs. 4,00,000

b) Net claim. $= \dfrac{\text{Policy Amount}}{\text{Insurance cover required}} \times$ Gross claim i.e. loss of profit.

$$= \frac{3,00,000}{4,00,000} \times 80,000$$

= Rs.60,000

Note : No need to calculate Indemnity ratio when average clause is applied for calculating average clause.

Illustration – 5 :

Mr. Sanjay holds a loss of profit policy. From the following information calculate the amount of claim under loss of profit policy.

1. The accounts are prepared annually on 31st December.
2. The net profit plus insured standing charges for the year ended 31st Dec. 2010 amounted to Rs.50,000.
3. A fire occurred on 30th April 2011, the period of Indemnity is 6 months.
4. The sales for the year ended 30th April 2011 were Rs.1,40,000 and For the year ended 31st Dec. were Rs.1,25,000.
5. The sales during the period of dislocation were Rs.20,000 and fro the corresponding period in the preceding year were Rs.45,000.
6. The expenses incurred to mitigate loss was Rs.2,000.
7. The saving in insured standing charges due to fire amounted to Rs.500.
8. The amount of policy was Rs.40,000.

Solution :

I. Calculation of short sales during the period of Indemnity.

	Rs.
Sales of previous period, i.e. 1.5.2010 to 31.10.2010	45,000
Less : Actual sales i.e. 1.5.2011 to 31.10.2011	20,000
Short Sales	25,000

II. Calculation of Gross Profit Rate.

$$\text{Gross Profit Rate} = \frac{\text{Net profit + Insured standing charges}}{\text{Sales of the previous year}} \times 100$$

$$= \frac{50,000}{1,25,000} \times 100$$

$$= 40\%.$$

III. Calculation of Loss of profit on sales.

Loss of Profit = Short sales x Gross profit Rate

= 25,000 x 40 / 100

= 10,000.

IV. Calculation of Amount of Gross Claim.

	Rs.
Loss of Profit calculated as above	10,000
Add – Increase in expenses	2,000
	12,000
Less – Saving in insured standing charges	500
Gross Claim	11,500

V. Calculation of Net claim by application of Average clause.

a) Insurance cover required = Gross profit at 40% on the sales for 12 months ending on date of fix

Rs.140000.

= 40% on Rs.140000.

= 56000.

b) Net claim = $\dfrac{\text{Amount of policy}}{\text{Insurance cover required.}}$ x Gross loss i.e. loss of profit.

$$= \frac{40,000}{56,000} \times 11,500$$

Net claim = Rs.8,214.

Illustration – 6 :

M/s.Patil Traders are insured under loss of profit policy for Rs.1,26,000. Their books of accounts are closed on 31st Dec. each year. The fire occurred in the premises of the business on 1.7.2008. The record saved disclosed the following information.

	Rs.
Sales during the year ended 30.6.2008	14,40,000
Sales during the year ended 31.12.2007	12,00,000
Sales from 1.7.2008 to 30.9.2008	60,000
Sales in the corresponding period from 1.07.2007 to 31.12.2007	3,60,000
Standing charges for the year ending 31.12.07	72,000
Net profit for the year ending 31.12.2007	48,000
Period of Indemnity	3 months.

In has been ascertained that the business has consistently an increase of 25% in sales in the month preceding the fire over corresponding period of the previous year. Calculate the amount of claim.

Solution :

I. Calculation of short sales during the period of Indemnity:

	Rs.
Sales of Previous period Expected (from 1.7.2007 to 30.9.07)	3,60,000
Add- 25% increase anticipated	90,000
	4,50,000
Less : Actual sales during Indemnity period	
(for 1.7.2008 to 30.09.2008)	60,000
Short sales	3,90,000

II. Calculation of Gross Profit Rate :

$$\text{Gross Profit Rate} = \frac{\text{Net Profit + Insured standing charges}}{\text{Sales in the last accounting year.}} \times 100$$

$$= \frac{48{,}000 + 72{,}000}{12{,}00{,}000} \times 100$$

$$= 10\%.$$

III. Calculation of Loss of Profit :

Loss of Profit = Short sales x Gross profit Rate.

= 3,90,000 x 10/100

Gross claim = 39,000.

IV. Application of Average Clause.

a) Insurance cover required = 10% of Sales for 12 months ending on the date of fire + 25% increase.

= 10% of Rs.14,40,000 + 3,60,000.

= 10% of Rs.18,00,000

= 1,80,000.

$$\text{b) Net claim} = \frac{\text{Policy Amount.}}{\text{Insurance cover require.}} \times \text{Gross claim i.e. Loss of profit.}$$

$$= \frac{1{,}26{,}000}{1{,}80{,}000} \times 39{,}000$$

$$= 27{,}300.$$

Claim for Los of Profit is Rs. 27,300.

3.4 Exercises for Self Study :

3.4.1 Questions for Self Study.

1. Explain the necessity of Loss of Stock Policy.

2. How to calculate claims under Loss of Stock Policy?

3. Explain the steps involved in calculation of claims under Loss of Profit Policy.

4. Write Short Notes on –

   1. Loss of Profit Policy.
   2. Indemnity Ratio.
   3. Loss of Stock Policy.
   4. Standard Sales.
   5. Average Clause.

5. Select the most appropriate answer.

1. The main object of average clause is to ....

   a) encourage full insurance. b) encourage under insurance,
   c) discourage full insurance.

2. In case of average clause the loss is suffered by both the insurer and the insured ......

   a) in the ratio of risk covered. b) in equal ratio
   c) only by insurer.

3. A plant worth Rs.40,000 has been insured for Rs.30,00, the loss on account of fire is Rs.25,000. The insurance company will bear loss to the extent of ....

   a) Rs.30,000 b) Rs.25,000 c) Rs.18,750

4. In case the net profit is Rs.10,000 insured standing charges Rs.5,000 and sales Rs.1,00,000, the rate of gross profit will be ... .

   a) 10% b) 15% c) 5%

5. Cost of goods sold is calculated by deducting gross profit from ....

   a) Purchase b) Closing stock c) Sales.

6. In case of Loss of Profit Policy, Gross Profit is equal to net profit .... changes.

   a) Insured standing charges b) Un-insured standing charges
   c) Increased cost of working.

6. State whether each of the following statement is True or False.

1. The loss of profit policy covers loss of profit due to loss of sales as well as loss of standing charges due to their non-recovery.
2. The insertion of average clause in an insurance policy results in bearing a part of loss by the insured himself.
3. It is not necessary to make any adjustment in the standard sales of the preceding period in the light of any change in future prospects.
4. The term gross profit in case of a Loss of Profit Policy is different from the term gross profit as used in loss of stock policy.
5. Any saving in expenses is to be deducted for determining the final claim.
6. Actual loss of stock is equal to total stock on the date of fire less stock salvaged.
7. Loss of Profit is calculated on short sales multiplied by rate of gross profit when under insurance.

3.4.2 Practical Problems for Self Study.

3.4.2.1 Problems on Loss of Stock Policy.

1. The godown of Purple Ltd. caught fire on 15th June 2013. Records saved fromfire showed the following particulars.

	Rs.
Stock at cost on 1st January 2012	60,000
Stock at cost on 31st December 2012	88,000
Purchases Less Returns for the year 2012	5,68,000
Sales Less Return for the year 2012	7,20,000
Purchases Less Returns from 1st Jan to 15th Jan. 2013.	1,80,000
Sales Less Returns from 1st Jan to 15th June 2013.	2,46,000

Gross profit had remained at uniform rate. The stock salvaged were worth Rs.7,200 and they were retained by Purple Ltd. The godown was insured. Show the amount of claim.

2. A fire occurred in the godown of X Ltd. on 9th March 2014, destroying the entire stock. The books and records were salvaged from which the following particulars were ascertained.

Sales for the year 2013	10,01,000
Sales for the period 1.1.2014 to 8.3.2014	3,00,000
Purchases for the year 2013	8,00,000
Purchases for the period 1.1.2014 to 8.3.2014.	1,25,000
Stock on 1.1.2013	3,31,100
Stock on 31.12.2013	3,85,000

The company has been following the practice of valuing the stock of good at actual cost plus 10%. Included in the stock on 1.1.2013 were some shop-sold goods, which originally cost Rs.2000 but were valued at Rs.1100. These goods were sold during the year 2013 for Rs.1000. Subject to these the rate of gross profit and basis of valuation of stock were uniform.

You are required to ascertain the value of stock destroyed.

3. A fire occurred on 15.9.2009 in the premises of Godrej Ltd. From the following figures calculate the amount of claim to be lodged with the insurance company for Loss of Stock.

	Rs.
Stock on 1.1.2008 (at cost)	20,000
Stock on 1.1.2009 (at cost)	30,000
Purchases for the year ended 2008	40,000
Purchases from 1.1.2009 to 15.9.2009	88,000
Sales for the year ended 2008	60,000
Sales from 1.1.2009 to 15.9.2009	1,05,000

During the current year cost of purchases have increased by 10% above last years level. Selling price has gone up by 5%. Salvaged stock amounted to Rs.6000.

4. Fire occurred in the premises of Badluck Ltd. on 10.4.2007. From the following particulars ascertain the claim for loss of stock.

	Rs.
Stock on 1.1.2006	72,000
Stock on 31.12.2006	45,000
Purchases during the year 2006	2,90,000
Sales during the year 2006	4,00,000
Purchases from 1.1.2007 to 9.4.2007	2,92,000
Sales from 1.1.2007 to 9.4.2007	3,78,000
Salvaged stock	14,000

The company follows the practice of stocks at cost less 10%.

3.4.2.2. Practical Problems on Loss of Profit Policy.

1. From the following particulars find out the amount of claim of Loss of Profit Policy.

		Rs.
1.	Date of fire 30.6.2010	
2.	Period of Indemnity – 6 months.	
3.	Sum Insured	40,000
4.	Net profit for the accounting year ending 31.3.2010	12,500
5.	Sales for the year ended 30.6.2010	2,00,000
6.	Standing charges for the accounting year ending 31.3.2010	28,500
7.	Sales for the year ending 31.3.2010 1,98,000	
8.	Sales for the indemnity period for 1.7.2010 to 31.12.2010	56,000
9.	Sales for the period 1.7.2009 to 31.12.2009	1,10,000

The sales of the year 2010–11 had shown tendency of increase of 10% over the turnover of preceding year.

2. From the following data calculate the claim under Loss of Profit Policy.

    1. Financial year ends on 31st December.
    2. Turnover Rs.2,00,000
    3. Indemnity period 6 months.
    4. Period of interruption – 1st July to 31st October.
    5. Net profit Rs.18000.
    6. Standing charges Rs.42,000 out of which Rs.10,000 have not been insured.
    7. Sum Assured – Rs.50,000.
    8. Standard Turnover Rs.65,000.
    9. Turnover in the period of Interruption Rs.25000 out of which 6000 was from a rented place at Rs.600 per month.
    10. Annual Turnover Rs.240000.
    11. Saving in standing charges Rs.4725 per annum.
    12. Date of fire – Night of 30th June.
    13. It was agreed between the insurer and the insured that the business trends would lead to an increase of 10% in the turnover.

3. A fire occurred on 1st July 2010 in the premises of Silver Ltd. and business was practically dis-organized up to 30th Nov. 2010. From the books of account, following information was extracted.

		Rs.
1.	Actual turnover from 1.7.2010 to 30 Nov. 2010	60,000
2.	Turnover from 1st July to 30th Nov. 2009	2,00,000
3.	Net profit for the financial year	90,000
4.	Insured standing charges for the last financial year	60,000
5.	Turnover for the last financial year	5,00,000
6.	Turnover for the year ending 30th June 2009	5,50,000
7.	Total standing charges for the year	72,000

The company incurred additional expenses amounted to Rs.9000 which reduced the loss in turnover. There was also a savings during the indemnity period of Rs.2486.

The company holds a loss of profit policy for Rs.165000 having an indemnity period for 6 months. There has been a considerable increase in trade and it has been agreed that an adjustment of 20% be made in respect of upward trend in Turnover.

Compute the claim under Loss of Profit Policy.

Answers to Check your progress

5. 1) a 2) a 3) c 4) b 5) c 6) a

6. 1) True 2) True 3) False 4) False

5) True 6) True 7) True

3.5 References for Additional Reading :

1. B.Com. Accountancy, Volume-III; by P.V. Rathnam, Himalaya Publishing House.

2. Advanced Accountancy; by S.P. Jain and K.L. Narang, Kalyani Publishers.

3. Advanced Accountancy, Vol. II; by S.K.R. Paul, Central Publication.

4. Advanced Accountancy; by Maheshwari & Maheshwari Sultanchand Publication.

❑❑❑

Unit-4

Introduction to Management Accounting and Cost Accounting

Structure : Meaning, Advantages, Objectives and Limitations,

4.0 Objectives :

After studying this unit students should be able to –

i) understand the concepts of Cost Accounting and Management Accounting.

ii) know the objectives and advantages of both he branches.

iii) understand the limitations of both the branches.

iv) explain the difference between Cost Accounting and Management Accounting.

4.1 Introduction :

Accounting is the language of the business. It communicates the results of the business units to the concerned parties. The main objective of any business activity is to earn profit. Each businessman want to know that his business is making profit or not. He knows the results of his business by preparing the accounts of his business transactions. Whenever an economic transaction takes place, an accounting takes place. So, generally, the accounting is related to financial transactions and it is called as financial accounting. The subject accounting, which we have studied, from XIth standard onwards, in each year is financial accounting. In this year we are going to study the introductory part of another branches of accounting, i.e. cost accounting and management accounting.

During a long period of time, the nature of business went on changing, therefore the needs of management also changed. As a result of that accounting also developed. Due to the limitations of financial accounting, a cost accounting comes into existence and to overcome the limitations of cost accounting, a management accounting is developed. Cost accounting and management accounting are the branches of accounting, which are recently developed.

4.2 Meaning of Cost Accounting :

Cost accounting is related to the cost of a product or service. It is the formal mechanism by means of which cost of products or services are ascertained and controlled. Cost accounting is the process of classifying, recording and appropriate allocation of expenditure for the determination of the total cost of products or services and for the presentation of suitably arranged data to the management with the purposes of control and guidance. It deals with the cost of production, administration, selling and distribution.

According to Wheldon, “Cost accounting is the application of accounting and costing principles, methods and techniques in the ascertainment of costs and the analysis of saving or excess cost incurred as compared with previous experience or with standards”.

From the above definition and explanation we can mention the features of cost accounting as follows :

i) It is a process of accounting for costs.

ii) It is related with cost ascertainment, cost control and cost reduction.

iii) It records total cost of product or service.

iv) It classifies the total cost as per elements of cost.

v) It establishes standards so that actual cost may be compared to find out deviations.

vi) It provides suitably arranged data for purpose of control and guidance of management.

4.3 Objectives of Cost Accounting :

Cost accounting has certain objectives which are as follows :

1) Cost ascertainment : The main objective of cost accounting is to ascertain the cost of product, services or jobs. Total cost as well as per unit cost is ascertained by using any suitable costing method or costing technique.

2) Cost analysis : Now a days, cost analysis has got more importance because mere cost ascertainment is not sufficient. Therefore, to provide a correct analysis of costs both by process or operations and by different elements is become the important objective of cost accounting.

3) Determination of selling price : Determine the proper selling price of a product or service is one of the very important decisions of the management. Cost accounting provides the base for determine the selling price by disclosing detailed and relevant cost figures.

4) Ascertainment of profitability : Ascertainment of profitability of each product or service is one of the objectives of cost accounting. Cost accounting, by comparing the cost data with selling price, helps to ascertain the profit of each product or service. It also advises to management as to how these products can be maximized.

5) Cost control : Cost accounting helps in controlling the costs of product. The objective of cost accounting is to develop a system of cost control for materials, labour and overheads, as well as control of stocks; therefore, the cost of product or service will be kept in limit and minimized the capital locked up.

6) Cost reduction : In the today's competitive age cost reduction is become the main objectives of cost accounting. Due to proper analysis of cost, management can disclose ways of wastage of materials, labour and overheads and by taking proper decisions or actions these wastages can be avoided and cost can be reduced.

7) Preparation of reports : In business it is necessary to prepare financial statements, reports by frequent intervals. Cost accounting provides data regarding various costs, stock levels, stock values etc., which help to prepare financial statements and reports.

8) Providing base for decisions : The one of the important objectives of cost accounting is to provide base for management decisions. Cost accounting supply useful data to management for taking various decisions such as introduction of a new product, replacement of labour or machine, make or buy, shut down or continue a particular activity etc.

4.4 Advantages of Cost Accounting :

Cost accounting is developed mainly to help the management. It is beneficial in various ways. The main advantages of cost accounting are noted below :

i) It helps to ascertain the total cost as well as unit cost of a product or service.

ii) It gives idea about profitable and unprofitable activities and steps can be taken to eliminate or minimize unprofitable activities and to expand profitable activities.

iii) It provides a base for determining a fair selling price.

iv) Cost accounting helps management to measure the efficiency of different units, activities etc. and then to maintain and improve it.

v) Cost accounting collects and analyse the cost data, which is useful to prepare estimates and tenders.

vi) It discloses the reasons of loss or wastages in materials, labour, overheads and also gives suggestions to control such wastages. Therefore, profit will be increased.

vii) It helps in cost control as well as cost reduction of product or service.

viii) It furnishes reliable data to the management on the basis of which management can take various proper decisions.

ix) Cost accounting helps to prepare more frequent and more accurate financial accounts with the help of perpetual inventory system of stock control.

x) Costing accounting discloses the relative efficiency of different workers and thereby facilitates to introduce a suitable wage plan.

xi) It facilitates the assessment of Excise Duty, Income Tax and helps in formulating government policies.

xii) The main objective of cost accounting is to reduce the cost. Therefore, customers will get the product or service at low price.

4.5 Limitations of Cost Accounting :

Cost accounting is not an exact science but is an art, which has developed on the basis of theories and accounting practice, based on reasoning and common sense. These theories and principles are not static but goes on changing as the time and circumstances change and this is the main limitation of cost accounting. In short, the limitations of cost accounting are explained as follows :

i) Lack of uniformity : Cost accounting is mainly based on changing theories and principles. It is an art of cost accountant and therefore, the results obtained by two cost accountants from the same data may be different.

ii) Large number of conventions, estimates and other flexible factors : No cost can be said to be exact or accurate as they based on large number of conventions, estimates and other flexible factors such as classification of costs into elements, apportionment and allocation of overheads on arbitrary basis, improper division of costs, materials issue pricing on average or standard cost etc.

iii) Expensive : Installation of cost accounting system is very expensive. So it is not suitable to small and medium size concerns.

iv) Cost accounting is not much suitable for handling futuristic situation such as inflationary situation.

4.6 Meaning of Management Accounting :

The limitations of financial accounting and cost accounting have give way to evolution of management accounting. It is a recent origin branch of accounting. The name management accounting itself suggests the meaning that it is the accounting for management. Management accounting is a tool for management decisions. The meaning of management accounting can be explained with the help of definitions. Some of the important definitions are given below :

1) "Management accounting is concerned with accounting information which is useful to management" – Robert Anthony.

2) "Management accounting is the term used to describe the accounting methods, systems and techniques which coupled with special knowledge and ability, assists management in its task of maximizing profits or minimizing losses". – J. Batty.

3) "Management accounting is the application of professional knowledge and skill in the preparation of accounting information in such a way as to assist management in the formulation of policies, and in the planning and control of the operations of the undertaking". – The Institute of Cost and Management Accountants, London.

4) "Management accounting is the application of appropriate techniques and concepts in processing historical and projected economic data of an entity to assist management in establishing plans for reasonable economic objectives in the making of rational decisions with a view towards these objectives." – American Accounting Association.

The above definitions clear that management accounting is the advanced branch of accounting. It is not a substitute to financial accounting or cost accounting. The work of management accounting begins after the work of financial accounting. In short, we can say that management accounting uses all techniques of financial accounting, cost accounting and statistics to collect and process data for making it available to management, so that it can take decisions in scientific manner. These definitions also reveals the nature or characteristics of management accounting which are pointed out as follows :

i) It is a new branch of accounting.

ii) It is partly a science and partly an art.

iii) It is a technique of selective nature. It takes into consideration only that data which is relevant and useful to management.

iv) The function of management accounting is to provide data and not decision.

v) Management accounting is mainly concerned with the forecast or estimates of the future.

vi) It analyses the cause and effect relationship.

vii) It does not follow set rules and formats like financial accounting. Its rules and formats are determined by the informational needs of the management.

viii) It is highly sensitive to management needs.

ix) It is highly personalized service because the effectiveness depends upon the skill and competence of the management accountant.

4.7 Objectives of Management Accounting :

Management accounting is mainly developed to fulfill the needs of management. The main function of management of any organization is to manage the activities of the organization to achieve the set objectives. Therefore, management has to perform various functions from planning to control. Management accounting is a tool of management. So the objectives of management accounting are to facilitate in performing management functions effectively. The main objectives of management accounting are as follows :

i) Analysis and interpretation of financial data : The main objective of management accounting is to analyse the financial data of the business and interpret in such a way that management can easily use that information for taking decisions.

ii) Assistance in planning and formulation of future policies : Planning is the basic function of management. Planning means to determine in advance what, when, how and by whom is to be done the activities. It involves forecasting and forecasting is based on the past information. Management accounting provides the analysis of past information on the basis of which management can well plan for future.

iii) Help in organizing : Organising is the another important function of management. It includes creation of organization structure by proper arrangement of men and other resources. Management accounting help in organizing by using the technique of budgeting, responsibility accounting and cost control etc.

iv) Help in controlling performance : Management accounting is a useful tool of management control. Management has to control the activities of each person in the organization. It is done by delegating the authority and responsibility. Management accounting with the use of budgeting standard costing helps the management in controlling the performance of each responsibility centre and take suitable action in order to correct it if necessary.

v) Help in coordinating : Management accounting helps the management in coordinating the activities of different departments and persons by preparing functional budgets at the first stage and later on coordinating the whole business by preparing a master budget by integrating all functional budgets.

vi) Helps in motivating employees : Management accounting provides base for setting the goals, plan for the best as well as standards for measuring the performance. Therefore, management can motivate the employees to achieve the set goals by giving the best performance.

vii) Find out solutions to strategic business problems : The main objective of management accounting is to help the management in finding out solution to strategic business problems. There are so many strategic problems arises before the management such as to start a new business or not, continue with the same or discontinue, make or buy, replace the resources etc. Management accounting gives guidelines for solving these problems by using various techniques like marginal costing, standard costing, break-even analysis, capital budgeting etc.

viii) Communicating up to date information : Management accounting helps management by communicating the information available for management decisions. So management can easily prepare the good plan of action. Reports are an integral part of management accounting. Such reports are means of communication of facts, which should be brought to the notice of various levels of management, so that they may be guided for taking suitable action for the purpose of control.

ix) Help in evaluating the policies : Management accounting also provides a base for evaluating the efficiency and effectiveness of management policies with the help of management audit. Management policies are reviewed from time to time to make improvement in them so that maximum efficiency may be achieved.

4.8 Advantages of Management Accounting :

Management accounting is very useful to management in every field of activity. It assists the management in performing the various managerial functions such as planning, organizing, controlling, coordinating, motivating and communicating. The advantages of management accounting involves in the fulfillment of objectives of management accounting. These advantages are as follows :

i) It provides analysis and interpretation of financial data to management.

ii) Management can discharge the planning function effectively.

iii) Due to the help of management accounting, management can take the decisions scientifically.

iv) It increases the efficiency in business operations.

v) It enables the actual performance to be measured by a comparison with the budget, so management can exercise the effective control.

vi) Management accounting helps to achieve perfect coordination among the various departments through departmental budgets and reports.

vii) It creates good relations between the management and the staff.

viii) Management accounting helps to communicate the data, results to the management.

ix) It enables the management to improve its service to its customers.

x) It enables the business to get the maximum returns.

4.9 Limitations of Management Accounting :

Though management accounting is very useful to management, it suffers from certain limitations. These limitations are as under :

i) Limitation of basic records : Management accounting collects information from financial accounting, cost accounting and other records. That means it depends on other sources. If this basic record is not reliable, the decisions suggested by management accountant may be misleading.

ii) No execution power : Management accounting provides base for decisions and not decisions. As well as decisions suggested by management accountant are not binding on management. Management may execute them or not. Management accountant has no execution power.

iii) Intuitive decisions : Though the management accounting helps management to take scientific decisions, the management has tendency to persistence intuitive decision making.

iv) Not a substitute for management : Management accounting is mere a tool of management. It cannot be a substitute for management because decisions are taken by the management and not by the management accountant.

v) Lack of objectivity : There is every possibility of personal bias and manipulation from the collection of data to the interpretation stage in management accounting. So there is a lack of objectivity and validity.

vi) Wide scope : Management accounting has a very wide scope. This wide scope of management accounting creates many problems of complexity.

vii) Developing stage : Management accounting is of recent origin. It is still in the process of development. Therefore, its techniques suffer from fluidicity of concepts, diversity in opinions and various interpretations.

viii) Costly : The installation of management accounting system needs large organization and various rules and regulations. This involves heavy cost. Therefore, it is limited only to big concerns and not suitable for small units.

4.11 Summary :

Cost accounting and management accounting are the developed branches of accounting. Cost accounting is the process of classifying, recording and appropriate allocation of expenditure for the determination of the total of a product or service.

4.10 Difference between Cost Accounting and Management Accounting:

Cost accounting and management accounting both are advanced branches of accounting. They are developed to help the management in planning, control and decision-making. Both branches use some common techniques and tools like standard costing, variable costing, budgetary control, etc. In spite of these similarities there are certain differences between these two. The main differences between cost accounting and management accounting are as under :

Point	Cost Accounting	Management Accounting
1. Growth	Cost accounting evolved in the 15th century.	Management accounting evolved in the 20th century.
2. Object	Main object is to ascertain and control cost.	Main objects to provide useful information to management for decision making.
3. Deals with	It deals with ascertainment, allocation, apportionment and accounting aspects of costs.	It deals with the effect and impact of cost on the business.
4. Base	It is derived from financial accounting and provides a base for management accounting.	It is derived from both financial accounting and cost accounting.
5. Scope	It has narrow scope. It does not include financial accounting, tax planning and tax accounting.	It has a wide scope. It includes financial accounting, cost accounting, taxation etc.

6. Approach	It is historical in its approach.	It is futuristic in its approach.
7. Types & Transactions	It deals with only monetary transactions that mean it covers only quantitative aspects.	It deals with both monetary and non-monetary transactions, i.e. both quantitative and qualitative aspects.
8. Principles and format	It follows a definite principle for ascertaining cost and a format for recording.	It does not follow definite principles and format.
9. Tools and Techniques	Basic tools and techniques of cost accounting are standard costing, variable costing, break even analysis etc.	Presentation is as per the needs of management. In addition to tools and techniques of cost accounting, management accounting uses funds and cash flow statement; ratio analysis etc.
10. Period of planning	It is concerned with short term planning.	It is concerned with short term and long term planning.
11. Assistance	It merely assists the management in its functions.	It assists and evaluates the management performance.
12. Installation	It can be installed without management accounting.	It is installed on the basis of financial and cost accounting.
13. Status	The status of cost accountant comes after the management accountant.	Management accountant is senior in position to cost account.

The main objectives of cost accounting are ascertainment of cost, cost control, cost reduction, determining the selling price, controlling the efficiency and providing useful basis for operating policy of the business. Cost accounting is developed to help the management. Management, with the help of cost accounting, can find out total cost as well as per unit cost, control and reduce the cost, determine the selling price, ascertain the profit etc. In spite of the various advantages of cost accounting, it suffers from some limitations such as lack of uniformity, large number of conventions, estimates and other flexible factors, expensive nature etc.

Management accounting is of recent origin. It is concerned with accounting information, which is useful to management. It has a very wide scope. Management accounting is the application of professional knowledge and skill in the preparation of accounting information in such a way as to assist management in formulating policies and in the planning and control of the operations of the undertaking. Management accounting is a tool for management. It assists the management in performing the various managerial functions such as planning, organizing, controlling, coordinating, motivating, communicating and decision-making. Though management accounting is very useful to management, it also suffers from certain limitations like limitation of basic records, no execution power, lack of objectivity, wide scope, costly etc. There are some similarities as well as some differences between cost accounting and management accounting.

4.12 Key Terms :

1. **Cost** : The term cost indicates the amount of expenditure incurred on or attributable to a specified thing or activity or cost unit.
2. Cost Accounting : It is the application of accounting and costing principles, methods and techniques in the ascertainment of costs and the analysis of saving or excess cost incurred as compared with previous experience or with standards.
3. Management Accounting : It is the term used to describe the accounting methods, systems and techniques which coupled with special knowledge and ability, assists management in its task of maximizing profits or minimizing losses.

4.13 Self Assessment Questions :

A) Objective Type Questions.

1) State ‘True’ or ‘False’.

   i) The scope of cost accounting includes cost ascertainment, cost presentation and cost control.

   ii) Cost accounting is nothing but a post-mortem of past costs.

   iii) Cost accounting is an instrument of management control.

   iv) Cost accounting aids in price fixation.

   v) Financial Accounting and Cost Accounting are complementary to each other.

   vi) Management accounting is the oldest branch of accounting.

   vii) Management accounting is a tool for management.

   viii) Management accounting is futuristic in its approach.

   ix) Cost accounting can be installed without management accounting.

   x) Management accounting has a wider scope than cost accounting.

2) Fill in the blanks.

   i) Costing is a technique of ………………

   ii) Cost accounting has been developed because of …………… of financial accounting.

   iii) Cost accounting provides data for managerial ……………

   iv) Cost accounting serves the information needs of ……………

   v) Management accounting is of …………… origin.

   vi) Management accounting is derived from both …………… and ……………

   vii) Management accounting deals with both …………… and …………… aspects.

   viii) Management accounting is a …………… for management.

B) Broad Answer Type Questions.

1. What is Cost Accounting? Discuss the objectives of Cost Accounting.
2. Enumerate the advantages of Cost Accounting.
3. What are the limitations of Cost Accounting?
4. "Cost Accounting has come to be an essential tool of the management". Comment.
5. Explain the concept, "Management Accounting" in detail.
6. Discuss the main objectives of Management Accounting.
7. What is Management Accounting? Give the advantages of Management Accounting?
8. Give the main limitations of Management Accounting.
9. Explain how does Management Accounting help management in fulfilling its functions.
10. Distinguish "Management Accounting" from "Cost Accounting".

4.14 Answers to Self Assessment Questions :

A) 1. State 'True' or 'False'.

i) True `	ii) False	iii) True	iv) True	v) True
vi) False	vii) True	viii) True	ix) True	x) True

2. Fill in the blanks.

i) Ascertaining cost ii) Limitations iii) decisions
iv) management, v) recent,
vi) financial accounting and cost accounting
vii) quantitative, qualitative viii) tool.

4.15 Further Readings :

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3. Pandey I.M.; Management Accounting, Vikas Publishing House Pvt. Ltd., New Delhi.
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SECTION – II

ADVANCED ACCOUNTANCY PAPER – III

Unit-1

Elements of Cost

Material, Labour & Overheads, Preparation of Cost Sheet, Quotation

Objectives :

After studying this unit, you will be able to understand:

- Meaning of cost and classifications of costs.
- Elements of cost.
- Statement of Cost and Profit.
- Meaning of key terms.

Structure of Unit :

1.1 Introduction.

1.2 Meaning of Cost & Different, classifications of costs.

1.3 Elements of cost.

1.4 Cost Concepts.

1.5 Cost Sheet.

1.6 Illustrations.

17 Summary.

1.8 Key-terms.

1.9 Self Assessment Questions.

1.10 Further Readings.

1.1 INTRODUCTION :

For the purpose of preparing financial accounts the expenditure of a business is recorded under various accounts suitable from the view-point of final accounts. Expenditure is identified with the total turnover or income, but no detailed information is afforded of the exact manner in which the net profit or loss has been made. But under cost accounts the expenditure is analyzed by different methods and in a greater detail. The broad heading under which, the total expenditure analyzed is known as the elements of cost.

For exam, when we purchase a readymade dress by paying Rs.100. We are paying to-wards the cost of the dress and some margin of profit to the manufactures of dress., Now if the margin of profit is say Rs. 15, the remaining Rs. 85 are paid to-wards the cost. The cost covers all the expenses incurred by the manufacturer of dress such as cloth of the dress, thread, buttons, tailoring charges, supervision charges, depreciation of equipments used for manufacture of dress, rent of workshop, lighting, salaries of clerks, accountants, salesman, managers of garment manufacturing firm, advertisements, printing, stationery, insurance, packing and what not.

1.2 MEANING OF COST:

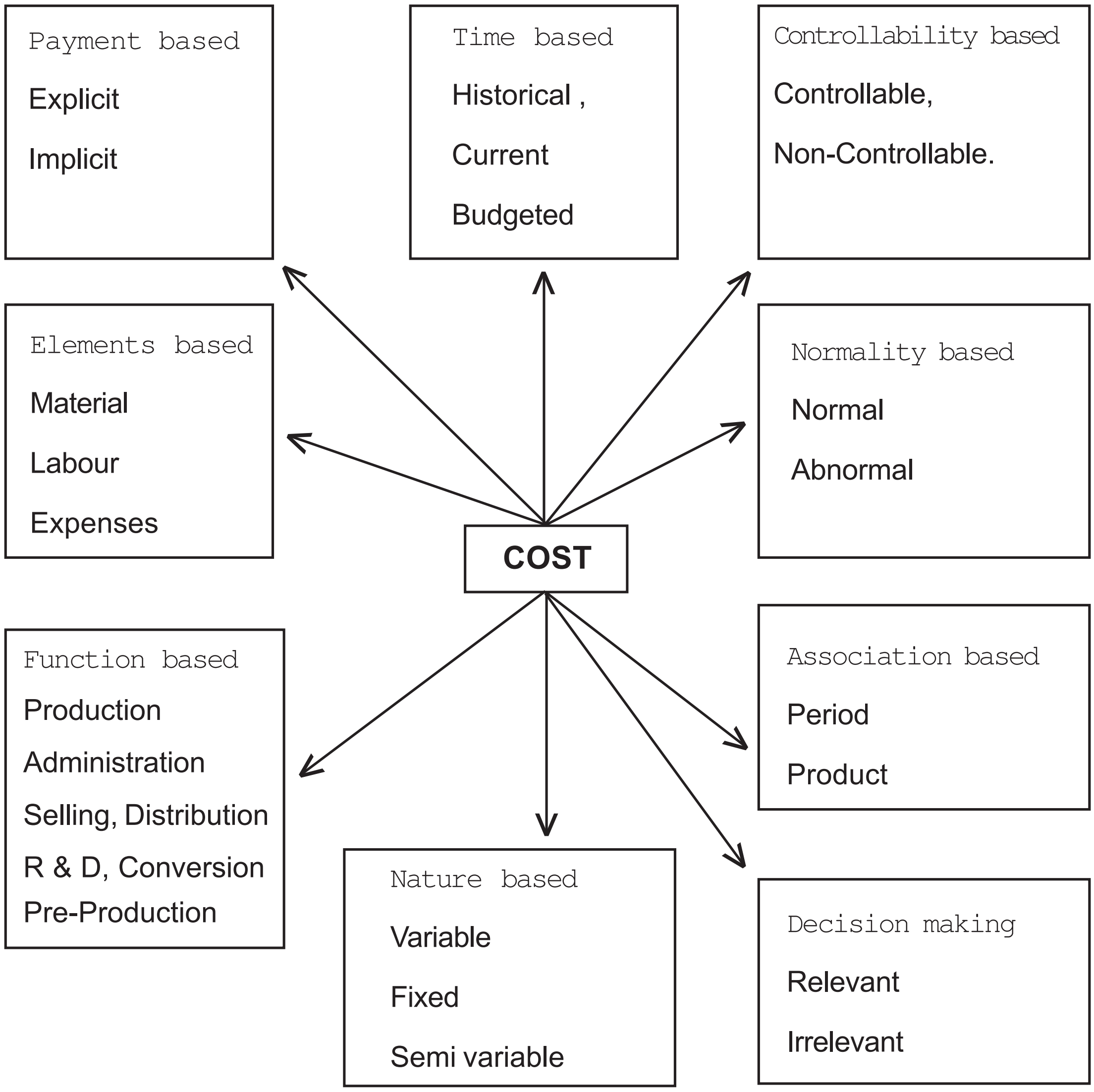
The monetary value of all sacrifices made to achieve an objective (i.e. to produce goods and services).

Cost refers to the expenditure incurred in producing a product or in rendering a service.

It is expressed from the producer or manufacturer’s viewpoint (not that of consumer / end user)

Cost ascertainment is based on uniform principles and techniques. Hence cost is objectively determined.

Different classifications of costs.



- Historical cost: Cost relating to the past time period, cost which has already been incurred.
- Current cost : Cost relating to the present period.
- Pre-determined costs : Costs relating to the future period cost which *is* computed in advance, on the basis of specification of all factors affecting it.
- Variable costs : These are costs which tend to very are change in relation to volume of production.

- Fixed costs : These are costs which remain constant at various levels of production.
- Semi-variable costs : These are cost which are partly fixed and partly variable.
- Materials: Cost of tangible, physical input used in relation to output/production e.g. cost of raw materials, consumable stores, maintenance items etc.
- Labour: Cost incurrent in relation to human resources of the enterprise.
- Expenses : Cost of operating and running the enterprise,, other than materials and labour, they are the residual category of costs. e.g. factory rent, office maintenance, salesmen salary etc.
- Direct costs: Costs which are directly related to / identified with / attributable to cost centre or a cost unit.
- Indirect Costs : Cost which are not directly identified with a cost centre or cost unit. -
- Controllable costs : Cost which can be influenced and controlled by managerial action,
- Non-Controllable costs : These are cost that cannot be influenced and controlled by a specific member of the organization.
- Normal cost : Cost which can be reasonable expected to be incurred tinder normal, routine and regular operating conditions.
- Abnormal cost: Cost over and above normal cost, which is not incurred tinder normal operating conditions e.g. tines and penalties.
- Production costs : The cost of the set of operation commencing with supply of materials, labour and services and ending with the primary packing of product
- Administration cost : The cost of formulating the policy, directing the organization and controlling the operations of the undertaking which is not directly related to production, selling distribution, research or development activity or function.
- Selling Cost : The cost of seeking to create and stimulate demand and of securing orders. These are sometimes called marketing cost.
- Distribution Cost : The cost of the sequence of operations which begins with making the packed product available for dispatch and ends with making the

reconditioned returned empty package, if any available for re-use.

- Research Cost : The cost of researching for new or improved products, new applications of materials or unproved methods.
- Development Cost : The cost of the process which begins with the implementation of the decision to produce a new or improved product, or to employ a new or improved methods and ends with commencement of formal production of that product or by that method.
- Pre-production Cost : The part of development incurred in making a trial production run prior to formal production.
- Period cost : These are cost which are not assigned to the products but are charged as expenses against the revenue of the period in which they are incurred.
- Product costs : These are cost which are assigned to the product and are included in inventory valuation. These are also called as inventoriable costs.

1.3 ELEMENTS OF COST:

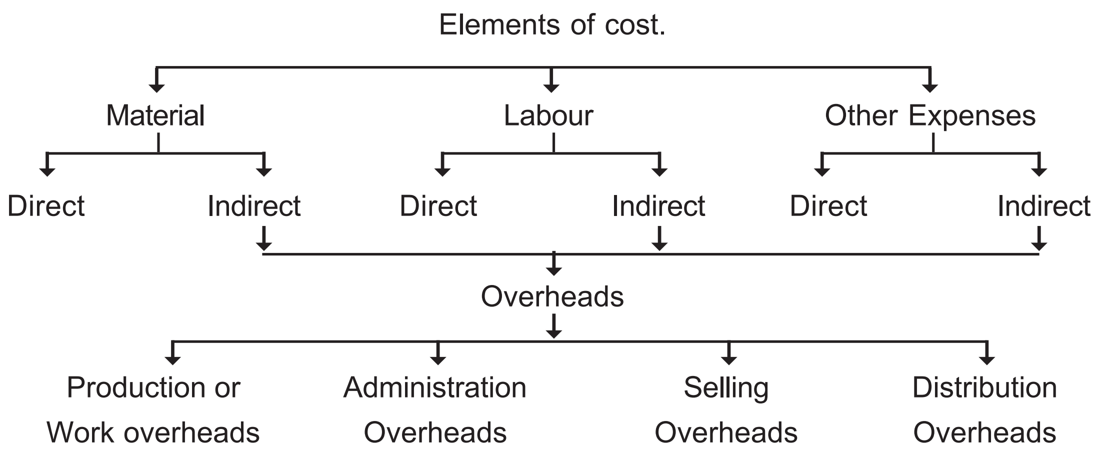
All these expenses can be basically classified in to three categories

viz. 1. Materials.

2. Labour.

3. Other expenses

These are called elements of costs. These elements are further classified in to different sub-elements.



By grouping the above elements of cost the following divisions of cost are obtained.

1. **Prime Cost :**

   Direct Material + Direct Labour + Direct Expenses

2. **Works or factory cost :**

   Prime cost + Works or Factory overheads

3. **Cost of Production :**

   Works cost + Administration Overheads

4. **Total cost or cost of sales :**

   Cost of production + selling and distribution overheads.

The difference between the cost of sales and selling price represents; profit or loss, Now all those terms will be examined in detail.

Direct Materials : are those materials which can be identified in the product and can be conveniently measured and directly charged to the product. Thus these materials directly enter the product and form a part of the finished product, for exam timber in furniture making, cloth in dress making, leather used in shoe making, bricks and cement: used in construction of building are called direct material. The direct material normally include,

i) All raw materials like jute in the manufacture of gunny bags, pig iron in foundry and fruits in canning industry.

ii) Parts or components purchased or produced such as spare parts of mechanical goods such as scooters, car radio, fan, machines etc. arid tyres for cycles.

iii) Primary packing materials like wooden or card board boxes, cartons wrapping etc.

iv) Buying expenses on raw materials / spare parts/ packing materials such as carriage and freight, import duty, custom duty, octroi etc.

However, if such material forms the part of a product but is of very small value it may be treated as indirect material for exam, thread or buttons used in dress making, nail paint, polish paper etc. used in furniture making threads, nails, polish etc. used in shoe making. Because such materials are of small value and they are incurred on all items jointly and efforts involved in identifying those with a particular product will not commensurate with the advantage gained by doing so.

Direct Laibour :

The labour costs which can be conveniently identified in the particular product and which can be easily measured and charged to the product are called direct wages. It is also defined as “all labour expended in altering the construction, composition, conformation of condition of the product.’’ In simple words, direct labour refers to the wages of workers who are directly engaged in the production of product. For exam, wages of a worker who stitches a shirt, wages of carpenters in furniture making and. wages of cobbler in shoe making, are treated as direct wages. Payments of the following groups of labour are treated as direct labour.

1) Labour engaged in the actual production or in the carrying out of an operation or process.
2) Inspectors, analysis etc. specially required for such production.
3) Labour assisting the production process by supervision, maintenance, materials handling, tool setting etc. if specially identified

However, the wages paid to labour who assists the direct labour in production process is treated as indirect labour, if it can not be conveniently charged to a particular product. For exam, wages of a supervisor in furniture workshop at Rs. 500 p.m. can be conveniently charged to the products, if suppose 50 chairs of same type are manufactured under his supervision (i.e. 500 / 50 = 10 per chair) but if ten sofa-sets, five dining sets, five tables and four cupboards are manufactured under the supervision of the same supervisor it will not be convenient to charge his wages to these different products. Hence it becomes indirect labour.

Direct expenses / Chargeable expenses /Productive expenses :

Include all expenditure other than direct material or direct labour that is specifically incurred for a particular product or process. Such expense is charged directly to the particular cost account concerned as part of the prime cost. Examples of direct expenses are - i) Excise duty, ii) Royalty, iii) Architects fees in construction work. iv) Cost of rectifying defective work. v) expenses of designing for the Product. vi) experimental expenses in developing the product. vii) Hire charges of special equipments obtained for a particular job or contract.

Overheads (On-Costs) :

These are the expenses over and above the cost of direct material, direct labour and direct expenses. In other words, the expenses of general nature over and above the cost of direct materials, direct labour and direct expenses are called overheads. These expenses are incurred in manufacture, sale and distribution of production, but they cannot be charged directly to a product; or process due to their general nature.

A) Functional classification of overheads-

The overheads can be further classified into following, categories.

a) Factory overheads (Works on costs or production overheads)

b) Administration overheads (Office on cost or Establishment on cost)

c) Selling and Distribution overheads (Selling and Distribution on cost)

a) Factory Overheads : (Works overhead, Factory on cost, Works on cost, Production overhead)

These are the expenses related to the production process. They include all indirect materials, indirect labour and indirect expenses incurred in the factory, from the receipt of work order till its completion. They include,

a) Indirect materials in production process such as lubricants, fuel and oil, cotton waste, belts, fasteners etc.

b) Indirect Labour such as wages of foremen, supervisors, store keepers, cleaners, maintenance personnel.

c) Indirect expenses such as factory rent and rates, insurance and lighting, deprecation and repairs of plants, equipments and factory building, motive power etc.

b) Administrative overhead : It includes all expenses incurred in relation to management or administration of business i.e. all office expenses means, printing and stationery office salaries, postage and telegram, office rent, ratio and insurance, legal charges, depreciation, audit fee, repairs of office building etc.

c) Selling and Distribution overheads : Expenses incurred in respect of getting orders for the commodity e.g. advertisement and publicity salaries and commission of salesmen, sales office expenses, bad debts, sales promotion expenses, after stiles service, market research expenses, show-room expenses etc. -

Distribution overheads-are the expenses incurred in dispatching, and delivering the finished goods to customers, such as warehouse rent, transportation on sales, loading arid unloading charges, salaries of dispatch clerk and workers, special packing charges., delivery van expenses, carriage outward etc.

B) Classification according to behavior :

Some costs; increase or decrease in direct proportion to the volume of production some costs remain unaffected, while others change but not in .direct production to the change in volume of production. -,

These are: i) Variable costs

ii) Fixed costs and

iii) Semi variable or semi-fixed cost.

i) Variable costs : These are costs which tend to vary or change in relation to volume of production. They increase in total as production. increases and vice-versa e.g. cost of raw materials, direct wages etc. However, variable costs pre unit are generally constant for every unit of the additional output ,

ii) Fiixed costs : These are costs which remain constant at various levels of production. They are not affected by volume of production e.g. factory rent, insurance etc. Fixed costs per unit very inversely with volume of production i.e. if production increases, fixed cost per unit decreases and vice-versa, sometimes, these are also known as Capacity costs or Period costs e.g. rent and rates of building, salary of works manager, Depreciation of building, insurance, interest on capital, municipal taxes.

iii) Semi Variable costs: These are costs which are partly fixed and partly variable. These are fixed up to a particular volume of production and become variable thereafter for the next level of production. Hence they are also called Step Costs. Some examples are Repairs and maintenance, Electricity, Telephone etc.

1.4 Cost Concepts :

Some concepts which are often used in Cost Accounting are explained below.

1) Cost Unit: - Cost unit is a unit of measurement in which cost may be ascertained, Example.

Product/ Service	Cost Unit	Product/ Service	Cost Unit
Soaps Wire / Cable Dairy (Milk) Goods transport Passenger transport	Number/Carton Meter/ Kilometer Liter /Bag Tonne kilometer Passenger kilometer	Brickworks Building Cement Power Paper	Per 1000 brick Square foot Tonne Kilowatt hour Rim
Wood / Gas Food grains Sugar Hospital Automobile	Cubic Feet (cft) Kg./Quintal/Tonne Per Tonne Per patient clay Per vehicle/Number	Textiles Road contractors Bicycle Pharmaceuticals Steel	Meters Per mile/kilometer Number 1000 tablets Tonne

2) Cost centre : Cost center is a location, person or item of equipment (or group of these) for which cost may be ascertained and used for the purpose of cost control. Thus cost center represents a head of account under which cost are recorded or gathered to facilitate their distribution and control, in the process of ascertaining the cost of any product in the first stage, the general costs (expenses) of the firm are classified department-wise or equipment-wise or significant person-wise, depending upon the suitability of situation. These different departments/equipments/persons with reference to which costs are collected for cost ascertainment and cost control are called cost centre. After ascertaining the cost incurred at these cost centre, it is absorbed by the units that are turned out with the help of these centre.. Cost centre may be of following types :

1) Impersonal Cost Centre: Such as Department or Lathe machine in production department or Vehicle of transport agency.

2) Personal Cost Centre: Such as foreman or a group of foremen or salesmen.

3) Operation Cost Centre: Consisting of a group of machines and men carrying out similar operations.

4) Process Cost centre: Consisting of continuous sequence of operations.

The examples of cost centre are: production department's boiler house, power house, research & development laboratory, staff training centre, canteen, warehouse, maintenance shops, sales area, clock room etc.

Presentation of total cost :

First of all cost are classified on the basis of nature, such as materials, labour and other expenses. Further distinction should be made of direct cost and indirect costs. All the direct costs are grouped under the heading of prime cost and indirect costs are known as overheads. All these costs are grouped under separate functional heads and presented to the management in the form of a statement, known as cost sheet.

1.5 Cost Sheet :

Meaning : A cost sheet is a statement which shows the break-up and build-up of costs. It is a document which provides for the assembly of the detailed cost of & cost centre or a cost unit. The statement summarizes the cost of manufacturing a particular list of product and discloses.

i) The prime cost ii) Works Cost iii) Cost of production and iv) Total cost.

Purposes :

1) It gives the breakup of total cost by elements and sub divisions.

2) Iit discloses the total cost as well as the cost per unit of production,

3) It helps for preparation of tenders and quotations.

4) It helps for fixing selling price.

Uses : The following are the uses of the cost sheet.

a) Presentation on cost information.

b) Determination of selling price.

c) Ascertainment of profitability.

d) Product wise and Location wise cost Analysis.

e) Inter- firm and Intra- firm cost comparison.

f) Preparation of Cost Estimates for submitting tenders / quotation.

g) Preparation, of Budgets.

h) Disclosure of operational efficiency for Cost control.

Specimen form of Cost Sheet

For the year ended....

Particulars		Total Cost	Cost per unit.
Opening stock of raw materials	xx		
Add : Purchase of raw materials	xx		
Carriage inwards	xx		
Octroi	xx		
	xxx		
Less : Closing stock of raw material	xx		
Material lost	xx		
Material transferred to job or department	xx		
Material Consumed		xxx	xx
Direct Wages		xxx	xxx
Direct Expenses		xxx	xxx
PRIME COST		xxx	xx
Add : Factory Overheads or Works on cost.			
Indirect materials	xxx		
Indirect wages- inspection instructors , Gatemen,	xxx		
Drawings office salary	xxx		

(Conted. on next page)

Factor/ Rent, Rates, Taxes &	xxx		
Insurance	xxx		
Lighting heating	xxx		
Power & fuel	xxx		
Repairs & Maintenance Cleaning	xxx		
Expenses cost of research & experiments	xxx		
Works manager salary	xxx		
Printing & Stationery	xxx		
Consumable stores	xxx		
Depreciation of plant & machinery	xxx		
Welfare service expenses	xxx		
Water supply	xxx		
Loose tools written off	xxx		
Haulage or crane expenses	xxxx		
Cost of defective work, etc.	xxx		
	xxx		
Less-Sale of scrap	xxx		
WORKS COST	xxx	xxx	xx
Add : Opening Work in progress		xxx	
Less: Closing Work in progress		xxx	
WORKS COST OF FINISHED GOODS		xxx	xx
Add : Administration overheads			
Counting house salaries	xx		
Rent, Rate, Insurance	xx		
Telephone & Postage	xx		
Printing & Stationery	xx		
Legal expenses	xx		

(Conted. on next page)

Audit fees	xx		
Bank Charges, etc	xx		
Depreciation of furniture	xx	xxx	
equipments & Building			
COST OF PRODUCTION		xxx	xx
Add : Opening stock of finished goods		xxx	
		xxx	
Less : Closing stock of finished goods		xxx	
Production cost of goods sold		xxx	xx
Add : Selling & Distribution overheads			
Commission	xx		
Salesmen's salaries	xx		
Advertisement & samples	xx		
Carriage outwards	xx		
Bad Debts	xx		
Depreciation & expenses of	xx		
delivery van	xx		
Debt collection charges	xx		
Rent of warehouse	xx		
Sample & other free gifts	xx		
Showroom rent & rates	xx		
Traveler's salaries, commission, etc.	xx		
		xxx	xx
COST OF SALES		xxx	xx
Profit / Loss		xxx	xx
SALES		xxx	xx

Note : Wile preparing the cost sheet financial Items (income and expenses) are not considered, because such item do not form, a part of the costs. The following items are not including In cost sheet.

Examples of financial and non-cost expenses :

1) Preliminary expenses. 2) Interest on capital. 3) Cash discount. 4) Income tax. 5) Donation. 6) Capital losses. 7) Goodwill written off 8) Discount on issue of shares & debentures 9) Interest on loan, overdraft. 10) Capital expenditure. 11) Underwriting commission 12) Dividend to shareholders. 13) Commission to managing directors or partners. 14) Debenture interest transferred to sinking fund. 15) Provision for doubtful debts 16) Obsolescence loss. 17) Bonus to shareholders. 18) Excess depreciation. 19) Cash discount. 20) Abnormal loss. 21) Interest on debenture. 22) Fines and penalties. 23) Charities. 24) Damage paid under court order.

Examples of financial Incomes :

1) Capital gains or profit.
2) Interest on investment.
3) Abnormal gains.
4) Stores adjustments.
5) Interest on bank deposits.
6) Dividend received on share and investment.
7) Rent received and share transfer fees received.

1.6 Illustrations :

Illustration. 1) Prepare a cost sheet from the details given below for the year ended 31Slt March 2006.

Particulars	Rs.
Raw materials	1,98,000
Productive wages	2,10,000
Direct Expenses .	18,0 00
Unproductive wages	63,000
Factory rent & taxes	45,000
Factory lighting	13,200

Factory heating	35,400
Haulage	18,000
Directors fee (Works)	6,000
Directors fee (Office)	12,000
Factory cleaning	3,000
Sundry office expenses	1,200
Estimating (Factory)	4,800
Factory stationery	4,500
Office stationery	5,400
Loose tools written off	3,600
Rent & taxes (Office)	3,000
Water supply	7,200
Factory insurance	6,600
Office insurance	3,000
Law charges	2,400
Rent of warehouse	1,800
Depreciation on plant &. Machinery	12,000
Depreciation office building	6,000
Depreciation on delivery van	1,200
Bad debts	600
Income tax provisions	5,000
Donations	10,000
Advertisement	1,800
Sales department salaries	9,000
Upkeep of deliver van	4,200
Bank charges	300
Commission on sales	9,000

The total output for the period has been 60,000 units.

Solutions :

Cost Sheet

For the year ended on 31st March 2006

Output 60,000 units.

Particulars	Rs.	Rs.
Raw material	1,98,000	
Productive wages	2,10,000	
Direct expenses	18,000	
		4,26,000
Prime Cost		
Add : Factory overheads:		
Unproductive wages	63,000	
Factory rent & taxes	45,000	
Factory lighting	13,200	
Factory heating	35,400	
Haulage	18,000	
Directors fees	6,000	
Factory cleaning	3,000	
Estimating	4,800	
Factory stationery	4,500	
Loose tools written off	3,600	
Water supply	7,200	
Factory insurance	6,600	
Depreciation on plant & Machinery	12,000	2,22,300
		6,48,300

Factory or Works Cost		
Add: Office Overheads:		
Directors fees	12,000	
Sundry office expenses	1,200	
Office stationery	5,400	
Rent & taxes	3,000	
Office insurance	3,000	
Law charges	2,400	
Dep. On office building	6,000	33,300
Bank charges	300	
		6,81,600
Cost of Production		
Add : Selling & Distribution		
Rent of Warehouse	1,800	
Dep. On delivery van	1,200	
Bad debts	600	
Advertisement	1,800	
Sales department salaries	9,000	
Upkeep of delivery van	4,200	
Commission on sales	9,000	27,600
Total Cost		7,09,200

Illustration No. 2

From the following particulars prepares a cost statement showing the component of total "and profit for the year-ended 3l^s: March 2008.

Particulars	On 1st **April 2007**	**On 31st March 2008**
Stock of finished goods	6,000	15,000
Stock of raw materials	40,000	50,000
Work in progress	15,000	10,000
Purchase of raw materials		4, 75,000
Carriage inwards		12,500
Wages		1,75,000
Works managers salary		30,000
Factory employees salary		60,000
Factory rent, taxes & insurance		7,250
Power expenses		9,500
Other production expenses		43,000
Saks for the year		8, 60,000
Income tax		5,000
Interest on debentures		10,000
Transfer to sinking fund for replacement		20,000
Of machinery		
Dividend received		2,500
Goodwill written off		10,500
Payment of sales tax		16,000
General expenses		20,500
Office rent		12,000

Solutions: –

Statement of Cost and Profit.

For the year ended 31-3-2008.

Particulars	Rs.	Rs.
Opening stock of Raw Materials	40,000	
Add:- Purchase of Raw Materials	4.75,000	
Carriage Inward	12,500	
	5,27,500	
Less : Closing stock of Raw Materials	50,000	
Material Consumed	4,77,500	
Wages	1,75,000	
Direct expenses	---	
PRIME COST		6,52,500
Add. Factory Overheads		
Factory employees salary	60,000	
Works managers salary	30,000	
Factory rent taxes & Ins.	7,250	
Power expenses	9,500	
Other production expenses	43,000	1,49,750
FACTORY COST		8,02,250
Add. Opening Work-in Progress		15,000
Less. Closing Work-in Progress		8,17,250
Add. Office & Administration		10,000
Overheads.		8,07,250
General expanses	20,500	
Office Rent	12,000	32,500
		8,39,750

(Conted. on next page)

COST OF PRODUCTION.		
Add : Opening stock of finished goods		6,000
		8,45,750
Less : Closing stock of finished goods		15,000
		8,30,750
COST OF GOODS SOLD		
Add :. Selling & Distribution		
Overheads		
Sales Tax		16,000
COST OF SALES		8,46,750
Profit (Balancing figure)		13,250
SALES		8,60,000

Illustration No. 3

(When units sold & produced are to he ascertained)

From the following figures, prepare the cost sheet to show the cost; of production of each unit of the goods manufactured. Also prepare a statement 1:0 show the profit earned.

Particulars	Rs.
Opening stock 1-7-2008. . ,	
Raw Material 500 units	300
Finished goods 500 units	1,610
Purchase:	
Raw Materials 10,000 units	9,635
Closing stock 31-7-2008:	
Raw Materials 300 units	755
Finished goods 700 units	1,834

Office Salaries, Rent & Rates	224
Repairs & depreciation of Plant &	
Machinery	1,020
Printing & Stationery	918
Manufacturing Wages	9,690
Coal Consumed	2,958
Rent & Rates of Factory	1,734
Commission on Sales	500

There was no wastage during production. Selling price was Rs. 3 per article (unit).

Solutions :

Statement of Cost and Profit.

For the Month ended 31 -7-2008

(No. of Units Produced 10,200)

Particulars		Total Cost Rs.	Cost Per Unit
Opening stock of raw materials	300		
Add :. Purchases of R. M.	+ 9,635		
Less : Closing of R.M.	– 755		
Material consumed		9,180	0.90
Manufacturing Wages		9,690	0.95
Direct expenses		---	---
PRIME COST			
Factory on Cost :			
Repairs & depreciation of plant	1,020		
Coal Consumed	2,958		

Rent & Rates	1,734		
		5,712	0.56
		24,482	2.41
FACTORY COST			
Office &. Administrative on cost :			
Salary, Rent & Rates	1,224		
Printing & Stationery	918	2,142	0.21
	Units	--	2.62
	10,200	26,724	
COST OF PRODUCTION			
Add. Opening stock of finished goods	500	1,610	
	10,700	1,610	
Less : Closing stock of finished good:	700	1,834	
	10,000	26,500	
PRODUCTION COST OF GOODS SOLD			
Selling & Distribution on-cost commission on sales		500	
		27,000	
COST OF SALES			
Profit (Balancing figure) SALE (@ Rs. 3 p.u. for 10,000 unitssold)		3,000	
		30,000	

Note:

1) The number of units produced during the month ended 31-7-2008 is ascertained as follows:

	Units
Opening stock of Raw Materials	500
Add: Purchase of Raw Materials	10,000
	10,500
Less: Closing stock of Raw Materials	300
No. of Units Produced	10,200

2) Units sold during the month are 10,000

Illustration No. 4

Given below is Profit & Loss Account of a manufacturing Co. for the year ending 31st March.

Dr **Profit and Loss Account** Cr

Particulars		Rs.	Particulars	Rs.
To Opening stock of			By Sales	4,45,800
Raw Materials		10,000	By Closing stock	12,000
Purchase of Raw Materials				
Materials		1,50,000		
Wages		1,24,000		
Power		36,000		
Establishment Exp.				
Factory	8,000			
Office	15,300	23,000		
Rent				
Factory	2,000			
Office	3,000	5,000		
Advertisement		6,000		
Traveller's Commission		4,000		
Maintenance of Delivery Vans		5,000		
Rent of Warehouse Telephone		2,500		

(Conted. on next page)

Factor	300			
Office	510	800		
Electric Charges				
Factory	200			
Office	400	600		
Depreciation.				
Factory	100			
Office	700	800		
Depreciation of factory				
Machinery		3,000		
Interest on loan		1,000		
Bad debts		600		
Miscellaneous Exp.				
Factory	2,000			
Office	9,000	11,000		
Net Profit		74,500		
		4,57,800		4,57,800

The following analysis of office expenditure is given to you:

	Office Expenditure	Administration	Analysis Selling	Distribution
a.	Office Establishment	50%	40%	10%
b.	Office Telephone	30%	50%	20%
c.	Office Rent	40%	60%	Nil
d.	Office Electric charges	20%	70%	10%
e.	Office Miscellaneous Expenses	65%	20%	15%
f.	Use of office Furniture	60%	30%	10%

From the above Profit & Loss Account Prepare a statement showing different elements of cost bringing out figures for Administration, selling and distribution separately.

Solution :

Statement of Cost

Particulars	Rs.	Rs.
Opening stock of Raw Materials	10,000	
Add : Purchase of Raw Materials	1,50,000	
	1,60,000	
Less : Closing stock of Raw Mat.	12,000	
Material Consumed	1,48,000	
Wages	1,24,000	
Prime Cost		2,72,000
Add : Factory Overheads		
Power	36,000	
Establishment	8,000	
Rent	2,000	
Telephone	300	
Electricity Charges	200	
Dep. of Furniture	100	
Dep. of Machinery	3,000	
Miscellaneous Expenses	2,000	51,600
Factory Cost		3,23,600
Add : Office Overheads.		
A) Administration Overheads		
Establishment Rent	7,500	
Rent	1,200	

(Conted. on next page)

	Telephone	150	
	Electricity Charges	80	
	Dep. of Furniture	420	
	Miscellaneous Expenses	5,850	15,200
			3,38,800
B)	Selling Overheads		
	Establishment	6,000	
	Rent	1,800	
	Advertisement	6,000	
	Traveller's commission	4,000	
	Telephone	250	
	Electricity Charges	280	
	Bad Debts	600	
	Dep. of Furniture	210	
	Miscellaneous. Expenses	1,800	20,940
			3,59,740
C)	Distribution Overheads		
	Establishment	1,500	
	Rent of warehouse	2,500	
	Telephone	100	
	Electricity Charges	40	
	Maintenance of Delivery Van	5,000	
	Dep. of Furniture	70	
	Miscellaneous Expenses	1,350	
			10,560
	Total Cost :		3,70,300

Note : Interest on loan being a pure financial matter, it is excluded from cost.

Illustration No. 5

Following are the particulars for the production of 2000 Fans of Air-solution Co. Ltd. for the year 2005-06.

Particulars	Rs.
Cost of Raw Materials	3,20,000
Wages	4,80,000
Manufacturing Expenses	2,00,000
Salaries	2, 40,000
Rent, Rates & Insurance	40,000
Selling Expenses	1,20,000
General Expenses	80,000
Sales	16,00,000

The company plans to manufacture 3,000 Fans during 2006-07. The following additional information is supplied regarding it.

1) The price of material is expected to increase by 20%
2) Wage rates are expected to show an increase of 5%
3) Manufacturing expenses will rise in proportion to the combined cost of material and wages.
4) Selling expenses will remain the same
5) Other expenses will remain unaffected by rise in output.

You are required to prepare cost sheet for the year 2005-06 and 'Estimated price' for 3,000 Fans to be produced during the year 2006-07 at which the Fans would be sold as to show profit of 10% on sales.

Solution :

Air- Solution Co. Ltd.

Cost Sheet

For the year 2005-2006

Output = 2000 Fans

Particulars	Rs.	Rs.
Materials		3,20,000
Wages		4,80,000
Prime Cost		8,00,000
Add : Factory Overheads		
Manufacturing Expenses		2,00,000
Factory Cost		10,00,000
Add : Office Overheads		
Salaries	2,40,000	
Rent, Rates & Insurance	40,000	
General Expenses	80,000	3,60,000
Cost of Production		13,60,000
Add : Selling Overheads		
Selling Expenses		1,20,000
Total Cost		14,80,000
Profit		1,20,000
Sales		16,00,000

Estimated price for 3000 Fans to Produced

During the year 2006-2007

Particulars	Rs.	Rs.
Materials		3,84,000
Wages		5,04,000
Prime Cost		8,88,000
Add : Factory Overheads		
Manufacturing Expenses		2,22,000
Factory Cost		11,10,000
Add : Office Overheads		
Salaries	2,40,000	
Rent, Rates & Insurance	40,000	
General Expenses	80,000	3,60,000
Cost of Production		14,70,000
Add : Selling Overheads		
Selling Expenses		1,20,000
Total Cost		15,90,000
Profit		1,76,667
Sales		17,66,667

Illustration No 6 :

The accounts of Pooja Company Ltd. show for 2008:- Materials Rs. 3,50,000; Labour Rs. 2,70,000; Factory Overheads Rs, 81.000; and Administration overheads Rs. 56,080.

What price should the company quote for a refrigerator? It is estimated that Rs. 5,000 in a material and Rs. 3,500 in labour will be required Jbr one refrigerator. Absorb Factory overheads on the basis of labour and Administration overheads on the basis of works cost. A profit of 12 ½ % on selling price is required

Solution :

Statement of Cost

	Rs.
Materials	3,50,000
Labour	2,70,000
Prime Cost	6,20,000
Factory Overheads	81,000
Works Cost	7,01,000
Administration Overheads	56,080
Total cost of production	7,57,080
A) Percentage of Factory overheads to Labour = Factory Overheads / Labour X 100 = 81,000 / 2,70,000 X 100 = 30%	
B) Percentage of Administration Overheads to Works. Administrative Over/Work Cost X 100 = 56,080 / 7,01,000 X 100 = 8%	

Statement of the Selling Price of a Refrigerator

	Rs.
Materials	5,000.00
Labour	3,500.00
Prime Cost :	8,500.00
Add :.Factory Overheads (30% on Labour)	1,050.00
Works Cost :	9,550.00
Add : Administration Overheads (8% of works cost)	764.00
Total cost of production	10,314.00
Add : Profit (1/S on sales or 1/7 of cost)	1,473.45
Selling Price:-	11,787.45

Illustration No 7 :

The following information is given for a year.

Direct Material	Rs.	200000
Direct Wages	Rs.	150000
Factory Expenses	Rs.	90000
Office and Administrative exp.	Rs.	88000

On the basis of above information ascertain cost of a job which will require materials of Rs. 2000 and wages Rs. 4000. What should be the quotation price if a profit of 20% on selling price is desired?

Solution

Statement of Cost

Particulars	Rs.
Direct materials	2,00,000
Direct wages	1,50,000
PRIME COST.....	3,50,000
Factory expenses	90,000
WORKS COST	4,40,000
Office and Administrative Overheads	88,000
TOTAL COST.....	5,28,000

1) Percentage of factory expenses to direct wages.

$\because$ Rs. 1,50,000 = 90,000

$\therefore$ 100 = 60%

2) Percentage of office expenses to work cost.

$\because$ Rs. 44,40,000 = 88,000

$\therefore$ 100 = 20%

3) Profit 20% on Sales

Sales - Profit = Cost

100 - 20 = 80

$\because$ 80 Cost = 20 profit

$\therefore$ 10080 cost = 2520

Quotation For a Job

Particulars	Rs.
Direct materials	2000
Direct wages	4000
PRIME COST.....	6000
Factory Overheads (60% on direct wages)	2400
WORKS COST	8400
Office and Administrative Overheads (20% on works cost)	1680
TOTAL COST.....	10,080
PROFIT (20% on selling price)	2520
SALES	12600

1.7 Summary :

For the purpose of preparing financial accounts the expenditure of a business is recorded under various accounts. The heading under which the total expenditure analysis are known as the elements of cost. All these expenses can be basically classified into three categories; i.e. Materials, Labour and Other expenses. There is need of different classification of cost some concepts i.e. Cost Unit, Cost Centre which are often used in Cost Accounting.

A Cost Sheer is a statement which shows the break-up and. build-up of costs. It discloses the total cost as well as the cost per unit of production. It also helps for determination selling price and ascertainment of profitability. While preparing the cost sheet financial items (income and expenses) are riot considered because such item does not form a part of the costs.

1.8 Key Terms :

1) **Cost Sheet :** A cost sheet is a statement which shows the break- *up* and build-up of costs.

2) Element of Cost Remember :

Direct Material + Direct Labour + Direct Expenses = Prime Cost

Indirect materials + Indirect Labour - Indirect expenses = Overheads

Overheads are further classified in to three categories :

1. Production Overheads
2. Administration overheads
3. Selling & distribution overheads.

Prime Cost + Production overheads = Factory or Works Cost Factory Cost + Administrative Overheads - Cost of Production

Cost of Production 4 Selling & distribution overheads = Cost of sales or Total Cost.

3) Pure financial items are excluded from cost sheet.

4) Para meters of cost expression –

Time parameter	—	Cost Period
Location Parameter	—	Cost Centre
Output / Product parameter	—	Cost unit

1.9 Self Assessment Questions :

Exercise 1) (Treatment of various types of expenses)

Calculate the Prime cost, Factory Cost, Cost of production and the cost of Sales from the following particulars.

Direct materials	1,00,000	Lighting: Factory	1,250
Direct wages	25,000	Office	500
Direct expenses	5,000	Depreciation	
Oil & waste	250	Office Premises	1,250
Wages of Supervisor	2,500	Plant & Machinery	500
Wages of storekeeper	1,250	Consumable Stores	2,500
Motive Power	500	Managers Salary (3/4	
Rent: Factory	5,000	factory, 1/4 office)	5,000
Office	2,500	Directors Fees	1,250
Repairs A Renewals		Office printing &	500
Factor Plant	1,250	stationery	
Machinery	2,500	Telephone Charges	125
Office Premises	500	Postage & Telegramme	
Carriage Outward	375	Salesmen's	250
Sales	2,00,000	commission & salary	1,250
		Travelling expenses	500
		Advertising	1,250
		Warehouse Charges	500

(Ans: Prime cost - Rs. 1, 30,000; Factory Cost - Rs. L 51,250; Cost of Production = Rs. 1, 59,375; Cost of Sales - Rs. 1, 63,250; Profit = Rs. 36,750).

Exercise 2 :

Prepare a cost sheet from following information.

	Rs.
Material Purchases	3, 20,000
Wages to direct workers	2,00,000
Salary of accountant	40,000
Repairs of Machines	20,000

Indirect material			30,000
Indirect wages			25,000
Expenses for industrial exhibition			12,000
Power for machine			24,000
Salary of factory Supervisor			30,000
Showroom expenses			50,000
Office expenses			34,000
Inventory work	Opening	Closing	
Raw material	40,000	60,000	
Work in progress	50,000	40,000	
Finished goods	35,000	30,000	
Sales			10,00,000

Ans. Prime Cost = Rs. 5, 00,000; Works cost gross - Rs. 6, 29,000 Work cost of finished goods = Rs. 6, 39,000 Cost of Production = Rs. 7, 13,000; Cost of production of goods sold = Rs.7, 18,000; Cost of sales = Rs. 7, 80,000, Profit = Rs. 2, 20,000/-.

Exercise 3

The following figures are extracted from the books of Anuya Ltd. for the year ended. Prepare a cost sheet showing clearly the cost per unit under the various elements, direct and indirect cost and also the profit/loss per unit.

Direct Material	24, 00,000
Direct Labour	5,00,000
Depreciation of factory building	15,000
Branch office expenses	40,000
Depreciation of office building	8,000
Depreciation of staff Cars	12,000
Insurance for staff Cars	1,500
Office Building	1,200

Factory Building		1,500
Delivery van maintenance & running Exp.		10,000
Salaries including-	3,00,000	
Sales Manager	25,000	
Factory Chief Engineer		25,000
Finished goods warehouse expenses		20,000
Electricity (including Rs. 4,000 for Administrative office)		40,000
Advertisement		20,000
Sundry factory expenses		3, 40,000
Sales Promotion		5,000
Office administration expenses		50,000
Expenses for participation in industrial exhibition		10,000
Units produced and sold (10,000) units)		

Note : Balance of salary considers Administrative salary.

Ans. Prime Cost = Rs. 29,00,000; Works Cost = Rs. 33, 17,500; Cost of production = Rs. 36,84,200; Cost of Sales - Rs. 37, 74,200; Profit - Rs. 4, 25,800/-

Exercise 4 :

Aishwarya Ltd. submits the following information on 31st March

Sales for the year		Rs. 2, 75,000
Inventories at the beginning of the year were-		
Finished goods	Rs. 7,000	
Work in progress	Rs. 4,000	
Purchase of material for the year were		Rs. 1,10,000
Materials inventor/ at the beginning of the year was	Rs. 3,000	
and at the end of the year	Rs. 4,000	
Direct labour was	Rs. 65,000	

Factory overheads were 60% of the direct Labour cost

Inventories at the end of the year were-

Work In progress	Rs. 6,000
Finished goods	Rs. 8,000

Other expenses for the year were-

Selling expenses 10% of sales

Administrative expenses 5% of the sales,

Prepare statement of Cost

Ans: i) Prime Cost - Rs. 1,74,000; ii) Works Cost gross = Rs. 2,13,000 iii) Works Cost of Finished goods - Rs. 2,19,000; iv) Cost of production - Rs. 2,24,750 v) Profit - Rs. 23,750/-

Exercise 5 :

The following extract of costing information relates to commodity 'A' for the half year ending 31st March 2008.

Purchase of Raw Materials	1,20,000
Works Overheads	48,000
Direct wages	1,00,000
Carriage on purchases	1,440
Stock (1st Oct. 2007)	
Raw Materials	20,000
Finished products (1,000 tons)	16,000
Stock 31st March 2008	
Raw Materials	22,240
Finished Products (2,000 tons)	32,000
Work in progress (1st Oct. 2007)	4,800
Work in progress (31st March 2008)	16,000
Sales - finished Products	3,00,000

Selling and distribution overheads are Rs. 1 per ton sold, 16,000 tons of commodity were produced during the period.

You are to ascertain i) Value of raw materials used, ii) Cost of output for the period, iii) Cost of sales, iv) Net profit for the period and v) Net profit per ton of the commodity:

Ans.: i) Value of raw materials used = Rs. 1,19,200 ii) Cost of output for the period - Rs. 2, 56,000, iii) Cost of sales = Rs 2, 55,000, iv) Net: profit = Rs. 45,000 v) Net profit per ton = Rs. 3/-

Exercise 6 :

Total Production in 2005 (tonnes) 5,000

	Rs.
Cost of Raw Materials	20,00,000
Carriage Inwards	2,00,000
Direct Wages	20,00,000
Indirect Wages (in factory)	1,00,000
Office expenses	10,00,000
Public relation expenses	50,000
Expenses on testing lab.	60,000
Selling Overheads	10,00,000
Salary of managing director	50,000
Payment of income-tax	3,00,000

Note : (i) A profit margin of 50% on cost in provided

(ii) The Government grants a special exports subsidy of Rs. 100 per tonne.

Prepare a cost sheet showing the price to be quoted.

Exercise 7 :

The following figures are available from the books on Best Manufacturing Company for the year ended 31-12-2005.

Material	Rs.
Stock on 1-1-2005	1,000
Stock on 31-12-2005	2,000
Purchased during 2005	10,000

Wages	7,500
Profit for the year	6,090
Selling Overhead	5,250
Factory Overhead	4,500
Administration Overhead	4,200

Prepare a cost sheet showing prime cost, cost of production, cost of sales & Sales.

Theoretical Questions :-

1. Tabulate the elements of cost showing the usual items of expenditures appertaining to each.
2. How are elements of cost useful for management? What are the different types of expenditure that are not included In cost accounts.
3. Define overheads arid explain the functional classification of overheads.
4. Short Notes:-
   a) Work in progress.
   b) Cost Centre.
   c) Cost Unit.
   d) Direct material.
   e) Direct Expenses.
   f) Direct Labour.

1.10 Fuirther Readings:-

1) Vinodkumar Agarwal & CA Subodli Shah -- Cost Accounting.
2) V. A. Patil & Dr. P. M. Herekar-Advanced Accountancy.
3) M. G. Patkar— Accountancy & Costing.
4) S. P. Jain & K. L. Narang - Cost Accounting.

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Unit-2

Marginal (Variable) Costing

Marginal (Variable) Costing : Concepts, Advantages and Limitations. Cost-Volume-Profit (CVP) Analysis and Decision Making

2.0 Objective

After studying this unit you will be able to –

- Understand the concepts of Marginal Cost, Contribution, Profit Volume Ratio, Break Even Point and Margin of Safety.
- Explain the nature, merits and limitations of Marginal Costing.
- Find relationship between Marginal Costing and Production Management.
- Understanding graphical representation and CVP analysis.
- Know use of marginal costing and CVP analysis for decision making.

2.1 Introduction

In general, overheads or expenses can be divided in two categories, fixed overheads and variable overheads. Fixed expenses remains constant irrespective to the level of production up to specific level of production. Whereas, variable expenses changes according to volume of production i.e. it increases or decreases in the proportion of increase or decrease in the production. Fixed expenses leads to different cost per unit at different level of output. For example, if fixed expenses are ₹100000 and variable expenses per unit are ₹100. Cost per unit for the production of 1000 units, 2000 units and 5000 units will be –

	For 1000 units	For 2000 units	For 5000 units
Variable expenses	(1000 x 100) 100000	(2000 x 100) 200000	(5000 x 100) 500000
Fixed expenses	100000	100000	100000
Total expenses	200000	300000	600000
Total cost per unit	(200000 /1000) 200	(300000 / 2000) 150	(600000/5000) 120

On account of this, a separate technique has been developed where only variable expenses are considered and fixed expenses are separated from cost of production, namely, Marginal Costing.

2.2. Presentation of Subject Matter

Section - 1

2.2.1. Definitions

In order to understand the concept of Marginal Costing it is necessary to study definition of Marginal Costing and definitions of certain terms associated with this technique.

The Institute of Cost and Management Accountants, England defined Marginal Costing and the related terms as below –

2.2.1.1. Marginal Costing – *"The ascertainment of marginal costs and of the effect on profit of changes in volume or type of output by differentiating between fixed costs and variable costs."*

Thus, the technique of Marginal Costing is based on the distinction between Variable Cost (Product Cost) and Fixed Cost (Period Cost). Only variable costs are charged to products, departments, operations or processes and all fixed costs are written off against the profit of that period.

2.2.1.2. Marginal Cost – *"The amount at given volume of output by which aggregate costs are changed if the volume of output is increased or decreased by one unit."* A unit may be a single article, a batch of articles, an order, a stage of production, capacity or a department.

Marginal Cost = Total Variable Cost = Direct Material + Direct Labour + Direct Expenses + Variable Factory Overheads + Variable Office & Administrative Overheads + Variable Selling & Distribution Overheads

2.2.1.3. Fixed Cost – *"A cost which tends to be unaffected by variations in volume of output."* Fixed cost mainly related to the time and do not vary directly with the volume or rate of output.

2.2.1.4. Variable Cost – *"A cost which tends to vary directly with volume of output."*

2.2.1.5. Semi-fixed or Semi-variable Cost – *"A cost which is partly fixed and partly variable."*

2.2.2. Features of Marginal Costing

The technique of Marginal Costing is based on separation of fixed cost from total cost of production. The following characteristics will explain the nature and scope of Marginal Costing.

- All elements of cost are classified into fixed and variable (marginal) components. Semi-variable elements of cost are also apportioned into these categories considering their relevant portion.
- The variable costs are treated as the cost of the product.
- Closing stock of finished goods and work-in-progress are valued on the basis of variable cost. Fixed costs are not considered for valuation of these inventories. As it is a stock, variable selling and distribution overheads are also not considered.
- As fixed costs are mainly related to period, it is treated as period cost and charged to Profit & Loss Account of the relevant period.
- Price of the product is determined with reference to marginal cost and contribution margin.
- Profitability of the department, process or product is determined on the basis of their contribution margin.
- This special technique is used for managerial decision making. It provides basis for the interpretation of cost data to measure profitability of different products, segments, departments, processes or cost centres.
- The technique considers nature and behaviour of cost and its effect on profitability of a concern.
- In this technique, it is assumed that, if other things remain same, variable cost per unit remains same and fixed cost remains unchanged even the level of production is increased or decreased up to a certain level of output.

2.2.3. Tools or Elements of Marginal Costing

2.2.3.1. Contribution or **Contribution Margin** – It is the difference between the sales and the marginal (variable) cost of sales and it contributes towards fixed expenses and profit. Contribution can be defined as excess of sales revenue over the variable cost. The concept of contribution is based on the theory that the profit and fixed cost cannot be equitably apportioned to different segments of a business or units of production.

Contribution can be used as a measure of efficiency of operations. Higher the contribution, higher is the efficiency and vice-versa. It is calculated by applying any one of the following formulae.

- Contribution = Sales – Marginal / Variable Cost (C = S – V) OR
- Contribution = Fixed Cost + Profit (C = F + P)

2.2.3.2. Marginal Cost Equation – Marginal Cost Equation is a formula which explains the relationship among the sales, variable cost and contribution. Symbolically,

Sales = Variable Cost + Contribution (S = V + C) OR

Sales = Variable Cost + Fixed Cost ± Profit / Loss (S = V + F ± P)

This equation is very useful because, it helps to find out any one of these four (S, V, F or P), when other three are known.

2.3.3. Marginal Cost Statement – Marginal Cost Statement is a tabular presentation of the Marginal Cost Equation. It can be given as under –

Marginal Cost Statement

Item	₹
Sales	XXX
Less – Variable Cost	XXX
Contribution	XXX
Less – Fixed Cost	XXX
Profit or Loss	XXX

OR

Marginal Cost Statement

Item	₹	₹
Sales		XXX
Less – Variable Cost		
Direct Material	XXX	
Direct Labour	XXX	
Direct Expenses	XXX	
Variable Factory Overheads	XXX	
Variable Office & Administrative Overheads	XXX	
Variable Selling & Distribution Overheads	XXX	XXX
Contribution		XXX
Less – Fixed Cost (factory, office & selling)		XXX
Profit or Loss		XXX

2.2.3.4. Profit Volume Ratio or P/V Ratio or Contribution to Sales Ratio – P/V Ratio is the ratio of Contribution to Sales and generally it is shown in the form of percentage. Symbolically,

$$\text{P/V Ratio} = \frac{\text{Contribution}}{\text{Sales}} \times 100 \quad \text{OR} \quad \frac{\text{Contribution per unit}}{\text{Selling Price per unit}} \times 100 \quad \text{OR} \quad \frac{C}{S} \times 100$$

OR

$$\text{P/V Ratio} = \frac{\text{Fixed Cost} \pm \text{Profit/Loss}}{\text{Sales}} \times 100 = \frac{F \pm P}{S} \times 100$$

OR

$$\text{P/V Ratio} = \frac{\text{Sales} - \text{Variable Cost}}{\text{Sales}} \times 100 = \frac{S - V}{S} \times 100$$

When two or more period's data is given P/V Ratio is calculated as below

$$\text{P/V Ratio} = \frac{\text{Change in Contribution}}{\text{Sales}} \times 100$$

Change in Contribution = Increase or Decrease in Contribution of the next year in comparison to the previous year

OR

P/V Ratio = $\frac{\text{Change in Profit/Loss}}{\text{Sales}}$ x 100

Change in Profit / Loss = Increase or Decrease in Profit / Loss of the next year in comparison to the previous year

In Marginal Costing, P/V Ratio is most important because, it points out the profitability of a business. Comparison of P/V Ratio of different products reveals which product is more profitable. As the same, comparison of P/V Ratio of different periods enables to understand trend of profitability. Higher the P/V Ratio, more is the profit and vice versa. It also helps to know Break Even Point.

2.2.3.5. Break Even Point – Break Even Point is the point where neither profits nor losses have been made. At this point, contribution equals the fixed cost or, in other words, total sales equal to total cost. This point shows what should be the amount of sales or how much units to be sold in order to reach at no profit no loss stage.

Break Even Point is calculated as below –

a) Break Even Point in units –

B E P = $\frac{\text{Fixed Cost}}{\text{Contribution per unit}} = \frac{\text{F}}{\text{C (p u)}}$ Contribution per unit

b) Break Even Point in rupees –

B E P = $\frac{\text{Fixed Cost}}{\text{Contribution}}$ x Sales $= \frac{\text{F}}{\text{C}}$ x S

OR

B E P = $\frac{\text{Fixed Cost}}{\text{P/V Ratio}} = \frac{\text{F}}{\text{P/V}}$

OR

B E P = B E P in units x Selling Price per unit

2.2.3.6. Margin of Safety – Margin of Safety is the difference between the actual sales and sales at break-even point. In other words, sales beyond break even point is called as margin of safety. It is calculated by deducting break even sales from the total sales. Symbolically,

Margin of Safety (M/S) = Total Sales – Break Even Sales

OR

$$\text{Margin of Safety (M/S)} = \frac{\text{Profit}}{\text{P/V Ratio}}$$

Margin of Safety is an indicator of profit margin or earning strength of a business. If the margin of safety is large, it shows that its profit strength is better. On the other hand, if the margin of safety is small, it indicates that its profit margin is less and reduction in sales may lead to loss.

Margin of Safety can also be used to judge the earning or profit on projected / estimated sales or sales to earn expected profit. At such time Margin of Safety is calculated as below –

Margin of Safety (M/S) = Projected /Estimated Sales – Break Even Sales

OR

$$\text{Margin of Safety (M/S)} = \frac{\text{Projected/Expected Profit}}{\text{P/V Ratio}}$$

2.2.4. Cost-Volume-Profit (CVP) Analysis or **Break Even Analysis** – Cost-Volume-Profit (CVP) Analysis or Break Even Analysis is the logical extension of marginal costing. It examines the relationship of costs and volume to the profit. It expresses the effect of change in level of production or sales and increase or decrease in cost on profit. In general, if volume increases cost per unit decreases and profit per unit increases. On the contrary, if volume decreases cost per unit increases and profit decreases. It means, there is direct positive relation between volume and profit and direct inverse (opposite) relation between cost and profit. This characteristic of the relation of volume and cost to profit can be applied for profit planning, cost control, evaluation of performance and many other managerial decision making.

In a narrow sense, CVP Analysis is the technique which helps to calculate break-even point i.e. no profit no loss point. But today, it is used in a wider sense. In a broader sense, the technique of CVP analysis is used to –

a) determine actual / projected / estimated / expected **total** contribution or fixed cost or profit or variable cost at any given volume of production or sales

b) determine actual / projected / estimated / expected contribution or profit or variable cost or selling price **per unit** at any given volume of production or sales

2.2.4.1. Key or Limiting Factor – A key or limiting factor is that factor which puts limit on production or sales or profit of a business. Limiting factor may be sales or any factor of production such as material, labour, plant capacity, etc. When there is no limiting factor a business can produce or sell as much as it can. But when there is shortage of any factor or there is limited market, the decision is to be taken after considering the key factor. At such time selection of product or production will be on the basis of contribution per unit of scarce factor of production. It means, scarce resource should be used in such a direction that contribution per unit of limited resource will be maximum.

2.2.4.2. Methods of CVP Analysis - There are two methods of break even analysis.

a) Algebraic Calculations – under this method, algebraic calculations are made to determine Contribution, Fixed Cost, Profit, Variable Cost or Sales by using convenient formulae of Contribution, P/V Ratio, Break Even Point and Margin of Safety. Marginal Cost Equation or Marginal Cost Statement may be used for the purpose.

b) Graphical Representation – under this method, break even chart is prepared with the help of graph to show fixed cost, variable cost, total cost, profit or loss, sales, margin of safety and break- even point.

2.2.4.3. Assumptions underlying Cost-Volume-Profit Analysis- CVP Analysis is based on the following assumptions.

1. Fixed cost and variable cost can be separated from the total cost with reasonable accuracy.
2. Fixed cost remains static and marginal cost is perfectly variable at all levels of output or sales.
3. Selling price remains constant at all levels of output or sales.
4. Price of material and labour rates remain constant at all levels of production or sales.

5. Efficiency and productivity of machines and employees remain constant.
6. Volume is the only factor affecting cost and profit.
7. The volume of production and sales is equal.

2.2.5. Advantages of Marginal Costing – Marginal Costing is very useful tool in the hands of management because it facilitates the following –

a) Cost Control – Top level management can control fixed cost whereas, middle level and lower level management can control variable cost. Marginal Costing separates fixed cost and variable cost and provides a tool to the management to control the respective costs.

b) Profit Planning – Marginal Costing calculates –

   i. break even point – no profit no loss position
   ii. contribution at any given volume of sales
   iii. profit at any given volume of sales
   iv. sales to earn projected profit
   v. margin of safety
   vi. profit volume ratio
   vii. effect of change in volume of sales
   viii. effect of change in selling price
   ix. selling price per unit at different level of production or sales
   x. trend of sales and profit
   xi. most profitable product mix
   xii. fixed cost and variable cost separately

   With the help of these any business concern can make effective plan for profit.

c) Evaluation of Performance – Performance of different products, departments, market segments and sales divisions can be evaluated with the help of contribution margin, margin of safety and P/V ratio.

d) Decision Making – The foremost important function of management of any organisation is to take decisions of various kinds at different times considering the circumstances. The technique of Marginal Costing provides assistance to the management in taking vital decisions especially, in short term decisions such as-

i. Fixation of selling price under normal circumstances, in times of competition, in times of depression, accepting additional orders, utilising idle capacity, exploring new market areas, exporting, etc.

ii. Make or Buy decision – whether to produce any component part or to purchase it from outside suppliers can be decided with the help of this technique. If marginal cost of producing the component part is less than the price quoted by the outside suppliers, it should be produced. Otherwise it should be purchased from outside.

iii. Maximisation of contribution when there is limiting or key factor

iv. Prediction of effect of change (increase or decrease) in selling price.

v. Maintenance of desired level of profit.

vi. Selection of suitable product mix which will give maximum contribution.

vii. Comparison of alternative methods of production and selection of best possible method.

viii. Diversification of products i.e. introducing new product of the same kind or introducing additional features in the same product.

ix. Suspension or close activities of a particular product, department or factory as whole due to any reason.

2.2.6. Limitations or Disadvantages of Marginal Costing – Marginal Costing is not a full proof technique that management can use at anytime and anywhere. It has the following limitations or demerits.

a) Practically it is very difficult to segregate all expenses into fixed and variable.

b) The technique considers variable cost and excludes costs related to time. Because of this, suitable comparison of different jobs, departments or products is not possible.

c) As the stocks of work-in-progress and finished goods are valued at marginal cost and not at total cost, balance sheet does not show true and fair view of the financial position. As the same, loss of stock due to any reason may not recovered in full from the insurance company.

d) This technique is not suitable for the industries where the period of production is more and value of work-in-progress is high.

e) An order may be accepted at lower price considering mainly the marginal cost. It may lead to general reduction in selling price and lead to the loss in the long run.

f) It is assumed that fixed costs remain static and variable costs per unit remains constant. But, in practice, it is not true. Fixed costs may change from one period to another and variable costs do not remain constant per unit of production.

g) Marginal costing does not consider time factor and investment. For example, two products may have same variable costs but the investment in machinery and other factors of production may differ. As well as, the time taken for the production of these two products may differ. These significant facts are not considered in marginal costing.

Check your progress

A) Fill in the blanks

1. In general, overheads or expenses can be divided in two categories, ____ and ____ overheads.
2. _____ expenses remains constant irrespective to the level of production up to specific level of production.
3. _______ expenses changes according to volume of production.
4. The technique of ________ is based on the distinction between Variable Cost and Fixed Cost.
5. Marginal Cost is the amount at given volume of output by which ________ are changed if the volume of output is increased or decreased by one unit.
6. At break even point ________ equals the fixed cost.
7. ___________ = Total Sales – Break Even Sales

B) State True or False

1. The special technique of marginal costing is used for managerial decision making.
2. Contribution means excess of sales revenue over the variable cost.
3. Sales - Contribution = Marginal Cost
4. Marginal Cost Statement is a tabular presentation of the Marginal Cost Equation.
5. P/V Ratio is the ratio of Contribution to Sales

Section II

Miscellaneous Illustrations

A) Calculation of Contribution

1. Calculate contribution -
   a) If Sales ₹ 500000, Direct Material ₹ 200000, Direct Labour ₹ 150000 and Variable Overheads ₹ 75000.
   b) If Fixed Costs ₹ 175000 and Profit ₹ 50000.

Solution

a) Contribution = Sales – Variable Costs

= 650000 – (200000 + 150000 + 75000)

= 650000 – 425000 = 225000

b) Contribution = Fixed Costs + Profit

= 175000 + 50000 = 225000

B) Calculation of Profit

2. Using marginal cost equation, determine profit from the following information.
   a) Production and Sales – 25000 units
   b) Direct Material Cost – ₹ 12 per unit
   c) Direct Labour Cost – ₹ 6 per unit
   d) Variable Overheads – ₹ 3 per unit

e) Fixed Costs - ₹ 200000

f) Selling Price per unit - ₹ 30

Solution

Marginal Cost Equation –Sales = Variable Cost + Fixed Cost ± Profit

Profit = Sales – Variable Cost – Fixed Cost

Profit = 750000 - 525000 - 200000 = ₹ 25000

Notes – a) Sales = 25000 x 30 = ₹ 750000

b) Variable Cost = (25000 x 12) + (25000 x 6) + (25000 x 3) OR 25000 x (12 + 6 + 3)

= 300000 + 150000 + 75000 = ₹ 525000 OR 25000 x 21 = ₹ 525000

C) Preparation of Marginal Cost Statement

3. On the basis of following data prepare a marginal cost statement.

	₹
Fixed Cost	
Factory Overheads	80000
Administrative Overheads	40000
Selling and Distribution Overheads	94000
Variable Cost	
Direct Material	90000
Direct Wages	50000
Factory Overheads	21000
Administrative Overheads	12000
Selling and Distribution Overheads	20000
Sales	300000

Solution

Marginal Cost Statement

			₹
Sales			300000
Less - Variable Cost			
	Direct Material	90000	
	Direct Wages	50000	
	Factory Overheads	21000	
	Administrative Overheads	12000	
	Selling and Distribution Overheads	20000	193000
Contribution			107000
Less - Fixed Cost			
	Factory Overheads	8000	
	Administrative Overheads	4000	
	Selling and Distribution Overheads	9400	21400
Profit			85600

4. From the following details, prepare Marginal Cost Statement of MRF Tyres Ltd.

	Tube ₹	Tyre ₹
Direct Materials	50000	200000
Direct Labour	60000	60000
Factory Overheads – Fixed	14000	8000
Variable	18000	50000
Office Overheads - Fixed	6000	2000
Variable	8000	10000
Selling Overheads - Fixed	10000	6000
Variable	14000	40000
Sales	200000	400000

Solution

Marginal Cost Statement

	Tube ₹	Tyre ₹	Total ₹
Sales (S)	200000	400000	600000
Less – Variable Cost			
Direct Materials	50000	200000	250000
Direct Labour	60000	60000	120000
Factory Overheads	18000	50000	68000
Office Overheads	8000	10000	18000
Selling Overheads	14000	40000	54000
Total Variable Cost (V)	150000	360000	510000
Contribution (S – V) (C)	50000	40000	90000
Less – Fixed Cost			
Factory Overheads	14000	8000	22000
Office Overheads	6000	2000	8000
Selling Overheads	10000	6000	16000
Total Fixed Cost (F)	30000	16000	46000
Profit (C – F)	20000	24000	44000

5. Prepare Marginal Cost Statement from the following information and ascertain the profit earned by the X co. during the first and second half of the year 2014 - 15.

   a) Output and sales during the first half of the financial year 2014-15 was 4000 units and that of in the second half was 5000 units.

   b) Cost of material consumed was ₹ 40 per unit.

   c) Cost of direct labour was ₹ 35 per unit.

   d) Direct expenses were ₹ 25 per unit.

e) Factory, office and selling variable overheads were ₹ 20 per unit.

f) Fixed cost was ₹ 144000 which incurred evenly during the year.

g) Selling price ₹ 150 per unit remained constant during the year.

Solution

Marginal Cost Statement

Particulars		1st Half Amt ₹		2nd Half Amt ₹
Sales		600000		750000
Less – Variable Cost				
Direct Material	160000		200000	
Direct Labour	140000		175000	
Direct Expenses	100000		125000	
Other Variable Overheads	80000	480000	100000	600000
Contribution		120000		150000
Less - Fixed Cost		72000		72000
Profit		48000		78000

Note - Calculations

	1st half of 2014-15	2nd half of 2014-15
Sales	4000 x 150 = 600000	5000 x 150 = 750000
Direct Material	4000 x 40 = 160000	5000 x 40 = 200000
Direct Labour	4000 x 35 = 140000	5000 x 35 = 175000
Direct Expenses	4000 x 25 = 100000	5000 x 25 = 125000
Other Variable Overheads	4000 x 20 = 80000	5000 x 20 = 100000
Fixed Cost	144000 / 2 = 72000	144000 / 2 = 72000

D) Computation of Break Even Point, P/V Ratio and Margin of Safety

6. Fixed Cost of Beenaca Co. is ₹ 400000 and variable cost per unit is ₹ 80. The selling price per unit of product is ₹ 120. Calculate break even point in terms of units and amount of sales.

Solution

Break Even Point (in units) = $\frac{\text{Fixed Cost}}{\text{Contribution per unit}} = \frac{400000}{120-80}$ = 10000 units

Break Even Point (in terms amount of sales) = Break Even Units x Selling Price per unit

= 10000 x 120 = 1200000

7. You are given the following data for the year 2014-15.

	₹
Variable Cost	2250000
Fixed Cost	450000
Net Profit	300000
Sales	3000000

Find out P/V Ratio, Break Even Point and Margin of Safety

Solution

a) P/V Ratio

P/V Ratio = $\frac{\text{Cntribution}}{\text{Sales}}$ x 100 = $\frac{3000000-2250000}{3000000}$ x 100 = 25%

b) Break Even Point

B E P = $\frac{\text{Fixed Cost}}{\text{P/V Ratio}} = \frac{450000}{25\%} = \frac{450000}{.25}$ = 1800000

c) Margin of Safety

M / S = $\frac{\text{Profit}}{\text{P/V Ratio}} = \frac{300000}{.25}$ = 1200000

OR

M /S = Total Sales – Break even sales = 3000000 – 1800000 = 1200000

8. From the following information find out P/V Ratio, Break Even Point and Margin of Safety of A Ltd. and B. Ltd.

	A Ltd. ₹	B Ltd. ₹
Sales	1800000	1800000
Variable Cost	1260000	1080000
Fixed Cost	390000	520000

Solution

a) P/V Ratio

P/V Ratio = $\frac{\text{Cntribution}}{\text{Sales}}$ x 100

A Ltd. B Ltd.

P/V Ratio = $\frac{540000}{180000}$ x 100 = 30% = $\frac{720000}{180000}$ x 100 = 40%

b) Break Even Point

B E P = $\frac{\text{Fixed Cost}}{\text{P/V Ratio}}$

A Ltd. B Ltd.

B. E. P. = $\frac{390000}{30\%}$ = $\frac{390000}{.30}$ = 1300000 = $\frac{520000}{40\%}$ = $\frac{520000}{.40}$ = 1300000

c) Margin of Safety

Margin of Safety = Sales – Break Even Sales

A Ltd. B Ltd.

M/S = 1800000 – 1300000 = 500000 1800000 – 1300000 = 500000

9. Calculate P/V Ratio and Break Even Point for the following data

	2013-14 ₹	2014-15 ₹
Sales	1200000	1800000
Contribution	240000	330000
Profit	90000	180000

Solution

a) P/ V Ratio -

P/V Ratio = $\frac{\text{Change in Contribution}}{\text{Change in Sales}}$ x 100

P/V Ratio = $\frac{330000\ 0\ 240000}{1800000-1200000}$ x 100 = $\frac{90000}{600000}$ x 100 = 15%

b) Fixed Cost

Fixed Cost = Contribution – Profit

	2013-14	2014-15
Fixed Cost =	240000 – 90000 = ₹ 150000	330000 – 180000 = ₹ 150000

c) Break Even Point

B E P = $\frac{\text{Fixed Cost}}{\text{P/V Ratio}}$ = $\frac{150000}{15\%}$ = $\frac{150000}{0.15}$ = ₹ 1000000

10. Calculate P/V Ratio and Break Even Point for the following data

	2013-14 ₹	2014-15 ₹
Sales	2000000	2600000
Profit	200000	350000

Solution

a) P/ V Ratio -

P/V Ratio = $\frac{\text{Change in Profit}}{\text{Change in Sales}}$ x 100 = $\frac{350000-200000}{2600000-2000000}$ x 100 = $\frac{150000}{600000}$ x 100 = 25%

b) Contribution

Contribution =Sales x P/V Ratio

	2013-14	2014-15
Contribution =	2000000 x25% = ₹ 500000	2600000 x25% = ₹ 650000

c) Fixed Cost

Fixed Cost = Contribution - Profit

	2013-14	2014-15
Fixed Cost =	500000 – 200000 = ₹ 300000	= 650000 – 350000 = ₹ 300000

d) Break Even Point

$$B\,E\,P = \frac{\text{Fixed Cost}}{\text{P/V Ratio}} = \frac{300000}{25\%} = \frac{300000}{0.25} = ₹1200000$$

E) Calculation of P/V Ratio, BEP and Estimation of Profit

11. From the following data find out P/V Ratio and Profit if sales are ₹ 560000.

Selling Price per unit ₹ 400

Variable Cost per unit - Direct Materials ₹ 100, Direct Labour ₹ 70 & Variable Overheads ₹ 70

Fixed Cost ₹ 128000

Solution		₹
Selling Price		400
Less – Marginal Cost - Direct Materials	100	
Direct Labour	70	
Variable Overheads	70	240
Contribution		160

$$\text{P/V Ratio} = \frac{\text{Contribution per unit}}{\text{Selling Price per unit}} \times 100 = \frac{160}{400} \times 100 = 40\%$$

$$\text{P/V Ratio} = \frac{\text{Contribution}}{\text{Sales}} \times 100$$

Contribution = Sales x P/V Ratio

Fixed Cost + Profit = Sales x P/V Ratio

128000 + Profit = 560000 x 0.40 (40%)

Profit = 224000 – 128000 = ₹ 96000

12. From the following information of a bullet manufacturing company, determine –

a) P/V Ratio

b) Break Even Point

c) Profit at the budgeted sales of ₹ 2000000

	Variable Cost in percentage to sales	Fixed Cost ₹
Direct Materials	32%	
Direct Labour	28%	
Factory Overheads	12%	180000
Administrative Overheads	2%	70000
Distribution Overheads	6%	50000

Solution

Sales (as the data is given in % to sales)			100
Less -	Direct Materials	32	
	Direct Labour	28	
	Factory Overheads	12	
	Administrative Overheads	02	
	Distribution Overheads	06	80
Contribution			20

a) P/V Ratio

P/V Ratio = $\frac{\text{Contribution}}{\text{Sales}}$ x 100 $= \frac{20}{100}$ x 100 = 20%

b) Break Even Point

B E P = $\frac{\text{Fixed Cost}}{\text{P/V Ratio}} = \frac{(180000+70000+50000}{20\%} = \frac{300000}{0.20}$ = 1500000

c) Profit at the budgeted sales of ₹ 2000000

Contribution = Sales x P/V Ratio

Fixed Cost + Profit = Sales x P/V Ratio

Profit = (Sales x P/V Ratio) – Fixed Cost

Profit = 2000000 x 0.20 (20%) - 300000

Profit = 400000 – 300000 = ₹ 100000

13. Moon Co. states that, at 100% capacity its fixed cost is ₹ 160000, P/V Ratio is 40% and sales are ₹ 800000. Find out profit of the co. Also determine what will be the profit of the co. at 80% capacity.

Solution

Note - P/V Ratio is 40% it means – if sales are 100, contribution is 40.

Contribution = sales – variable cost

Variable cost = sales – contribution

= 100 – 40 = 60

It means, ratio of variable cost to sales is 60%.

a) Calculation of Profit

	at 100% capacity	at 80% capacity
	₹	₹
Sales	800000	640000
Less – variable cost – 60% of sales	480000	384000
Contribution	320000	256000
Less – Fixed cost	160000	160000
Profit	160000	96000

14. The P/V Ratio of Mahind Co. is 50% and its margin of safety is 40%. Find out break even point and net profit if sales volume is 800000.

Solution

Margin of safety = sales – break even sales break even sales = sales - margin of safety

	₹
Sales	800000
Less – margin of safety – 40% -	320000
Break even point	480000

Margin of safety = $\frac{\text{Profit}}{\text{P/V Ratio}}$ Profit = Margin of safety x P/V Ratio

% of Profit = Margin of safety % x P/V Ratio % = 40% x 50%

$= \frac{40}{100} \text{ x } \frac{50}{100} = \frac{20}{100} = 20\%$

Profit = 20% of sales = 20% of 800000 = 160000

F) Calculation of P/V Ratio, BEP and Estimation of Sales

15. Find out how many units are to be sold to earn a net profit of 10% on sales, if Selling Price per unit is ₹ 50, Variable Cost per unit is ₹ 35 and Fixed Cost is ₹ 700000.

Solution

Profit – 10% of selling price = 10% of 50 = 5

Sales = Variable Cost + Fixed Cost + Profit

= Selling price per unit x Units to be sold = (variable cost per unit x units to be sold) + Fixed Cost + (profit x units to be sold)

Suppose, units to be sold is 'X'

= 50 X = 35 X + 700000 + 5 X

= 50 X – 35 X – 5 X = 700000

= 10 X = 700000

= X = 700000 / 10 = 70000 units

16. Godrej Company provides you the following –

Selling Price per unit ₹ 40, Variable Cost per unit ₹ 25 and Fixed Cost ₹ 180000.

Find out – a) the number of units to be sold if the company wants to earn profit of ₹ 120000.

b) the number of units to be sold if the company reduced the selling price by ` 10 and wants to earn the same amount of profit

c) the number of units to be sold if the company increased the selling price by ` 10 and wants to earn the same amount of profit

Solution

a) The number of units to be sold if the company wants to earn profit of ₹ 120000

P/V Ratio = $\frac{\text{Contribution per unit}}{\text{Selling Price per unit}}$ x 100 = $\frac{40-25}{40}$ x 100 = 37.5%

Sales = $\frac{\text{Contribution}}{\text{P/V Ratio}} = \frac{\text{180000+120000 (Fixed Cost+Desired Profit)}}{37.5\%}$ = 800000

Sales 800000

Units to be sold = $\frac{\text{Sales}}{\text{Selling Price pedr unit}} = \frac{800000}{40}$ = 20000

b) The number of units to be sold if the company reduced the selling price by ₹ 10 and wants to earn the same amount of profit - New selling price = 40 – 10 = 30

P/V Ratio = $\frac{\text{Contribution per unit}}{\text{Selling Price per unit}}$ x 100 = $\frac{30-25}{30}$ x 100 = 16.67%

Sales = $\frac{\text{Contribution}}{\text{P/V Ratio}} = \frac{\text{180000+120000 (Fixed Cost+Desired Profit)}}{16.67\%}$ = 1800000

Units to be sold = $\frac{\text{Sales}}{\text{Selling Price per unit}} = \frac{1800000}{30}$ = 60000

c) The number of units to be sold if the company increased the selling price by ₹ 10 and wants to earn the same amount of profit – New selling price = 40 + 10 = 50

P/V Ratio = $\frac{\text{Contribution per unit}}{\text{Selling Price per unit}}$ x 100 = $\frac{50-25}{50}$ x 100 = 50%

Sales = $\frac{\text{Contribution}}{\text{P/V Ratio}} = \frac{\text{180000+120000 (Fixed Cost+Desired Profit)}}{50\%}$ = 600000

Units to be sold = $\frac{\text{Sales}}{\text{Selling Price per unit}} = \frac{600000}{50}$ = 12000

G) Evaluation of Performance and decision 'to continue or to close'

17. Ganesh Bakery provides you the following details.

	Bread ₹	Toast ₹	Cookies ₹	Cake ₹
Sales	300000	150000	200000	100000
Direct Cost - Variable	180000	80000	110000	50000
Fixed	40000	25000	20000	25000
Indirect Cost - Variable	15000	10000	40000	20000
Fixed	20000	5000	10000	10000

Rank the products on the basis of profit and P/V Ratio. Will you advice the bakery to close the product 'Cake'?

Solution

	Bread ₹		Toast ₹		Cookies ₹		Cake ₹		Total ₹
Sales		300000		150000		200000		100000	750000
- Variable Cost									
Direct	180000		80000		110000		50000		
Indirect	15000	195000	10000	90000	40000	150000	20000	70000	505000
Contribution		105000		60000		50000		30000	245000
- Fixed Cost									
Direct	40000		25000		20000		25000		
Indirect	20000	60000	5000	30000	10000	30000	10000	35000	155000
Profit		45000		30000		20000		-5000	90000
% of profit to sales		15%		20%		10%		5% (Loss)	12%
P/V Ratio $\frac{\text{Cont.}}{\text{sales}} \times 100$	$\frac{105000}{300000} \times 100 = 35\%$		$\frac{60000}{150000} \times 100 = 40\%$		$\frac{50000}{200000} \times 100 = 25\%$		$\frac{30000}{100000} \times 100 = 30\%$		$\frac{245000}{750000} \times 100 = 32.67\%$

Rank of products according to Profit – 1) Toast 2) Bread 3) Cookies 4) Cake
Rank of products according to P/V Ratio – 1) Toast 2) Bread 3) Cake 4) Cookies

If the Product Cake closed –

	Present Total ₹	Cake ₹	New Total ₹
Sales	750000	100000	650000
- Variable Cost	505000	70000	435000
Contribution	245000	30000	215000
- Fixed Cost	155000		155000
Profit	90000		60000
% of profit to sales	12%		9.23%

If the product Cake closed, the amount of profit decreases by ₹ 30000, so, it is advice to the bakery that, it should continue the product even it is in loss.

H) Pricing in Depression

18. 'X' product of Asus Co. is in low demand phase. In respect of this product the company is providing you the following information.

    Marginal Cost – 5000 units @ ₹ 1000 per unit

    Fixed Cost – ₹ 10,00,000

    Present market price of the product is fallen down to ₹ 1100 per unit. Whether the company should sell the product at this price or not?

Solution

	If sold at ₹1100	If not sold
Sales – 5000 x 1100	5500000	0
- Marginal Cost – 5000 x 1000	5000000	0
Contribution	500000	0
- Fixed Cost	1000000	1000000
Loss	500000	1000000

The loss when the product will be sold at ₹ 1100 is less than the loss if the product is not sold, so, it is better to sell the product at the fallen down price.

J) Acceptance or Rejection of an offer

19. Mobile manufacturing company present the following information.

Material cost ₹ 300 per unit

Labour cost ₹ 200 per unit

Variable overheads ₹ 100 per unit

Fixed overheads ₹ 1000000

Units produced 15000

Selling price ₹ 800

Total production capacity 20000 units

There are two offers to the company in addition to the present sales.

a) From local dealer at ₹ 700 per unit for 5000 units and

b) From foreign dealer at ₹ 650 per unit for 4000 units.

What is your suggestion to the company regarding acceptance of the above offers?

Solution

	Present		If local offer accepted		If foreign offer accepted	
Sales	15000 x 800	12000000	15000 x 800	12000000	15000 x 800	12000000
			5000 x 700	3500000	4000 x 650	2600000
		12000000		15500000		14600000
- Variable Cost						
Material	15000 x 300	4500000	20000 x 300	6000000	19000 x 300	5700000
Labour	15000 x 200	3000000	20000 x 200	4000000	19000 x 200	3800000
Overheads	15000 x 100	1500000	20000 x 100	2000000	19000 x 100	1900000
		9000000		12000000		11400000
Contribution		3000000		3500000		3200000
- Fixed Cost		1000000		1000000		1000000
Profit		2000000		2500000		2200000

Suggestion

If offer from local dealer is accepted, it will increase profit by ₹ 500000 but, it may lead to general reduction in selling price and it will hamper the profit in the future. Besides, the policy of selling products at different prices in the local market will hamper adversely on the relation with the present dealers. So, it is suggested that, it is not desirable to accept the offer of the local dealer even though the profit is increased.

If offer from foreign dealer accepted, it increases profit by ₹ 200000 and at the same time explore new market segment. Discrimination in price is for foreign market, so, it will not hamper the relation with local dealers. Therefore, it is suggested that, the foreign offer should be accepted even though it is at the lowest price.

K) Taking decision when there is Key Factor

20. Following particulars are supplied to you and required to state which product is better if –

    a) Raw material is in short supply and

    b) Machine hours are limited.

	Product S	Product Z
Selling price per unit ₹	500	400
Consumption of material in Kg.	5	4
Material cost per unit ₹	100	125
Direct wages per unit ₹	50	75
Variable overheads per unit ₹	100	100
Machine hours required	25	5

Solution

	Product S ₹	Product Z ₹
Selling price	500	400
Less – variable cost		

Material cost	100	125
Direct wages	50	75
Variable overheads	100	100
Total	250	300
Contribution	250	100
Contribution per kg. –	(250/5) 50	(100/4) 25
Contribution per Machine hour	(250/25) 10	(100/5) 20

a) Product S is better if raw material is in shortage. The company should produce first product S as much as it can, because, it has more contribution per kg of raw material.

b) Product Z is better if machine hours are limited. The company should take maximum production of product Z as it gives more contribution per machine hour.

L) Make or Buy Decision

21. Alfa Gears Ltd. uses a spare part called 'Shaft' in the production of gears. The annual requirement of the part is 20000 units. At present, the company is purchasing the part from outside at ₹ 200 per unit.

The company can produce the part 'Shaft'. For this purpose, a machine costing ₹1000000 with annual capacity of producing 20000 units and a life of 10 years is required. The company can raise the required capital through bank loan. The prevailing rate of interest is 10% p.a. Supervisor with a monthly salary of ₹10000 is to be engaged.

Variable Cost per unit will be - Material ₹ 80, direct labour ₹ 70 and overheads ₹ 20.

As a Cost Accountant, advice the company whether it should produce the part or to purchase from outside.

Solution

		Total ₹	Per Unit ₹
Purchase Price	20000 x 200	4000000	200
Variable Cost			
- Materials	20000 x 80	1600000	80
- Direct Wages	20000 x 70	1400000	70
- Variable Overheads	20000 x 20	400000	20
Total Variable Cost		3400000	170
Contribution		600000	30
Fixed Cost			
- Depreciation on Machine	1000000/10	100000	
- Supervision Charges	10000 x 12	120000	
- Interest on Loan	1000000 x 10%	100000	
Total Fixed Cost		320000	16
Profit		280000	14

If the company produced the spare part, it will save ₹ 14 per unit and will increase profit by ₹ 280000. So, it is advice to the company that, it should produce the spare part instead of purchasing from outside.

M) Selection of suitable Product Mix

22. You have provided the following information.

	Product M ₹	Product W ₹
Selling Price	200	150
Marginal Cost	160	120

The company can produce and sale 4000 units and fixed cost is ₹ 100000.

You are asked to advice which of the following mix should be adopted by the company.

a) 1000 units of Product M and 3000 units of Product W

b) 2000 units of Product M and 2000 units of Product W

c) 3000 units of Product M and 1000 units of Product W

Solution

	Mix (a)			Mix (b)			Mix (c)		
	M ₹	W ₹	Total ₹	M ₹	W ₹	Total ₹	M ₹	W ₹	Total ₹
Sales	200000 (1000x200)	450000 (3000x150)	650000	400000 (2000x200)	300000 (2000x150)	700000	600000 (3000x200)	150000 (1000x150)	750000
M. Cost	160000 (1000x160)	360000 (3000x120)	520000	320000 (2000x160)	240000 (2000x120)	560000	480000 (3000x160)	120000 (1000x120)	600000
Contri.			130000			140000			150000
F. Cost			100000			100000			100000
Profit			30000			40000			50000

Mix (c) should be adopted by the company as it gives maximum contribution and profit.

N) Graphical Representation of Cost-Volume-Profit Analysis

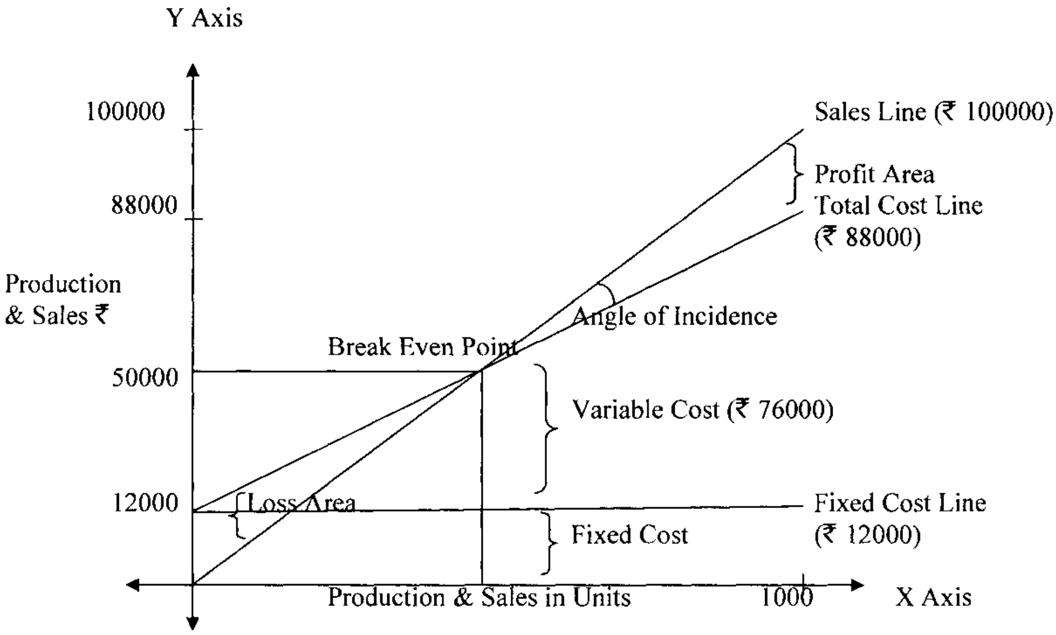
23. Draw Break Even Chart and determine Break Even Point, Profit Area and Angle of Incidence.

    i. Maximum production and selling capacity – 1000 units.

    ii. Sales – ₹ 100000

    iii. Marginal Cost – ₹ 76000

    iv. Fixed Cost - ₹ 12000



Note – The graph is not as per scale

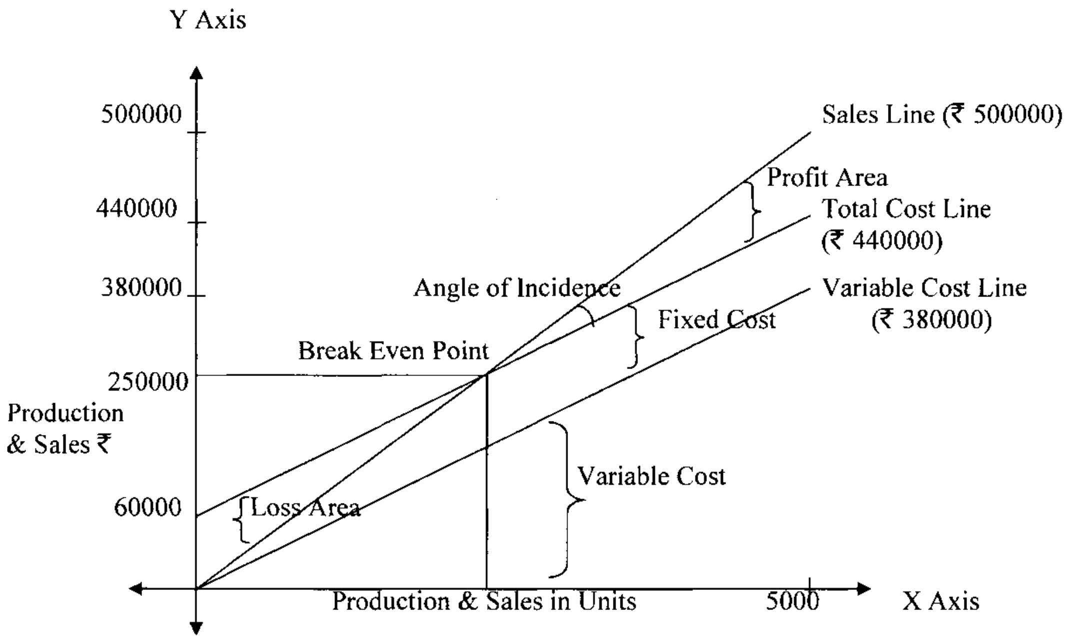
24. Represent the following data through Break Even Chart and determine Break Even Point, Profit Area and Angle of Incidence.

    i. Maximum production and selling capacity – 5000 units.

    ii. Sales – ₹ 500000

    iii. Marginal Cost – ₹ 380000

    iv. Fixed Cost - ₹ 60000



Note – The graph is not as per scale

25. The following figures relate to one year's working in a manufacturing company.

    Fixed Overhead Rs.120000

    Direct Materials Rs.410000

    Direct Wages Rs.150000

    Variable Overheads Rs.200000

    Sales Rs.1000000

    Output 1000 units

    Draw a break even chart by all the methods and show –

    a) break even point b) profit area

    c) angle of incidence d) margin of safety.

Solution

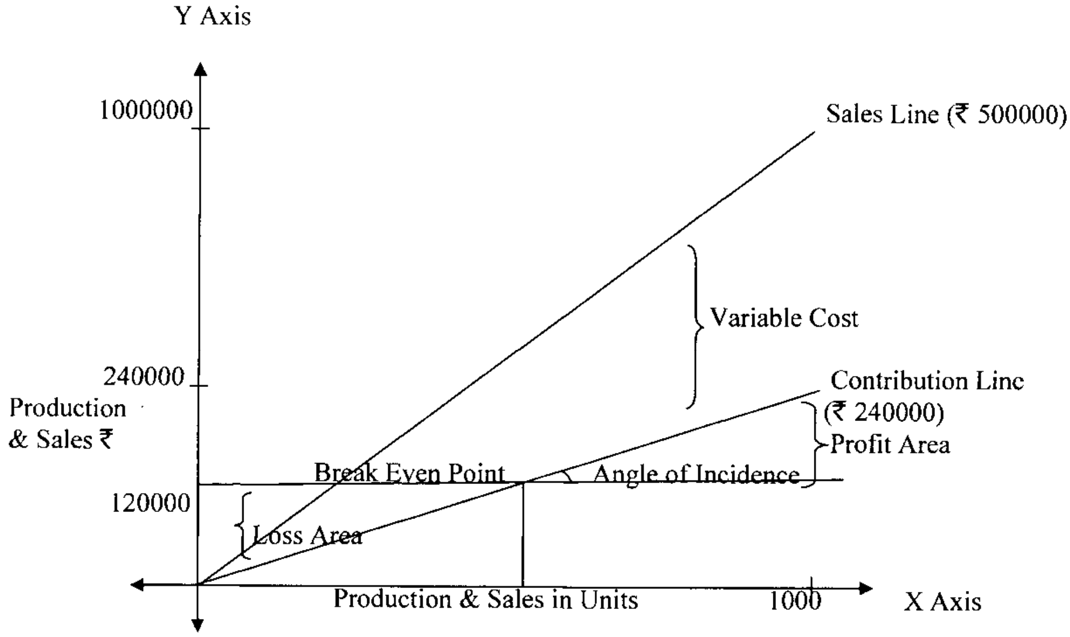
Working Note

Total Variable Overheads = Direct Material + Direct Wages + Variable Overheads

= 410000 + 150000 + 200000 = 760000

Contribution = Sales – Variable Cost

= 1000000 – 760000 = 240000



Note – The graph is not as per scale

2.3. Summary

Fixed Overheads remain constant irrespective to the level of production but, variable expenses changes according to volume of production. Fixed expenses leads to different cost per unit at different level of output. On account of this, a separate technique of Marginal Costing has been developed where only variable expenses are considered and fixed expenses are separated from cost of production.

Marginal Costing is very useful for control of cost, profit planning, evaluation of performance and decision making. The technique of Marginal Costing provides assistance to the management in taking vital decisions like fixation of selling price, to make or to buy, selection of suitable product mix, suspension or close activities of a particular product, department or factory, etc. It is also helpful for prediction of effect of change in selling price, maintenance of desired level of profit, comparison of alternative methods of production, diversification of products, etc.

Marginal Costing has the following limitations.

a) Practically it is very difficult to segregate all expenses into fixed and variable.

b) Suitable comparison of different jobs, departments or products is not possible.

c) Balance sheet does not show true and fair view of the financial position. As the same, loss of stock due to any reason may not be recovered in full from the insurance company.

d) This technique is not suitable for the industries where the period of production is more and value of work-in-progress is high.

e) An order may be accepted at lower price and it may lead to general reduction in selling price.

f) Fixed costs may change from one period to another and variable costs do not remain constant per unit of production.

g) Marginal costing does not consider time factor and investment.

2.4. Terms to Remember

- **Marginal Costing** – "The ascertainment of marginal costs and of the effect on profit of changes in volume or type of output by differentiating between fixed costs and variable costs."
- **Marginal Cost** – "The amount at given volume of output by which aggregate costs are changed if the volume of output is increased or decreased by one unit."
- **Fixed Cost** – "A cost which tends to be unaffected by variations in volume of output."
- **Variable Cost** – "A cost which tends to vary directly with volume of output."
- **Semi-fixed or Semi-variable Cost** – "A cost which is partly fixed and partly variable."
- **Contribution or Contribution Margin –** It is the difference between the sales and the marginal cost of sales and it contributes towards fixed expenses and profit.

Contribution = Sales – Marginal / Variable Cost (C = S – V) **OR** Fixed Cost + Profit (C = F + P)

- **Marginal Cost Equation** –

  Sales = Variable Cost + Contribution (S = V + C) OR

  Sales = Variable Cost + Fixed Cost ± Profit / Loss (S = V + F ± P)

- **Marginal Cost Statement** – Marginal Cost Statement is a tabular presentation of the Marginal Cost Equation.

- **P/V Ratio** – P/V Ratio is the ratio of Contribution to Sales and generally it is shown in the form of percentage. Symbolically,

  $$\text{P/V Ratio} = \frac{\text{Contribution}}{\text{Sales}} \text{ x } 100 \text{ OR } \frac{\text{Contribution per unit}}{\text{Selling Price per unit}} \text{ x } 100 \text{ OR } \frac{C}{S} \text{ x } 100$$

- **Break Even Point** – It is the point where neither profits nor losses have been made. At this point, contribution equals the fixed cost or total sales equal to total cost.

  a) Break Even Point in units –

  $$\text{B E P} = \frac{\text{Fixed Cost}}{\text{Contribution per unit}} = \frac{F}{C\ (p\ u)}$$

  b) Break Even Point in rupees –

  $$\text{B E P} = \frac{\text{Fixed Cost}}{\text{Contribution}} \text{ x Sales} = \frac{F}{C} \text{ x S}$$

- **Margin of Safety** – Margin of Safety is the difference between the actual sales and sales at break-even point. Margin of Safety (M/S) = Total Sales – Break Even Sales

- **Break Even Analysis** – It is the technique which is used to determine actual / projected / estimated / expected contribution or fixed cost or profit or variable cost in total or per unit at any given volume of production or sales

2.5 Answers to check your progress

A) 1) fixed and variable 2) Fixed 3) Variable 4) Marginal Costing 5) aggregate costs 6) contribution 7) Margin of Safety

B) All the statements are true.

2.6 Exercise

1. Define Marginal Cost and Marginal Costing. State features of Marginal Costing.
2. What is Marginal Costing? State the advantages of Marginal Costing.
3. Introduce the technique of Marginal Costing and state its limitations.
4. Explain Profit Volume Ratio. State various formulae for calculation of P/V Ratio and illustrate with example.
5. Write Short Notes

   a) Contribution b) P/V Ratio c) Break Even Point

   d) Margin of Safety e) Marginal Cost Equation and Marginal Cost Statement
6. Calculate contribution, profit, P/V Ratio, B E P, and Margin of Safety from the following data.

   Sales ₹ 1500000, Variable Cost ₹ 750000 and Fixed Cost ₹ 500000
7. The following data is obtained from the records of an Oil Factory.

	₹
Material Consumed	80000
Labour Charges	50000
Variable Overheads	25000
Fixed Overheads	20000

Sales – 5000 litres @ 50 per litre

Calculate contribution, profit, P/V Ratio, B E P, and Margin of Safety.

8. You are given that –

	2013-14 ₹	2014-15 ₹
Sales	3000000	4000000
Profit	60000	100000

You are required to calculate –

a) P/V Ratio

b) Break Even Point

c) Sales required to earn a profit of ₹ 12000

d) Amount of Profit if sales are ₹ 600000

9. The following particulars are available

   Current sales in units – 6000

   Current selling price per unit ₹ 500

   Current variable cost per unit ₹ 250

   Current fixed cost ₹ 1000000

   What will be the effect on profit if sales increased by 10% or decreased by 20%?

10. Palmolive Co. producing talcum powder and talcum cream. From the following particulars prepare Marginal Cost Statement.

		Talcum Powder Cost per 100 gm ₹	Talcum Cream Cost per 100 gm ₹
Materials		50	80
Labour		20	30
Variable Expenses –	Factory	10	12
	Office	08	08
	Selling	22	30
Selling price		150	200
Units sold		7000	8000

Fixed costs incurred by the co. which can be apportioned equally between the two products are –

   Factory – ₹ 24000, Office – ₹ 10000 and Selling - ₹ 36000

11. Eastern Co. is currently working at 50% capacity and producing 10000 units. At this capacity, and cost per unit is as follows –

	₹
Materials	200
Wages	60
Factory Overheads (40% fixed)	40
Administrative Overheads (50% fixed)	20
Selling Overheads (30% fixed)	40
Total Cost	360

   The company is selling its products at ₹ 400 per unit.

Estimate profit of the company at 60% and 80% capacity.

12. Fixed cost of Kalam Co. is ₹ 400000 and variable cost is ₹ 15 per unit. How many units are to be sold by the company, if selling price is ₹ 25 and if it wants earn profit of ₹ 150000?

13. Pranav co. produced 500 sewing machines during the last year. The variable cost was 2000 and selling price per machine was 3000. Total fixed overheads for the last year were 150000. Determine Break Even Point in units and in amount of sales for the last year.

For the current year, it is expected that variable cost will rise by 10% and due to competition; the price is to be decreased by 10%. How many machines are to be produced during the year to break even?

14. A Soft – Drink Co. has given the following data.

Sales – 20000 bottles @ 25 each – ₹ 500000

Variable cost ₹ 300000

Fixed cost ₹ 100000

What is the break even point in amount and units?

Suppose that a plant expansion will add 50000 to fixed cost and increase capacity to 30000 bottles, what will be the new break even point in terms of units and sales.

15. The P/V Ratio of Maha-Indo Co. is 40% and its margin of safety is 30%. Find out break even point and net profit if sales volume is 1000000.

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Unit-3

Working Capital

Meaning, Significance and Calculations of working Capital Requirement, Preparation of Funds Flow statement.

Objectives :

After studying this unit you should be able to –

- Understand the concept of working capital
- Know the significance of working capital
- Explain the determinants of working capital
- Compute the working capital required
- Understand the concept of fund, flow of fund, funds flow statement.
- Explain the sources and applications of working capital
- Prepare the funds flow statement.

Structure :

3.1 Introduction :

Management of each business firm is interested in knowing the financial position of the business. Financial statements show the financial position of the firm. But these statements only show the financial status and not give the details. Management in interested in understanding the changes in the financial position. There are different tools and techniques available to analyse the financial statements and to know the changes. A statement showing changes in working capital, funds flow statement are the important tools. Capital is important for every business. It is essential to start the business as well as to run the business. There are mainly two types of capital i.e. Fixed Capital and working capital. Management must have the knowledge these concepts in detail. In this unit we are going to study the concept of working capital as well as funds Flow Statement.

3.2 Meaning of Working Capital :

In general sense, the working capital means, the capital which is needed to carry on the day today working of the business. Shubin defined the working capital as, “the funds necessary to cover the cost of operating the enterprise.” The cost of operating the enterprise includes purchases of raw materials of finished goods, wages and salaries of staff, payment of other expenses like rent, insurance, printing, lighting, advertisement etc. The funds need to cover this cost is called as working capital. Such capital is in the different current assets and they change their form in the ordinary course of business e.g. from cash to inventories, inventories to receivable and receivables into cash In this view, Gerstenberg called it as a circulating capital

The most widely used concept of working capital is defined as, “the defference between current assets and current liabilities.” This concept is useful to know the liquidity of the firm.

3.3 Significance / Importance of Working Capital :

The definition of working capital itself explain the significance of it in the business that it is the amount which is used to carry on day to day working of the business. That means without working capital the working of the business cannot be possible. Working capital is called as the life blood or heart of the business. The significance or importance of working capital can be explained as under –

i) It is important to maintain the smooth flow of the working of the business.

ii) With the helps of working capital, the required raw materials and other materials can be purchased in time which leads to full utilization of the capacity of the business.

iii) It is possible to avail the benefits of large scale purchases.

iv) If the working capital is sufficient, the firm can pay its short term claims in time which will useful to maintain good relations with claimants.

v) Working capital is the indicator of liquidity position and if it is good short – term loans can easily be made available from banks and financial institutions.

vi) It is possible to take the advantage of favourable and profitable market conditions.

vii) A firm can pay the government dues and other claims in time and avoid penalties.

viii) If a firm ensures a good flow of working capital, there is no need to borrow funds at high rate of interest.

ix) The sufficient working capital ensures the payment of wages and salaries to the staff in time which develops good working environment.

x) A firm having sufficient working capital can increase the sales by allowing credit facility to customers.

3.4 Determinants of working capital :

Each business firm needs the working capital but the requirement of the working capital of each firm is different because it depends upon various factors. These factors are as follows :

i) Size of the firm : The amount of working capital required depends upon the size of the firm. Big firm require more working capital as compare to the small firms.

ii) Nature of business : The requirement of working capital also depends on the nature of the business carried out by the firm. If the firm is a trading firm it requires more working capital and if the firm is a industrial or public utility concern it requires less working capital.

iii) Volume of business capital : If the volume of business is large it requires more working capital and if the volume of business is small these is a less need of working capital.

iv) Length of processing or selling period : If the processing or selling period is large it requires more working capital and vice versa.

v) Policy of purchase and sale : The requirement of working capital depends upon the firm's policy of purchase and sale. If a firm has a policy of cash purchases and credit sales if requires more working capital and if a firm has a policy of credit purchases and cash sales if requires less working capital.

vi) Large stock of raw materials : Some firms require large stock of raw materials for some reasons such as seasonal nature, long distance etc. Such firms need more working capital than others.

vii) Expansion : If a firm wants to make raid expansion or expansion on large scale if require more working capital.

viii) Cash requirements : If a firm requires more cash for payment of different expenses, taxes, charges etc. the requirement of working capital is more and if cash requirement is less, the need of working capital is also less.

ix) Use of Labour : The firm who use labour or large scale for business activities, needs more working capital and if the firm is highly mechanized if needs less working capital.

x) Management attitude and efficiency : The attitude or policy of management in respect of payments of dividend, discount, price, expenses etc. is of each saving and efficiency of management is more then requirement of working capital is less and vice-versa.

3.5 Computation of Working capital :

Working capital is called as the lifeblood or heart of a business firm. Therefore proper estimation of working capital is necessary. As working capital is defined the difference between current assets and current liabilities, the computation of working capital depends upon the estimation of current assets and current liabilities. While computing the working capital estimation regarding various current assets and current liabilities is to be made as under-

A) Estimation of Current Assets :

1) **Stock/Inventories :** A business firm needs various types of stock like Raw materials, Work-in-progress, Finished Goods. The working capital required for maintaining the stock is based on the period for which stock of goods is remained in the business. It is estimated as follows –

i) Raw Materials : The period for which the raw materials remain in stores.

ii) Work in Progress : The period in which the work in progress remain in manufacturing process.

iii) Finished Goods : The period for which the finished goods remain in stock unsold.

2) Sunday Debtors : The period of credit allowed to debtors / customers.

3) Bills Receivable

4) Cash and Bank Balance : As per estimation of cash requirements.

5) Prepaid Expenses : Any expenses paid in advance.

B) Estimation of Current Liabilities :

1) **Sundry Creditors :** The period of credit allowed by suppliers or creditors.

2) Bills Payable

3) Outstandng Expenses : On the basis of time lag in payment of wages and other expenses.

4) Bank Overdraft

By deducting the total and current liabilities from the total of current assets (A – B), the working capital is calculated. While computing working capital stock is valued at cash cost as well as debtors are also to be taken at cash cost basis and not an sales value basis. If cash costs are not available, the sales value may be taken.

Illustration : 1

From the following information prepare a statement showing the working capital requirement.

Budgeted sales Rs.. 2,08,000 p.a. Analysis of one rupee of sales is as under –

Particulars	Rs.
Raw Materials	0.40
Direct Labour	0.30
Overheads	0.20
	0.90
Profile	0.10
Sales	1.00

It is assumed that –

a) Raw materials are carried in stock for 3 weeks and finished goods for 2 weeks.

b) Factory processing will take 3 weeks.

c) Suppliers will give 5 weeks credit.

d) Customers will allowed 8 weeks credit.

It may be assumed that production and overheads accrue evenly throughout the year.

Solution :

Statement showing working capital Requirement Particulars :

Current Assets :

1) Stock :

i)	Raw Materials (3 weeks) (Rs. 2,08,000 x 3/52 x 0.40)	4,800
ii)	Work in Progress (Rs. 2,08,000 x 3/52 x 0.90)	10,800
iii)	Finished Gods (Rs. 2,08,000 x 2/52 x 0.90)	7,200

2)	Sundry Debtors at cost	28,800
	(Rs. 2,08,000 x 8/52 x 0.90	
		51,600
	Less – Current Liabilities	
1)	Sundry Creditors	8,000
	(Rs. 2,08,00 x 5/52 x 0.40)	
	Working Capital Required	43,600

Illustration – 2 :

Hindustan industries sells its product on a Gross Profit of 20% on sales. The following information is extracted from its annual accounts for the year ended 31st March, 2009.

Particulars	Rs.
Sales of 3 month's credit	20,00,000
Raw Materials	6,00,000
Wages paid (15 days in arrears)	4,80,000
Manufacturing Expenses paid (one month in arrears)	6,00,000
Administration Expenses paid (one month in arrears)	2,40,000
Sales promotion expenses payable	1,00,000
(1/2 yearly in advance)	
Income Tax payable quarterly	2,00,000
(Last instalments falls due to June 2009)	

The company enjoys one month's credit from the suppliers of raw materials and maintains 2 months stock of raw materials and one and half month's of finished goods. Cash balance is maintained at Rs. 50,000. Assume a 10% margin for contingencies. Compute working capital required by the company.

Solution :

Statement showing Working capital Requriement –

Particulars		Rs.
Current Assets		
1) Stock		
i. Raw Materials (Rs. 6,00,000 x 2/12)		1,00,000
ii. Finished Goods (Rs. 19,20,000 x 1.5/12)		2,40,000
2) Sundry Debtors (Rs. 19,20,000 x 3/12)		4,80,000
3) Cash in hand		50,000
4) Prepaid Sales Promotion Expenses (Rs. 1,00,000 x 6/12)		50,000
		9,20,000
Less : Current Liabilities :		
1) Sundry Creditors (Rs. 6,00,000 x ½)		50,000
2) Outstanding Expenses		
i) Wages (Rs. 4,80,000 x 0.5 / 12)	20,000	
ii) Manufacturing Expenses (Rs. 6,00,000 x ½)	50,000	
iii) Administration Expenses (Rs. 2,40,000 x 1/12)	20,000	
iv) Income Tax (Rs. 2,00,000 x 3/12)	50,000	1,90,000
Net Working Capital		7,30,000
Add : 10% margin for contingencies		73,000
Total working Capital		8,03,000

3.6 Meaning of Funds :

Funds flow statement is the important tool of financial analysis. But before going through the concept of funds flow statement, it is necessary to understand the meaning of the term ‘fund’. The term ‘fund’ has got different meanings and interpretations, which are as follows –

i) Cash Fund : It is a narrow concept. As per this concept 'Fund' means 'Cash' which includes cash in hand and demand deposits at bank. The statement prepared on the basis of this term is called "Cash Flow statement."

ii) Capital Fund : It is broader concept. As per this concept 'fund' means the total amount of resources employed in the business.

iii) Working Capital Fund : This concept is widely used. As per this concept 'Fund means the 'Net Working Capital' or 'Net Current Assets' that means Current Assets less current liabilities. While preparing the funds Flow Statement the 'Working Capital Fund' concept is used.

3.7 Meaning of Flow of Funds :

Flow of funds means the change in the amount of fund or net working capital. The change may be an increase or decrease. If a transaction results in an increase in the amount of fund it is considered as a source of fund, and if a transaction results in a decrease in the amount of fund it is considered as an application of fund. If a transaction does not affect the amount of fund, then, there is no flow of fund.

In other words flow of fund means the movement of fund. Such movement maybe from one asset to another, or from one equity to another, or from an asset to an equity, or from equity as asset, or a combination of any of them. A transaction will cause a net flow of working capital / fund only when one of the accounts affected is a current account (current asset or current liability) and another account is a non-current account (non current asset or non-current liability). In short the concept of flow of fund may be summarized as follows :

i) The fund / net working capital increases or decreases when a transaction involves a current account and a non current account.

ii) The fund / net working capital remains unaffected when a transaction involves only current accounts.

iii) The fund / net working capital remains unaffected when a transaction involves only non-current accounts.

3.8 Funds Flow Statement :

Fund flow statement is a statement of flow / movement of fund / net working capital.

If discloses the analytical information about the different sources of a fund / net working capital and the applications uses of the same in an accounting cycle.

According to Robert Anthony, “The funds flow statement describes the sources from which additional funds were derived and the uses to which these funds were put.”

According to Smith and Brown, “A funds flow statement is prepared in summary form to indicate changes occurring in terms of financial condition between two different balance sheet dates.

In short it is a technical device designed a highlight the changes in the financial condition of a business firm between two balance sheet dates. A funds flow statement is known by different names. Such as statement of sources and Application of Fund, Statement of funds provided and applied, where got and where gone statement, Inflow and outflow of funds, statement of sources and application of working capital, Movement of funds statement, Movement of working capital statement, etc. A funds flow statement is very useful to management, banks and other financial institutions, shareholder, Debenture holders, financial analyst to know the changes in financial position of the business.

3.9 Sources and Applications of Funds / Working Capital :

Funds flow statement discloses the sources and applications of funds / working capital. For the preparation of funds flow statement, it is necessary first to know the sources and applications of funds. The following are the some important sources and applications of funds.

a) Sources of Funds / Working Capital :

Transactions which results in an increase in the amount of fund or working capital are called sources of funds. The usual sources of funds are as follows :-

i) Funds from operations or operating profits.

ii) Non-operating or non-trading incomes such as dividend, received, interest received on investment, rent received etc.

iii) Issue of shares, equity or preference, for cash of for any other current asset.

iv) Issue of debentures for cash or for any other current asset.

v) Borrowing of long-term and medium-term longs.

vi) Acceptance of long-term and medium-term deposits.

vii) Sales of long-term investments for cash or for any other current asset.

viii) Sale of fixed assets of cash or for any other current asset.

ix) Refund of income tax received.

x) Decrease in working capital as per the schedule of changes in working capital.

b) Applications / Uses of Fund / working capital :

Transactions which result in a decrease in the amount of fund or net working capital are called uses of fund. The usual applications / uses of funds are as follows –

i) Fund lost in operations or operating loss.

ii) Non-operating expenses such as dividend paid, income, tax paid, fines paid etc.

iii) Redemption of redeemable preference shares in cash or in any other current asset.

iv) Redemption of debentures in cash or in any other current asset.

v) Repayment of long-term and medium0-term loans in cash or in any other current asset.

vi) Repayment of long-term and medium-term deposits in cash or for any other current asset.

vii) Purchase of long-term investments for cash or for any other current asset.

viii) Purchase of fixed assets for cash or for any other current asset.

ix) Drawings in case of sole trader or a partnership firm.

x) Increase in working capital as per the schedule of changes in working capital.

3.10 Preparation of Funds Flow Statement :

There are certain steps involved in the preparation of funds flow statement which are as follows :

1) Preparation of schedule / statement of changes in working capital.

2) Preparation of adjusted Profit and loss account and other necessary accounts.

3) Preparation of the funds flow statement.

The explanation of these steps is as under –

Preparation of schedule / statement of changes in working capital :

As the working capital is the excess of current assets over current liabilities, the schedule of changes in working capital is prepared with the help of only current assets and current liabilities appearing in the two balance sheets. The additional information regarding the current assets and the current liabilities given outside the balance sheets should not be taken into account in the schedule. Which preparing this schedule the following points may be borne in mide –

i) An increase in current asset increase the working capital.

ii) A decrease in current liabilities increases the working capital.

iii) A decrease in current asset decreases the working capital.

iv) An increase in current liabilities decreases the following capital.

The form of the schedule / statement of changes in working capital is as follows –

Schedule / Statement of changes in Working Capital.

Particulars	Previous Year Rs.	Current Year Rs.	Change in working capital	
			Increase Rs.	Decrease Rs.
A) Current Assets				
Cash Balance	xxx	xxx		
Bank Balance	xxx	xxx		
Stock in trade	xxx	xxx		
Sundry Debtors	xxx	xxx		
Prepaid Expenses etc.	xxx	xxx		
Total A	xxx	xxx		
B) Current Liabilities				
Sundry Creditors	xxx	xxx		
Bills Payables	xxx	xxx		
Bank overdraft	xxx	xxx		
Outstanding expenses	xxx	xxx		
Total B	xxx	xxx		
Net Working Capital (A – B)	xxx	xxx	xxx	xxx
Increase / Decrease in working capital	xxx	xxx	xxx	xxx

Preparation of Adjusted Profit and loss Account and other necessary accounts :

Adjusted Profit and loss Account is prepared to find out the from operations or operating profit by adjusting the transactions to the profit or loss disclosed by the profit and loss account. This account is prepared as follows –

Adjusted Profit and Loss Account

To Balance b/d (Last year loss)	By Balance b/d (Last year profit)
To Non-fund and Non-operating expenses such as depreciation, preliminary exp, goodwill etc written off.	By Non-fund and Non-operating incomes like profit on sale of investment / fixed assets, interest / dividend on investment, rent received etc.
To Appropriations of profit such as transfer to general reserve, other reserves, dividend etc.	By Transfer from General Reserve or any other reserve to profit and loss account.
The Balance c/d (Closing balance – credit)	By funds from operations (Balance figure)
	By Balance c/d (Closing balance-debit)

If there are any unknown or hidden transaction, to find out the amount of such transaction, if is necessary to prepare that particular account.

Funds flow statement is a statement showing sources and applications of funds. It is prepared either in Report Form or in the account from. The Account form of funds flow statement is as follows :

Funds Flow Statement :

Sources of Funds	Rs.	Applications of Funds	Rs.
Issue of Shares	xxx	Redemption of Redeemable	
Issue of Debentures	xxx	Preference shares	xxx
Long term Borrowing	xxx	Redemption of Debentures	xxx
Sale of Fixed Assets	xxx	Repayment of Long Term Loans	xxx
Funds from Operations /		Purchases of Long Term	
Operating Profit	xxx	Investments	xxx
Non Operating/Non trading		Purchase of fixed Assets	xx
Income	xxx	Operating Loss / Funds Lost	
Decrease in working		In Business	xxx
Capital etc.	xxx	Non operating Expenses	xxx
		Increase in working capital etc	xxx
	xxx		xxx

While preparing a funds Flow statement, current assets and current liabilities are to be ignored. Attention is to be given to changes in Fixed Assets and Fixed Liabilities with the help of amounts given in two balance sheets and other information.

Illustration – 3

From the following particulars of XYZ Ltd, prepare a funds Flow Statement with a Statement of change in working capital.

Balnace Sheet

Liabilities	31-3-08 Rs.	31-3-09 Rs.	Assets	31-3-08 Rs.	31-3-09 Rs.
Eq. Share Capital	50,000	60,000	Goodwill	8,000	5,000
Profit & Loss A/c	20,000	30,000	Fixed Assets	30,000	50,000

(Conted. on next page)

General Reserve	5,000	7,000	Current Assets	47,000	60,000
Provision for					
Depreciation	—	3,000			
Current Liabilities	10,000	1,15,000			
	85,000	1,15,000		85,000	1,15,000

Adjusted Profit and Loss Account for

Dr. the year ended 31-3-2009 Cr.

Particulars	Rs.	Particulars	Rs.
To General Reserve	2,000	By Balance b/d	20,000
To Goodwill	3,000	By Trading Profit	28,000
To provision for Depreciation	3,000	Funds from operations	
To Dividend	5,000		
To Taxation	4,000		
To Balance c/d	30,000		
	47,000		47,000

Solution :

Statmeent of Change in Working Capital

	Particulars	31-3-08 Rs.	31-3-09 Rs.	Change in W.C.	
				Increase Rs.	Decrease Rs.
A)	Current Assets	47,000	60,000	13,000	—
B)	Current Liabilities	10,000	15,000	—	5,000
	Net working Capital (A – B)	37,000	45,000		
	Increase in working capital	8,000	—	—	8,000
		45,000	45,000	13,000	13,000

(Conted. on next page)

Funds Flow Statement for the year ending 31-3-2009

Sources of Funds	Rs.	Applications of Funds	Rs.
Issue of shares	10,000	Purchases of Fixed Assets	20,000
Funds from operations/		(Rs. 50,000 – Rs. 30,000)	
Trading Profit	27,000	Tax paid	4,000
		Dividend paid	5,000
		Increase in working Capital	8,000
	37,000		37,000

Illustration 4 :

Balance sheet of M/s. Black and White as on 1-1-2008 and 31-12-2008 were as follows –

Balance Sheet

Liabilities	1-1-08 Rs.	31-12-08 Rs.	Assets	1-1-08 Rs.	31-12-08 Rs.
Creditors	40,000	44,000	Cash	10,000	7,000
Mr. White's Loan	25,000	—	Debtors	30,000	50,000
Loan from Bank	40,000	50,000	Stock	35,000	25,000
Capital	1,25,000	1,53,000	Machinery	80,000	55,000
		Land	40,000	50,000	
		Building	35,000	60,000	
	2,30,000	2,47,000		2,30,000	2,47,000

During the year machine costing Rs. 10,000 (accumulated depreciation Rs. 3,000) was sold for Rs. 5,000. (The provision for depreciation against machinery as on 1-1-2008 was 25,000 and on 31-12-08 Rs. 40,000. Net profit for the year 2008 amounted to Rs. 45,000. You are required to prepare Funds Flow statement.

Solution :

i) Schedule of changes in Working Capital

Particulars	1-3-08 Rs.	31-12-08 Rs.	Change in W.C. Increase Rs.	Decrease Rs.
A) Current Assets:				
Cash 10,000	7,000	—	3,000	
Debtors	30,000	50,000	20,000	—
Stock 35,000	25,000	—	10,000	
	75,000	82,000		
B) Current Liabilities				
Creditors	40,000	44,000	—	4,000
Net working Capital (A – B)	35,000	38,000	20,000	17,000
Increase in Working Capital	3,000	—	—	3,000
	38,000	38,000	20,000	20,000

ii) Statement showing Funds, from operations.

Particulars	Rs.	Rs.
Profit Made during the year	—	45,000
Add : Depreciation on Machinery	18,000	
Loss on sale of Machinery sold	2,000	200,000
Funds from operations		65,000

iii) Funds Flow Statement for the year ending 31-12-2008

Sources	Rs.	Applications	Rs.
Loan from Bank	10,000	Repayment of Mr. White	
Sale of Plant	5,000	Loan	25,000

(Conted. on next page)

Funds from operations	65,000	Purchase of Loan	10,000
		Purchase of Building	25,000
		Partner's Drawings	17,000
		Increase in Working Capital	3,000
	80,000		80,000

iv) Machinery Account

Particulars	Rs.	Particulars	Rs.
To Balance b/d (80,000 + 25,000)	1,05,000	By Dep. On Machinery sold	3,000
		By Bank	5,000
		By Loss on Machinery sold	2,000
		By Balance c/d (55,000 + 40,000)	95,000
	1,05,000		1,05,000

v) Provision for Depreciation on Machinery

Particulars	Rs.	Particulars	Rs.
To Machinery A/c	3,000	By Balance b/d	25,000
To Balance c/d	40,000	By P & L. A/c (Bal. Fig.) (Provision during the year)	18,000
	43,000		43,000

vi) Statement showing Partner's Drawing

Particulars	Rs.
Opening Capital of Partners	1,25,000
Add : Profit during the year	45,000
	1,70,000
Less : Closing Capital of Partners	1,53,000
Drawings	17,000

Illustration 5 :

From the following Balance Sheets of ABC Ltd., prepare

i) Statement showing changes in working capital

ii) Funds Flow statement.

Balance shet as on 31st **December**

Liabilities	2007 Rs.	2008 Rs.	Assets	2007 Rs.	2008 Rs.
Trade Creditors	31,000	29,000	Plant at cost	70,000	80,000
Current liabilities	16,500	15,000	Less : Depreciation	25,250	7,000
Accrued Expenses	7,500	8,000	47,750	73,000	
Mortgage	10,000	15,000	Goodwill	5,000	—
Share Capital	50,000	65,000	Investment	5,000	—
Retained Earnings	14,750	17,000	Cash in hand	15,000	9,000
			Debtors	25,000	27,000
			Stock	35,000	40,000
	1,29,750	1,49,000		1,29,750	1,49,000

Additional Information :

1. Depreciation provided during the year 2008 amounted to Rs. 1750
2. Goodwill was written off out of retained earnings.
3. Dividend paid during the year 2008 amounted to Rs. 3,500/-

Solution :

i) Funds Flow statement for the year

Ended 31-12-2008

Sources	Rs.	Applications	Rs.
Issue of Shares	15,000	Dividend paid	3,500
(65,000 – 50,000)		Plant purchased	30,000

(Conted. on next page)

Loan on Mortgage taken	5,000	Increase in working capital	4,000
Investment sold	5,000		
Funds from operations	12,500		
	37,500		37,500

ii) Statement showing changes in Working Capital

Particulars	31-3-08 Rs.	31-3-09 Rs.	Change in W.C. Increase Rs.	Decrease Rs.
A) Current Assets:				
Cash 15,000	90,000	—	6,000	
Debtors	25,000	27,000	2,000	—
Stock 35,000	40,00	5,000	—	
Total 'A'	75,00	76,000		
B) Current Liabilities :				
Trade Creditors	31,000	29,000	2,000	—
Current Liabilities	16,500	15,000	1,500	—
Accrued Expenses	7,500	8,000	—	500
Total 'B'	55,000	52,000		
Net working Capital (A – B)	20,000	24,000	10,500	6,500
Increase in Working Capital	4,000	—	—	4,000
	24,000	24,000	10,500	10,500

iii) Adjusted Profit and Loss A/c

Particulars	Rs.	Particulars	Rs.
To Depreciation	1,750	By Balance b/d	14,750
To Goodwill written off	5,000	By Funds from operations	12,500
To Dividend paid	3,500	(Bal. Fig.)	
To Balance c/d	17,000		
	27,250		27,250

Net Retained earnings has been taken balance of Profit and Loss A/c

iv) Plant Account

Particulars	Rs.	Particulars	Rs.
To Balance b/d/	44,750	By Depreciation	1,750
To Bank A/c (Bal. Fig.)	30,000	By Balance c/d	73,000
	74,750		74,750

3.11 Summary :

Management and other parties are interested n knowing the changes in financial position. They use various tools for this purpose. Funds flow statement, Schedule of changes in working capital are the important tools used for the analysis of financial position. Working capital is called the lifeblood or heart of the business. It is defined as the excess of current assets over current liabilities. It is also defined as the capital which is needed to carry on day to day working of the business. Each business firm needs more or less working capital. The requirement of working capital depends upon various factors such as size of the firm, nature of business, volume of business, policy of purchase and sale etc. It is necessary to compute essential working capital because with adequate working capital no business firm can survive. Computation of working capital depends upon the proper estimation of current assets and current liabilities.

The term 'fund' has got different meanings and interpretations like cash fund, Capital Fund, Working Capital Fund. The term 'Working Capital Fund' is used widely. Flow of fund means the movement of fund or the change in the amount of fund. This change in the amount of fund may be an increase or decrease. If a transaction resuts in an increase in the amount of fund it is considered as a source of fund and if a transaction results in a decrease in the amount of fund it is considered as an application of fund. The fund increases or decreases when a transaction involve a current account and a non-current account. Funds flow statement discloses the sources and applications of fund / working capital. There are different sources and applications of fund. Funds flow statement is prepared after preparing a Statement showing changes in working capital, Adjusted profit and Loss A/c and other necessary accounts.

3.12 Key Terms :

1) **Working Capital :** The capital which is needed to carry on the day to day working of the business and it is expressed as the excess of current assets over current Liabilities.

2) Fund : The term fund has different meanings. The most widely used meaning of the term fund is Net Working Capital or Net Current Assets.

3) Flow of Fund : Flow of funds means the movement of fund or the change in the amount of the fund.

4) Funds Flow Statement : It is a statement showing sources and applications of fund indicating the changes occurring in terms of financial condition between two different balance sheet dates.

3.13 Self Assessment Questions :

a) Objective Types

1) Fill in the Blanks

i) Difference between current assets and current liabilities is known as …….

ii) Funds flow refers to changes is …………….. capital.

iii) Building sold on credit is …………… of funds.

iv) A transaction results as a decrease in the amount of fund is considered as …………….. of fund.

v) Increase in a fixed assets due to purchase is …………… of fund.

(Ans. : i) working capital, ii) working, iii) a source, iv) an application / use, v) use / application)

2) State 'True' or 'false'.

i) A decrease in current liabilities increases working capital.

ii) The fund remains unaffected when a transaction involves only current accounts.

iii) Working capital is necessary to purchase the fixed assets.

iv) Funds flow refers to change in long-term funds.

v) Payment of dividend is a use fund.

(Ans. : i) T, ii) – T, iii) – F, iv) – F, v) – T)

b) Essay Type :

i) What is meant by working capital ? Explain the factors which determine the working capital requirement.

ii) Define working capital. State the significance of working capital.

iii) Explain the term 'Fund Flow Statement', what are the sources and applications of fund.

iv) What do you mean by working capital ? How is it determined ?

v) What do you mean by funds from operations ? How is it determined ?

vi) Explain the terms 'Fund' and 'Flow of Fund'.

C) Practical Problems :

1) From the following information prepare a statement showing working capital requirement.

Analysis of one rupee of sales	Rs.
Raw Materials	0-30
Overheads	0-20
	0-90
Profit	0-10
Sales	1-00

It is assumed that –

a) Raw materials are carried in stock for 3 weeks and finished goods for 2 weeks.

b) Factory Processing will take 3 weeks.

c) Suppliers will given 5 weeks credit.

d) Debtors will require 8 weeks credit.

It may be assumed that production and overheads accrue evenly throughout the year. (Answer – W.C. Rs. 55500)

2) From the following particulars of Ntional Co-Ltd., calculate the amount of working capital required.

Lag in Payment	Amounts for the year
a) Wages – 1 $\frac{1}{2}$ weeks	5,20,000
Stores and Materials – 1 $\frac{1}{2}$ months	96,000
Office Staff 1 $\frac{1}{2}$ months	1,24,800
Rent – 6 months	20,000
Other Expenses – 1 $\frac{1}{2}$ month	99,600
b) Average amount looked up in stock.	
Finished Goods	10,000
Stock of stores	16,000
c) Pre-payments	
Expenses paid (Quarterly in Advance)	16,000
d) Period of average credit given	
Domestic Sales – 6 weeks	6,24,000
Foreign sales – 1 $\frac{1}{2}$ weeks	1,56,000
Add : 10% for contingencies.	

(Ans. W.C. Rs. 45,650)

4) The summarized Balnce sheet of Ajay Ltd., as at 31-12-2007 and 31-12-2008 are as under –

Liabilities	2007 Rs.	2008 Rs.	Assets	2007 Rs.	2008 Rs.
Share capital	4,50,000	4,50,000	Fixed Assets	4,00,000	3,20,000
General Reserve	3,00,000	3,10,000	Investments	50,000	60,000
P & L A/c	56,000	68,000	Stock	2,40,000	2,10,000

(Conted. on next page)

Creditors	1,64,000	1,29,000	Debtors	2,10,000	4,55,000
Prov For Bad Debts.	4,000	5,000	Bank	1,49,000	1,97,000
Prov. For Taxation	75,00	10,000			
Mortgage Loan	—	2,70,000			
	10,49,000	**12,42,000**		**10,49,000**	**12,42,000**

Additional Information :

i) Investment costing Rs. 8,000 were sold during the year 2008 for rs. 8,500.

ii) Provision for tax made during the year was Rs. 9,000

iii) During the year part of the fixed assets costing Rs. 10,000 was sold for Rs. 12,000 and the profit was included in the Profit and Loss A/c and

iv) Dividend paid during the year amounted to Rs. 40,000/- You are required to prepare a funds flow statement.

(Ans. : Increase in W.C. Rs. 2,97,000, Funds from operations Rs. 68,500, Funds Flow statement Rs. 4,29,000)

4) From the following Balance sheet of PQR Ltd. And other particulars, prepare a statement of changes in working capital and a funds flow statement for the year ended 31-12-2008.

Balance Sheets

Liabilities	2007 Rs.	2008 Rs.	Assets	2007 Rs.	2008 Rs.
Eq. share Capital	1,00,000	1,50,000	Land & Building	60,000	60,000
8% Red.Pref. shares	50,000	25,000	Plant & Machinery	80,000	90,000
General Reserve	10,000	15,000	Investments	20,000	10,000
P & L A/c	12,000	20,000	Stock	10,000	30,000
Sundry Creditors	8,000	12,000	Debtors (all good)	25,000	40,000
Outstanding liabilities	2,000	3,000	Cash	14,000	35,000
Prov. For Bad Debts	2,000	4,000			

(Conted. on next page)

Provi. For Dep. On. Plant & Machinery	10,000	13,000			
Proposed Dividend	10,000	13,000			
Proposed Dividend	10,000	15,000			
Prov. For Taxation	5,000	8,000			
	2,09,000	2,65,000		2,09,000	2,65,000

Additional Information :

i) 8% Red. Pef. Shares were redeemed at a premium of 10%.

ii) During the year tax and dividend were paid Rs. 6,000 and Rs. 12,000 respectively.

iii) During the year a plant, the book value of which was Rs. 27,000 (accumulated depreciation Rs. 12,000) was sold for Rs. 5,000.

(Ans. Increase in W.C. Rs. 51,000, Funds from operations, Rs. 68,500, Funds Flow statement Total Rs. 1,33,500)

5. The Balance Sheets of Jai – Vijay Ltd., as at the end of 2007 and 2008 are given below -

Liabilities	2007 Rs.	2008 Rs.	Assets	2007 Rs.	2008 Rs.
Share Capital	1,00,000	1,50,000	Feedhold Land	1,00,000	1,00,000
Share premium	—	5,000	Plant at Cost	1,04,000	1,00,000
General Reserve	50,000	60,000	Furniture at Cost	7,000	9,000
P & L A/c	1,000	17,000	Investment at cost	60,000	80,000
12% Debentures	70,000	50,000	Debtors	30,000	70,000
Prov. For Dep on Plant	50,000	56,000	Stock	60,000	65,000
Furniture	5,000	6,000	Cash	30,000	45,000
Prov. For Taxation	20,000	30,000			
Sundry Creditors	86,000	95,000			
	3,91,000	4,69,000		3,91,000	4.69,000

A Plant purchased for Rs. 4,000 (Depreciation Rs. 2,000) was sold for cash for Rs. 800 on September 30, 2007. On 30 June 2008, an item of furniture was purchased for Rs. 2,000. These were the only transactions concerning fixed assets during 2008. A dividend of 22 $\frac{1}{2}$ % on original shares was paid.

You required to prepare a Funds Flow Statement.

(Ans. Increase in working Capital Rs. 41,000, Funds from operations Rs. 49,700, Funds Flow statement Rs. 1,05,500)

3.14 Further Readings :

1) Dr. Maheshwari S. N, Principles of Management Accounting, Sultan Chand & Sons, New Delhi.

2) Man Mohan, S. N. Goyal, Principles of Management Accounting, Sahitya Bhavan, Agra.

3) Pandey I. M., Management Accounting, Vikas Publishing House Pvt. Ltd., New Delhi.

4) Patkar M. G. Advanced Accountancy – B.Com. III, Phadake Prakashan, Kolhapur.

5) Paul S. Kr., Financial Statement Analysis, New Central Book, Agency (P) Ltd. Kolkata.

6) Raman B. S., Management Accounting, United Publishers Mangalore.

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Unit : 4

Ratio Analysis

Meaning Advantages and Limitations – Classification of Ratio – Profitability Ratios, Turnover Ratios, Solvency Ratios and Liquidity Ratios.

Objectives :

After studying this unit you should be able to –

- understand the meaning of Ratio and Analysis.
- Know the importance of Ratio Analysis.
- Explain the limitations of Ratio Analysis.
- Understand the classification of Ratios.
- Compute various ratios.

Structure :

4.1 Introductions :

The main financial statements prepared by each business organization are – (i) The profit and loss Account or Revenue statement and (ii) The Balance Sheet. These statements show the profit or loss of a business during a particular period and the financial position on a particular date respectively. But the figures given in the financial statements will not be of much useful, if they are considered independently. They will be very useful only when one item is compared with another item. Management as well as other parties need different type of information for decision making and such information can be made available from the analysis of financial statement .There are various tools or techniques of analyzing the financial statement. The important tools or techniques of financial analysis are comparative financial statement analysis, common-size statement analysis , Trend analysis, Ratio analysis, Funds flow analysis, cash flow analysis etc. Ratio analysis is the important and the most widely used technique for the analysis of financial statements.

4.2 Meanings of Ratios :

Ratios are relationships expressed in mathematical terms between figures which are connected or interrelated with each other in some manner. It is simply an expression of one number in terms of another. It also be defined as the relationship or proportion that one amount bears to another, the first number being the numerator and the latter the denominator. Ratios can be expressed in three ways.

1) Pure ratio or proportion : When proportion of one accounting figure to another accounting figure is shown it is termed as pure ratio or proportion e.g. current

Assets : Current Liabilities are Rs.100000 : Rs. 50000 = 2:1

2) Times – When one value is divided by another, the unit used to express the ratio is termed as, “Times”,

e.g. $$\frac{\text{Current Assets}}{\text{Current liabilities}} = \frac{100000}{50000} = 2 \text{ Times.}$$

3) Percentage – when one figure is divided by another figure and multiplied by 100 the unit of expression is termed as, “percentage”.

$$\text{e.g.} = \frac{\text{Current Assets}}{\text{Current liabilities}} \times 100$$

$$= \frac{1,00,000}{50,000} \times 100 = 200\%$$

In short, accounting ratios or financial ratios are mathematical relationships expressed between inter – connected or inter – related accounting figures. A ratio is on index or yardstick for evaluating the financial position and performance of a firm. It is to be noted that a ratio indicates a quantitative relationship which can be, in turn, used to make a quantitative judgment.

4.3 Meaning of Ratio Analysis :

Ratio analysis the technique of the calculation of a number of accounting ratios from the data or figures founded in the financial statement. It involves compares for useful interpretation of the financial statements. It involves comparison for useful interpretation of the financial statements A signal ratio cannot indicate favorable or unfavorable condition. It should be compared with some slandered. Standards of comparison may be post rations of the same firm or estimated / projected ratios of the same firm or ratios of some selected firms or ratios of the industry to which the form belongs. Ratio analysis includes not only the calculation of ratios but also its interpretation. In short, it is the technique of interpretation of financial statements with the help of the accounting ratios derived from the financial statements.

4.4 Importance / Advantages of Ratio Analysis :

The ratio analysis is the most important tool of the financial analysis. People in different fields are interested in the analysis of financial statements for different purposes and use ratio analysis as a tool of analysis. Management, shareholders, creditors, government, financial institutions, investors etc use the tool of ratio analysis. The importance or advantages of ratio analysis are as follows –

i) Simplifies financial statement : Ratio analysis simplifies the understanding of financial statements. Ratios tell the significance of various inter-related items and their effect on financial position.

ii) Facilitates inter-firm comparison : Ratio analysis provides data for inter-firm comparison. Ratios of a particular firm are compared with the ratios of another firms and strong points / areas and weak points / areas are found out. They also helpful in deciding successful and unsuccessful firms, strong firms and weak firms.

iii) Facilitates inter-firm comparison : Ratio analysis helps in comparison of the performance of different activities as well as different departments of the firm. They are helpful in deciding the efficiency of each activity.

iv) Assist management : The basic function of management are forecasting, planning, co-ordinating, controlling etc. Ratio analysis by providing various information assist management in carrying its functions effectively.

v) Financial diagnosis : With the help of ratio analysis a financial diagnosis of a firm can be possible Ratios tell the whole story of the changes in financial condition or position of the business. They evaluate the liquidity, solvency, profitability of the firm.

vi) Ratios are very helpful in the establishing standard costing system and budgetary control.

vii) Ratio analysis is useful not only to the insiders but also to outsiders like creditors, investors, financial institutions etc. The interested outsiders can know the liquidity, solvency, profitability position of the firm and take the decisions regarding lending or investing.

4.4 Limitations of Ratio Analysis :

Though, ratio analysis is the most powerful tool of the financial analysis, it suffers from certain limitations. These limitations are as under –

i) Limitation of data : Ratios are based on the financial information available in financial statements. If the data is not reliable, the ratios calculated from such data also doubtful.

ii) No consistency in meaning : There is no consistency in the meaning of certain accounting ratios. The items used in the calculation of ratios differ from one analyst to another.

iii) Supplementary nature : Ratios are supplementary to and not substitute of the original data. They must be studied with the related data from which they are derived.

iv) Changes in price level : Ratios do not present true information in case of changing price level of the variables. In such case ratios will provide misleading results.

v) Not helpful for preparing budget : Ratios are computed on the basis of past result. It does not help properly to predict the future, the prepare budgets and estimates since the business policies are constantly changing.

vi) Difficult to ascertain standard ratio : It is very difficult to ascertain the normal or standard ratio in order to make proper comparison. Because it differs from firm to firm.

vii) Not possible to solve the problems : Analysis and interpretation of ratios helps us to locate the problems relating to the variables but cannot help us to solve such problems.

viii) Window dressing : There is the danger of window dressing in ratio analysis. As a result a particular ratio cannot be used as a definite indicator.

ix) Mere Symptoms : Ratios are mere symptoms and the management must make a proper diagnosis on the basis of such symptoms. The real success of ratio analysis depends upon proper diagnosis of the ratio.

x) Need expert knowledge : The success of ratio analysis depends on the expert knowledge of the analyst. Therefore the ratios are significant only in the hands of expert analyst and not in the hands of everybody.

4.6 Classification of Ratios :

Different peoples use ratio as a tool of financial analysis. One ratio is used for one particular purpose and another ratio is used for another purpose. Management as well as other parties are interested in use of ratios. To fulfill their requirements ratios are classified into different categories on the different basis. Some of the important bases of classification of accounting ratios and the classification based thereon are as follows–

a) On the basis of the source of Figure :

i. Balance Sheet Ratios / Financial Ratios

ii. Profit and Loss Account Ratios / Revenue Statement Ratios.

iii. Mixed / Combined Ratios.

b) On the Basis of Time :

i. Structural Ratios

ii. Trade Ratios

c) On the Basis of the Importance :

i. Primary Ratios

ii. Secondary Ratios

d) On the Basis of Functions / Nature :

i. Liquidity Ratios

ii. Profitable Ratios

iii. Solvency Ratios

iv. Turnover Ratios

e) On the Basis of the users :

i. Ratios for Management

ii. Ratios for Creditors

iii. Ratios for Shareholders

As per the prescribed syllabus, out of the above classification, the classification on the basis of function / nature is explained in this unit.

4.7 Classification on the Basis of Functions / Nature :

Though there are different bases of classification of ratios, the most widely accepted classification is based on the functions or nature. As per this classification accounting ratios are classified as under –

Functional Classification of Ratios

Liquidity Ratios

i) Current Ratio

ii) Liquid Ratio

iii) Absolute Liquid Ratio

Profitability Ratios

i) Gross Profit Ratio

ii) Net Profit Ratio

iii) Operating Ratio

iv) Operating Profit ratio

v) Return on Capital Employed

Turnover Ratios

i) Stock Turnover Ratio

ii) Debtors Turnover Ratio

iii) Creditors Turnover Ratio

iv) Working Capital Turnover Ratio

v) Fixed Assets Turnover Ratio.

Solvency Ratios

i) Debt. Equity Ratio

ii) Proprietary Ratio

iii) Total Liabilities to Total Assets Ratio.

a) Liquidity Ratios :

Liquidity ratios show short term financial position of the firm. Liquidity means one's ability to meet claim and obligations as and when they become due. Liquidity ratios indicate whether it will be possible for the firm to meet its short term obligations or Liabilities out of its short term resources or assets. These ratios are also termed as working Capital Ratios or Short Term Solvency Ratios. These ratios are helpful to short-term creditors, like trade creditors, bankers and other short-term lenders. The important Liquidity ratios are as follows –

1) Current Ratio : This ratio shows relation between current assets and current liabilities. It is an indicator of the firm's ability to meet its short term liabilities. It is expressed as follows -

$$\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

Current assets are those assets which change their form into cash within a year's time or during the normal operating cycle of the business, whichever is longer. Generally, current assets include cash in hand, cash at bank bills receivables, sundry debtors / books debts, stock / inventory, short term investments, advances, prepaid expenses, accrued incomes etc. Sundry debtors outstanding for more than 6 months and loose tools should not be included in current assets. Current liabilities means liabilities payable within a year or during the operating cycle, whichever is longer. Current liabilities are composed of sundry creditors, bills payables, bank overdraft, outstanding expenses, provision for taxation, proposed dividend, unclaimed dividend, cash credit, short term loans and advance, incomes received in advance, outstanding interest.

An ideal current ratio is 2 : 1 but application of current ratio is depend on the situation of the firm. Some times a lower current ratio than ideal or standard many be adequate. A very high current ratio is also not desirable since it means less efficient use of funds. In fact the current ratio should be seen in relation to the component of current assets and their liquidity.

2) Liquid Ratio : This ratio is also known as Quick Ratio or Acid Test Ratio. It is ascertained by comparing the liquid assets to liquid liabilities. Liquid assets means those assets which are immediately convertible into cash without much loss. Liquid assets include all current assets except stock and prepaid expenses. Liquid liabilities include all current liabilities except bank overdraft and cash credit. Some accountants use current liabilities than liquid liabilities for ascertaining this ratio. It is expressed as follows –

$$\text{Liquid Ratio} = \frac{\text{Liquid Assets}}{\text{Liquid Liabilities}} \quad \text{or} \quad \frac{\text{Liquid Assets}}{\text{Current liabilities}}$$

The normal liquid ratio is 1 : 1. It indicates the ability of the business to meet its commitment without delay. A comparison of the current ratio and liquid ratio shall indicate the inventory hold ups.

3) Absolute Liquid Ratio : It is also termed as Super Quick Ratio or Cash Position Ratio. This is a more rigorous ratio introduced recently to measure the liquidity of a concern. This ratio expresses the relationship between absolute liquid assets and Liquid Liabilities. Absolute liquid assets include cash in hand, cash at bank and marketable securities. It is expressed as follows -

$$\text{Absolute Liquid Ratio} = \frac{\text{Absolute Liquid Assets}}{\text{Liquid Liabilities.}}$$

Illustration -1 :

From the following compute the Current Ratio, Liquid Ratio and Absolute Liquid Ratio.

Particulars	Rs.	Particulars	Rs.
Sundry Debtors	40,000	Sundry Creditors	20,000
Prepaid Expenses	20,000	Debentures	1,00,000
Short term Investments	10,000	Inventories	20,000
Loose Tools	5,000	Outstanding Expenses	20,000
Bills Payable	10,000	Bank overdraft	10,000

Solution :

i) Current ratio $= \dfrac{\text{Current Assets}}{\text{Current Liabilities}}$

$= \dfrac{\text{Rs. } 90,000}{\text{Rs. } 60,000}$

$=$ 1.5 : 1

Where, Current Assets = Sundry Debtors + Prepaid Expenses + Short term Investments + Inventories

= 40,000 + 20,000 + 10,000 + 20,000

= 90,000

Current Liabilities : Bills Payable + Sundry Creditors + Outstanding Expenses + Bank overdraft.

= 10,000 + 20,000 + 20,000 + 10,000

= 60,000

ii) Liquid Ratio $= \dfrac{\text{Liquid Assets}}{\text{Liquid Liabilities}}$

$= \dfrac{\text{Rs. } 50,000}{\text{Rs. } 50,000} = 1 : 1$

Where, Liquid Assets = Total current Assets – (Inventories + Prepaid Expenses)

= 90,000 – (20,000 + 20,000)

= 50,000

Liquid Liabilities = Total Current Liabilities – Bank overdraft.

= 60,000 – 10,000

= 50,000

iii) Absolute Liquid Ratio $= \dfrac{\text{Absolute Liquid Assets}}{\text{Liquid Liabilities}}$

$= \dfrac{\text{Rs. } 10{,}000 = 0.20 : 1}{\text{Rs. } 50{,}000}$

Where, Absolute Liquid Assets = Short Term Investments

= Rs. 10,000

b) Profitability Ratios :

Profitability is an indication of the efficiency with which operations of the business are carried on Profitability should be distinguished from profit . Profitability can be measured in relation with sales or overall performance. Profitability ratios are of much importance to the enterprise, management, owners, creditors, employees, customers, government and the country. The important profitability ratios are as under –

i) Gross Profit Ratio : This is the ratio of Gross Profit to Net sales and expressed as a percentage. It is also called Turnover Ratio. It is highly significant and important since the earning capacity of the business can be ascertained by taking the margin between cost of goods and sales. The higher the ratio, the greater will be the margin, and this is why it is also called Margin Ratio. It is very useful as a test of profitability and management efficiency. 20% to 30% Gross Profit Ratio may be considered normal. It is expressed as follows -

$$\text{Gross Profit Ratio} = \frac{\text{Gross Profit}}{\text{Net Sales}} \times 100$$

(Net Sales = Gross Sales – (Return Inward + Cash Discount Allowed)

ii) Net Profit Ratio : This is the ratio of Net Profit to Net sales and is also expressed as a percentage. It is very useful to the proprietors and investors because it reveals the overall profitability of the concern. If indicates the net margin earning in sales. It indicates the amount of sales left form shareholders after all costs and expenses have been met. The higher the ratio, the greater will be profitability and the higher the returns to the share holders. This ratio measures the overall efficiency of the management through the firm's overall profitability. 5% to 10% Net profit Ratio may be considered the normal. It is expressed as follows –

$$\text{Net Profit Ratio} = \frac{\text{Net Profit}}{\text{Net Sales}} \times 100$$

iii) Operating Ratio : This is the ratio of operating expresses or operating cost to net sales. It is also called operating cost Ratio and is expressed as a percentage. Operating cost refers to all expenses incurred for operating or running a business. It comprises cost of goods sold plus operating expenses such as office and administrative expresses and selling and distribution expenses. The lower the ratio, the higher is the profitability and the better is the management efficiency. 80% to 90% operating Ratio may be considered as normal. It is expressed as follows -

$$\text{Operating Ratio} = \frac{\text{Cost of Goods Sold + Operating Expenses}}{\text{Net Sales}} \times 100$$

iv) Operating Profit Ratio : It is a modified version of Net Profit Ratio. It is the ratio between operating Net Profit to Net Sales and is expressed as a percentage. Here the non-operating incomes and expenses are to be adjusted (i.e. to be excluded) with the net profit to find out the amount of operating net profit. It is expressed as follows -

$$\text{Operating Profit Ratio} = \frac{\text{Operating Net Profit}}{\text{Net Sales}} \times 100$$

Where, Operating Net Profit = Net Profit – Income from external securities and non-operating / non-trading incomes + Non-operating expenses.

v) Return on Capital Employed (ROCE) Ratio : It is also called as Return on Investment (ROI) or overall Profitability Ratio. It indicates the percentage of return on the total capital employed in the business. It is calculated as follows -

$$= \frac{\text{Operating Profit}}{\text{Capital Employed}} \times 100$$

The term capital employed has different measuring. The most used term is as follows –

Capital Employed = Fixed Assets (at cost less depreciation) + Net Current Assets (Current Assets – Current Liabilities)

O R

Capital Employed = Equal share capital + Preference Share Capital + reserves & Surplus + Long term Loans – (Non-Business/ Operating Assets + Fictions Assets)

The term operating Profit means 'Profit before Interest and Tax.' The term investment means 'Interest on Long term Borrowings.'

Illustration – 2 :

XZY ltd. Presented the following Trading and Profit and Loss Account for the year ended 31st March, 2009 and Capital Employed Rs. 1,50,000/-

Dr. Trading and Profit and Loss Account Cr.

Particulars	Rs.	Particulars	Rs.
Operating Stock	1,00,000	By Sales	5,00,000
To Purchases	3,50,000	By Closing Stock	2,00,000
To Wages	50,000		
To Gross Profit c/d	2,00,000		
	7,00,000		7,00,000
To Administration Expenses	1,50,000	By Gross Profit b/d	2,00,000
To Selling & Distribution		By Profit on Sales of Plant	10,000
Expenses	20,000		
To Loss on Sale of Assets	15,000		
To Net Profit	25,000		
	2,00,000		2,00,000

Compute : i) Gross Profit Ratio, ii) Net Profit Ratio, iii) Operating Ratio, iv) Operating Profit Ratio, v) Return on Capital Employed Ratio.

Solution :

i) Gross Profit Ratio $= \dfrac{\text{Gross Profit}}{\text{Net Sales}} \times 100$

$= \dfrac{\text{Rs. } 2,00,000}{\text{Rs. } 5,00,000} \times 100$

$=$ 40 %

ii) Net Profit Ratio $= \dfrac{\text{Net Profit}}{\text{Net Sales}} \times 100$

$= \dfrac{\text{Rs. } 25,000}{\text{Rs. } 5,00,000} \times 500$

$=$ 5%

iii) Operating Ratio $= \dfrac{\text{Cost of Goods Sold + Operating Expenses}}{\text{Net Sales}} \times 100$

$= \dfrac{3,00,000 + 1,70,000}{5,00,000} \times 100$

$=$ 94%

Cost of Goods Sold = Sales – Gross Profit

= Rs. 5,00,000 – 2,00,000

= Rs. 3,00,000

Operating Expenses = Administration Expenses + Selling and Distrubution Expenses

= Rs. 1,50,000 + 20,000

= Rs. 1,70,000

iv) Operating Profit Ratio $= \dfrac{\text{Operating Net Profit}}{\text{Net Sales}} \times 100$

$= \dfrac{\text{Rs. } 30{,}000}{\text{Rs. } 5{,}00{,}000} \times 300$

$= 6\%$

Operating Net Profit = Net Profit – Profit on Sales of Plant + Loss on Sale of Assets

= Rs. 25,000 = 10,000 + 15,000

= Rs. 30,000

v) Return on Capital Employed Ratio

$= \dfrac{\text{Operating Profit}}{\text{Capital Employed}} \times 100$

$= \dfrac{\text{Rs. } 30{,}000}{\text{Rs. } 1{,}50{,}000} \times 100$

$= 20\%$

C) Turnover Ratio :

The Turnover Ratios are also known as Activity or performance or Efficiency or Velocity Ratios. These ratios indicate the effective utilization of the various assets or existing resources in relation to Turnover / Sales / Cost of Goods sold. These ratios supply the information about the speed with which the stock or working capital or debtors or creditors etc are turned in to sales. The important turnover ratios are as follows –

1) Stock Turnover Ratio : This ratios indicates the number of times the stock is turned over during a year. In other words, it is the ratio between stock or inventory and the cost of goods sold or sales. It is expressed as follows.

Stock Turnover Ratio $= \dfrac{\text{Cost of Goods Sold}}{\text{Average Stock}}$

Where, Average Stock $= \dfrac{\text{Opening stock + Closing Stock}}{2}$

If the information of opening stock is not available the closing stock can be taken as the average stock. Also, if the cost of goods sold is not available, the sales can be used for the calculation of the stock turnover ratio. A high stock turnover ratio reveals the effective in inventory management, on the other land a low stock turnover ratio reveals undesirable accumulation of absolute stock.

2) Debtors Turnover Ratio : Debtors constitute an important item of current assets. The quality of debtors determine the liquidity of a firm to a great extent. The Debtors Turnover Ratio is useful to know the quality of the debtors. It is also called as Receivable Turnover Ratio or Debtors velocity. In indicates the number of times on an average, that debtors turnover each year. There are two approaches of this ratio which are as follows –

i) Debtors Turnover Ratio $= \dfrac{\text{Credit Sales}}{\text{Average Debtors / Accounts Receivables.}}$

Here, Average Debtors means average of opening and closing debtors and Debtors includes sundry debtors and bills receivables. A high debtors turnover ratio is good for the business. If the details regarding opening and closing debtors and credit sales are not available, the ratio is calculated by dividing total sales by closing debtors.

ii) Debt Collection Period Ratio $= \dfrac{\text{Average Debtors}}{\text{Credit Sales}} \times$ Months or days in a year

It indicates the extent to which the debts have been collected in time. It gives the average debt collection period. Generally, the shorter the average collection period, the better is the quality of debtors. This ratio is also calculated by using following formulas.

$$= \frac{\text{Months or days in a year}}{\text{Debtors Turnover Ratio}}$$

OR

$$= \frac{\text{Average Debtors}}{\text{Average months or daily credit sales}}$$

3) Creditors Turnover Ratio : It is similar to Debtor's Turnover Ratio. It indicates the number of times the creditors are paid in a year. There are two approaches of this ratio which are as follows –

i) Creditors Turnover Ratio = $\frac{\text{Credit Purchases}}{\text{Average Creditors / Account Payables}}$

Here, Average Creditors means average of opening and closing creditors and creditors includes sundry creditors and bills payables. A lower creditors turnover ratio is good for the business. If the details regarding opening and closing creditors and credit purchases are not available, the ratio is calculated by dividing total purchases by closing creditors.

ii) Indicates the average credit period enjoyed from the creditors. It is also calculated by using following formulas -

$$= \frac{\text{Months or days in a year}}{\text{Creditors Turnover Ratio}}$$

OR

$$= \frac{\text{Average Creditors}}{\text{Average monthly or daily credit purchases}}$$

4) Working Capital Turnover Ratio : This is also known as working capital leverage Ratio. If indicates whether or not working capital has been effectively utilized in making sales. It explains the relationship between sales / turnover and working capital. This ratio is calculated as follows -

$$= \frac{\text{Not sales / Turnover}}{\text{Working Capital}}$$

Here, Net sales / Turnover means Total Sales Less Sales Returns and working capital means Current Assets Less, Current Liabilities. The higher the ratio, the lower is the investment in working capital and higher is the profitability and vice versa. But too high a ratio indicates over-trading.

5) Fixed Assets Turnover Ratio : It is the ratio between net sales and fixed assets. This ratio indicates as to what extent the fixed assets have been utilized. The ratio is calculated as follows -

$$= \frac{\text{Net Sales / Turnover}}{\text{Fixed Assets}}$$

Here, fixed assets means net fixed assets i.e. fixed assets less depreciation.

Illustration – 3 :

Following is the Balance Sheet of ABC Ltd. As n 31st March, 2009

Balance Sheet

Liabilities	Rs.	Assets	Rs.
Share Capital	2,00,000	Goodwill	30,000
Reserves	50,000	Buildings	1,20,000
Profit and Loss A/c	12,750	Plant and Machinery	29,000
Bank overdraft	11,250	Stock	66,000
Sundry Creditors	36,000	Debtors	85,000
Provision for Taxation	20,000		
	3,30,000		3,30,000

Other Information :

Sales for the year	Rs.	8,40,000
Average stock in hand	Rs.	63,000
Purchases for the year	Rs.	4,50,000
Gross Profit	Rs.	2,10,000

Compute :- 1) Stock Turnover Ratio, ii) Debtors Turnover Ratio, iii) Creditors Turnover Ratio, iv) Working Capital Turnover Ratio, v) Fixed Assets Turnover ratio.

Solution :

i) Stock Turnover Ratio $= \dfrac{\text{Cost of Goods Sold}}{\text{Average Stock}}$

$= \dfrac{\text{Rs. } 6,30,000}{\text{Rs. } 63,000}$

= 10 Times

Cost of Gods sold = Sales – Gross Profit

= 8,40,000 – 2,10,000

= 6,30,000

ii) Debtor's Turnover Ratio $= \dfrac{\text{Credit Sales}}{\text{Average Debtors}}$

$= \dfrac{\text{Rs. } 8{,}40{,}000}{\text{Rs. } 85{,}000}$

= 9.88 Times

iii) Creditors Turnover Ratio $= \dfrac{\text{Credit Purchases}}{\text{Average Creditors}}$

$= \dfrac{\text{Rs. } 4{,}50{,}000}{\text{Rs. } 36{,}000}$

= 12.5 Times

iv) Working Capital Turnover Ratio $= \dfrac{\text{Net Sales}}{\text{Working Capital}}$

$= \dfrac{\text{Rs. } 8{,}40{,}000}{\text{Rs. } 83{,}750}$

= 10.03 Times

Working Capital = Current Assets – Current Liabilities

= (Stock + Debtors) – (B/o + Sundry Creditors + Provision for Taxation)

= (66,000 + 85,000) – (11,250 + 36,000 + 20,000)

= 83,750

v) Fixed Assets Turnover Ratio $= \dfrac{\text{Net Sales}}{\text{Fixed assets}}$

$= \dfrac{\text{Rs. } 8{,}40{,}000}{\text{Rs. } 1{,}49{,}000}$

= 5.64 Times

Fixed Assets = Building + Plant and Machinery

= 1,20,000 + 29,000

= 1,40,000

(Note – Goodwill is not included)

d) Solvency Ratios :

Solvency refers to the capacity of a firm to pay off its long debtors. So, long term financial position is tested by solvency ratios. This ratios are also called as Leverage Ratios or Capital Structure Ratios or Stability Ratios. Long term creditors are interested about the repayment capacity of their principal and about the regular payment of interest as soon as it becomes due. Solvency ratios give information about it. The important solvency ratios are as follows –

1) Debt Equity Ratio : This ratio indicates the relationship between Debt and Equity that means the relationship between the claims of outsiders and owners against the assets of the firm. In short it expresses the relationship between the external equities and internal equities or borrowed capital and owned capital. It is expressed as follows–

$$\text{Debt Equity Ratio} = \frac{\text{External Equities}}{\text{Internal Equities}}$$

The term external equities refers to total outside liabilities and the term internal equities refers to shareholders fund. The normal or ideal Debt-Equity Ratio is 2:1. It is also calculated as –

$$= \frac{\text{Long term Debt.}}{\text{Proprietor's Equity / Share holders Fund}}$$

2) Proprietary Ratio : It is a variant of the Debt Equity Ratio. It is also called as Equity Ratio or Net worth Ratio. This ratio expresses the relationship between the proprietor's / Shareholders fund or net worth and total tangible assets. It is calculated as –

$$= \frac{\text{Proprietors / Shareholders Fund / Net Worth}}{\text{Total Tangible Assets.}}$$

There is no hard and fast norm about the standard, yet 60% + 75% of the total assets should be financed by the proprietors fund.

3) Total Liabilities to Total Assets Ratio : This ratio explains the relationship between the total liabilities to outsiders and the total assets of a firm. It is calculated as-

$$= \frac{\text{Total Liabilities to outsiders}}{\text{Total Assets}}$$

If the ratio is fond high, it will indicate that the long term solvency position of the firm is unsatisfactory and vice-versa.

Illustration – 4 :

Following is the Balance Sheet of Swaraj Ltd.,

Liabilities	Rs.	Assets	Rs.
20,000 Eq. Shares of		Fixed Assets	4,00,000
Rs. 10 each fully paid	2,00,000	Current Assets	3,00,000
10,000 8% Pref. Shares of Rs. 10 each	1,00,000	Miscellaneous Expenditure	10,000
8% Debentures	1,00,000		
Reserves and Surplus	1,10,000		
10% Long term Loans	50,000		
Bank Overdraft	50,000		
Creditors	1,00,000		
	7,10,000		7,10,000

Compute : i) Debt – Equity Ratio, ii) Proprietary Ratio, iii) Total Liabilities to Total Assets Ratio.

Solution :

i) Debt Equity Ratio $= \dfrac{\text{External Equities}}{\text{Internal Equities}}$

$= \dfrac{\text{Rs. } 3{,}00{,}000}{\text{Rs. } 4{,}00{,}000}$

= 0.75 : 1

External Equities = 8% Debentures + 10% Long-term Loans + Bank overdraft + creditors.

= 1,00,000 = 50,000 + 50,000 + 1,00,000

= 3,00,000

Internal Equities / shareholders Fund = Eq. share Capital + Prof. Share Capital + Reserve & Surplus – Misc. Expenditure.

= 2,00,000 + 1,00,000 + 1,10,000 – 10,000

= 4,00,000

ii) Proprietary Ratio $= \dfrac{\text{Proprietary / Shareholders Fund}}{\text{Total Tangible Assets}}$

$= \dfrac{\text{Rs. } 4,00,000}{\text{Rs. } 7,00,000}$

= 0.57 : 1

Total Tangible Assets = Fixed Assets + Current Assets

= 4,00,000 + 3,00,000

= 7,00,000

iii) Total Liabilities to Total Assets Ratio :

$= \dfrac{\text{Total Liabilities to outsiders}}{\text{Total Assets}}$

$= \dfrac{\text{Rs. } 3,00,000}{\text{Rs. } 7,00,000}$

= 0.43 : 1

Illustration – 5 :

From the following particulars ascertain the following ratios – Current Ratio, Liquid ratio, Proprietary Ratio, Debt- Equity Ratio, Gross Profit Ratio, Net Profit Ratio, Operating Ratio, Operating Profit Ratio, Return on Capital Employed, Return on Proprietor’s Fund, Earning per share, Dividend Per share, Capital Turnover Ratio, stock Turnover Ratio, Debtors Turnover Ratio, Creditors Turnover Ratio, Capital Gearing Ratio.

Balance Sheet as on…….

Liabilities	Rs.	Assets	Rs.
1,00,000 Eq. Shares of		Land & Building	3,50,000
Rs. 5 Each	5,00,000	Plant & Machinery	2,50,000
General Reserve	2,00,00	Stock	3,00,000
Profit & Loss A/c.	2,00,000	Sundry Debtors	2,00,000
8% Debentures	1,00,000	Cash at Bank	1,00,000
Sundry Creditors	2,00,000		
	12,00,000		12,00,000

Trading And Profit and Loss Account

Dr. for the year ended ………… Cr.

Particulars	Rs.	Particulars	Rs.
To Opening Stock	1,00,000	By Sales	16,00,000
To Purchases – credit	8,00,000	(Credit less Returns)	
To Gross Profit	9,00,000	By Closing Stock	2,00,000
	1,80,000		1,80,000
To office and Administration		By Gross Profit	9,00,000
Expenses	2,00,000	By Profit on sale of	
To Selling and Distribution		Assets	25,000
Expenses	1,00,000		
To other Expenses	25,000		
To Net Profit	6,00,000		
	9,25,000		9,25,000

Rate of tax is at 50%

Dividend paid to Equity shareholders amounted to Rs. 1,00,000

Solution :

i) Current Ratio $= \frac{\text{Current Assets}}{\text{Current Liabilities}}$

$= \frac{\text{Rs. } 6,00,000}{\text{Rs. } 2,00,000}$

$= 3 : 1$

Current Assets = Stock + Debtors + Cash at Bank

Current Liabilities = Sundry creditors

ii) Liquid Ratio $= \frac{\text{Liquid Assets}}{\text{Liquid Liabilities}}$

$= \frac{\text{Rs. } 3,00,000}{\text{Rs. } 2,00,000}$

$= 1.5 : 1$

Liquid Assets = Current Assets – Stock

iii) Proprietary Ratio $= \frac{\text{Proprietor's Fund}}{\text{Total Assets}}$

$= \frac{\text{Rs. } 9,00,000}{\text{Rs. } 12,00,000}$

$= 0.75 : 1$

Proprietary Fund = Eq. share Capital + General Reserve + Profit & Loss A/c.

iv) Debt – Equity Ratio $= \frac{\text{Total Debt}}{\text{Proprietor's Fund}}$

$= \frac{\text{Rs. } 3,00,000}{\text{Rs. } 9,00,000}$

$= 0.33 : 1$

Total Debt = 8% Debentures + Sundry Creditors.

v) Gross Profit Ratio $= \dfrac{\text{Gross Profit}}{\text{Net Sales}} \times 100$

$= \dfrac{\text{Rs. } 9,00,000}{\text{Rs. } 16,00,000} \times 100$

$= 56.25\%$

vi) Net Profit Ratio $= \dfrac{\text{Net Profit}}{\text{Net Sales}} \times 100$

$= \dfrac{\text{Rs. } 6,00,000}{\text{Rs. } 16,00,000} \times 100$

$= 37.5\ \%$

vii) Operating Ratio $= \dfrac{\text{Cost of Goods sold + operating Expenses}}{\text{Net Sales.}} \times 100$

$= \dfrac{\text{Rs. } 7,00,000 + 3,25,000}{\text{Rs. } 16,00,000}$

$= 64.1\%$

Cost of Goods Sold = Sales – Gross Profit.

Operating Expenses = office & Adm. Expenses + Selling & Distribution Expenses + Other Expenses.

viii) Operating Profit Ratio $= \dfrac{\text{Operating Net Profit}}{\text{Net Sales}} \times 100$

$= \dfrac{\text{Rs. } 5,75,000}{\text{Rs. } 16,00,000} \times 100$

$= 35.94\%$

Operating Net Profit = net Profit – Profit on sale of Assets

ix) Return on Capital Employed $= \dfrac{\text{Operating Profit}}{\text{Capital Employed}} \times 100$

$$= \frac{\text{Rs. } 5,57,000}{\text{Rs. } 10,00,000} \times 100$$

$= 57.5\%$

Capital Employed = Fixed Assets + Net Current Assets

= Rs. 6,00,000 + 4,00,000 (6,00,000 – 2,00,000)

= Rs. 10,00,000

x) Return on Propriteot's Fund = $\frac{\text{Net Profit (After Tax)}}{\text{Proprietors Fund}} \times 100$

$$= \frac{\text{Rs. } 3,00,000}{\text{Rs. } 9,00,000} \times 100$$

= 33 — %

xi) Earning per Share (EPS) = Net Profit available to Eq. share holders.

Total Number of Eq. Shares.

$$= \frac{\text{Rs. } 3,00,000}{\text{Rs. } 1,00,000}$$

= Rs. 3

xii) Earning per share (EPS) = $\frac{\text{Net Profit available to Eq. shareholders}}{\text{Total Number of Eq. shares}}$

$$= \frac{\text{Rs. } 3,00,000}{\text{Rs. } 1,00,000}$$

= Rs. 3

xii) Dividend Per Share = $\frac{\text{Dividend Paid}}{\text{Total No. of Eq. Shares}}$

$$= \frac{\text{Rs. } 1,00,000}{\text{Rs. } 1,00,000}$$

= Rs. 1

xiv) Stock Turnover Ratio $= \dfrac{\text{Cost of Goods Sold}}{\text{Average Stock}}$

$= \dfrac{\text{Rs. 7,00,000}}{\text{Rs. 1,50,000}}$

= 4.67 Times

Average Stock $= \dfrac{\text{Opening Stock + Closing Stock}}{2}$

xv) Debtor's Turnover Ratio $= \dfrac{\text{Debtors x Days in a year}}{\text{Credit Sales}}$

$= \dfrac{\text{Rs. 2,00,000}}{\text{Rs. 1,60,000}} \times 365$

= 46 days

xvi) Creditors Turnover Ratio $= \dfrac{\text{Creditors}}{\text{Credit Purchases}} \times \text{Days in a year}$

$= \dfrac{2,00,000}{8,00,000} \times 365$

= 91 days

xvii) Capital Gearing Ratio $= \dfrac{\text{Fixed Interest Securities}}{\text{Equity Share Capital}}$

$= \dfrac{\text{Rs. 1,00,000}}{\text{Rs. 5,00,000}}$

= 1 : 5

4.8 Summary :

Management as well as other parties need different type of information for decision making and such information can be made available from the analysis of financial statement. There are various tools or techniques of analysis financial statements such as Comparative Financial Statements. Analysis, Common size Statements Analysis, Trend Analysis, Ratio Analysis, Funds Flow Analysis, Cash Flow Analysis etc. Ratio analysis is the important and the most widely used tool for the analysis of Financial Statements.

Ratios are relationships expressed in mathematical terms between figures which are inter-connected or inter-related with each other in some manner. Ratio analysis is the tool or techniques of interpretation of financial statements with the help of the accounting ratios derived from the financial statements. Ratios are useful to different parties for different purposes. Therefore they are classified on the different bases such as source of data, time, importance, functions or nature, users etc. As per functional basis ratios are classified into different categories such as liquidity ratios, profitability ratios, turnover ratios, solvency ratios etc.

4.9 Key Terms :

1) **Ratio :** Ratio is a mathematical relationship expressed between inter-connected or inter-related accounting figures.

2) Ratio Analysis : It is the technique of interpretation of financial statements with the help of the accounting ratios derived from the financial statement.

3) Liquidity : Liquidity means ones ability to meet claims and obligations as and when they become due.

4) Solvency : Solvency refers to the capacity of the firm to pay off its long term debts.

4.10 Self Assessment Questions :

a) Objective Type Questions.

1) State 'True' or 'False'.

i) Ratio analysis is a technique of planning and control.

ii) Debt-equity ratio is a 'Solvency Ratio'.

iii) 'Acid Test' denotes liquidity.

iv) A decreased stock turnover ratio usually indicates expanding business.

v) Normal current ratio is 1 : 1

(Ans: i) False, ii) True, iii) True, iv) False, v) False)

2) Choose the correct alternative.

i) Ratio of Net sales to Net working Capital is called as ....

a) Working Capital Turnover Ratio   b) Profitability Ratio

c) Liquidity Ratio   d) Solvency Ratio.

ii) The statistical yardstick that provides a measure of the relationship between two accounting figures is ....

a) a current ratio   b) the accounting ratio

c) a input-output ratio   d) non of above.

iii) Ratio of Net Profit before Interest and Tax to sales is called as.........

a) Operating Profit ratio   b) Operating Ratio

c) Capital Gearing Ratio   d) solvency Ratio

iv) The turnover Ratio helps management in ....

a) Managing resources   b) Managing a debt.

c) Evaluating Performance   d) Non of above.

v) Long-term solvency is indicated by ....

a) Current Ratio   b) Debt Equity Ratio

c) Net Profit ratio   d) Debtors Turnover Ratio.

(Ans : i) – a, ii) – b, iii) – a, iv) – c, v) – b)

b) Essay Type Questions :

i) Define Accounting Ratios, Discuss the importance of Ratio Analysis.

ii) Discuss the significance of ratio Analysis in the analysis of financial statements.

iii) Explain the limitations of Accounting ratios.

iv) Discuss the following accounting ratios with their significance.

a) Current Ratio   b) Liquid Ratio   c) Cross Profit Ratio

d) Net Profit ratio   e) Operating Ratio   f) Debt. Equity ratio

g) Proprietary Ratio   h) Debtors Turnover Ratio

c) Practical Problems :

1) Following is the Trading and Profit and Loss Account of Bharat Co. Ltd. For the year ending 31st March, 2009 and the Balance Sheet as on the date.

Dr. Trading and Profit and Loss Account Cr.

Particulars	Rs.	Particulars	Rs.
To Opening Stock	1,45,000	By Sales	7,50,000
To Purchases	6,10,000	By Closing Stock	1,55,000
To Gross Profit	1,50,000		
	9,05,0000		9,05,000
To Expenses	80,000	By Gross Profit	1,50,000
To Net Profit	70,000		
	1,50,000		1,50,000

Balance Sheet

Liabilities		Rs.	Assets	Rs.
Share Capital		7,00,000	Fixed Assets	5,50,000
Reserve and Surplus			Current Assets	
Balance	50,000		Stock	1,55,000
Profit for the year	70,000	1,20,000	Debtors	80,000
Bank overdraft		35,000	Cash	2,20,000
Creditors		1,50,000		
		10,05,00		10,05,000

You are required to calculate the following ratios –

a) Current Ratio, b) Liquid Ratio, c) Cross Profit Ratio, d) Net Profit Ratio, e) Stock Turnover Ratio, f) Debtors Turnover ratio, g) Debt. Equity Ratio, h) Proprietary Ratio

(Ans.: A) – 2.46 : 1, b) 2 : 1, c) 20%, d) 9.33%, e) 4 Times, f) 9.38 Times, g) 0.23 : 1, h) 0.82 : 1)

f) Following is the summarized Balance Sheet of ITC Ltd., as on 31st March, 2009.

Balance Sheet

Liabilities	Rs.	Assets	Rs.
6% Pref Share Capital	1,50,000	Goodwill	20,000
Eq. Share Capital	2,50,000	Land & Building	2,50,000
General Reserve	20,000	Machinery	1,75,000
Profit & Loss A/c	15,000	Furniture	10,000
5% Debentures	1,00,000	Stock	90,000
Sundry Creditors	28,000	Sundry Debtors	21,000
Bills Payable	12,000	Cash at Bank	5,000
	5,75,000		5,74,000

Other Information :

Total sales Rs. 4,00,000, 20% of which is m ade on credit. Gross Profit and Net Profit (after tax) for the year amounted to rs. 80,000 and Rs. 20,000 respectively.

Compute – a) Current Ratio, b) Liquid Ratio, c) Cross Profit Ratio, d) Net Profit Ratio, e) Stock Turnover Ratio, f) Debtors Turnover Ratio, 9) Debt. Equity Ratio, h) Proprietary Ratio.

(Ans. A) 2.9 : 1, b) 0.65 : 1, c) 20%, d) 5%, e) 3.6 times, f- 96 days, 9) 0.34 : 1, h 0.75 : 1)

Exercise-1

The following is Profit and Loss A/c of SURYA BULB LTD., for the year ended 31st March, 2015.

Dr. Profit and Loss A/c. Cr.

Particulars	Amt.	Particulars	Amt.
To Opening Stock	1,25,000	By Sales	9,00,000
To Purchases	5,25,000	By Closing Stock	75,000
To Gross Profit Old	3,25,000		
	9,75,0000		9,75,000

To Administrative expenses	1,15,000	By Gross Profit Old	3,25,000
To Selling and distribution expenses	50,000	By Other income	25,000
To Finance expenses	10,000		
To Net Profit	1,75,000		
	3,50,000		3,50,000

Calculate : i) Gross Profit ratio ii) Operating ratio iii) Operating Profit ratio iv) Net Profit ratio v) Administrative expenses ratio vi) Selling and distribution expenses ratio.

Exercise-2

Given below is the Balance Sheet of Atharv & Co. as on 31st March, 2015

Balance Sheet

Liabilities	Rs.	Assets	Rs.
E/S capital	1,50,000	Goodwill	50,000
6% preference shares	75,000	Land & Building	1,50,000
General Reserve	75,000	Machinery	1,75,000
Dividend equalization fund	25,000	Inventory (Stock)	1,00,000
5% Debentures	2,00,000	Sundry Debtors	75,000
Current liabilities	2,00,000	Cash at Bank	17,500
		Outstanding Income	7,500
	5,75,000		5,75,000

Find out :

a) Solvency ratio

b) Proprietary ratio

c) Debt. - Equity ratio

d) Fixed Assets to shareholders fund ratio

e) Current Assets to Net worth ratio

4.11 Further Reading :

1) Pandy I. M., Management Accounting, Vikas Publishing House, Pvt. Ltd, New Delhi.

2) Paul S. Kr. Financial Statement Analysis, New Central Book Agency (P) Ltd., Kolkata.

3) Dr. Maheshwari S. N., Principles of Management Accounting Sultan Chand & Sons, New Delhi.

4) Raman B. S., Management Accounting, United Publishers, Mangalore.

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