1.9 Let us Sum Ups

Accounting plays a vital role in the field of commerce and business. One should know the basic purpose of accounting, its merits, kinds of accounting and rules of accounting. By studying this lesion one can understand the above said things and need of double entry system. The next lesion will deal with principles of accounting.

1.10 Lesson-End Activities.

1. Define Accounting.
2. Explain the primary objectives of accounting?
3. What is Double entry system?
4. What is meaning of Debit and Credit?
5. Explain the different methods of accounting.
6. Explain the various types of accounts.
7. Discuss the limitations of accounting.
8. Distinguish between book-keeping and accounting.
9. Explain the accounting rules.

1.11 Check your Progress

1. Your answer may include any five of the following.

    1. To keeping systematic record
    2. To ascertain the results of the operation
    3. To ascertain the financial position of the business
    4. To portray the liquidity position
    5. To product business properties

1.12 Points for Discussion

1. Explain the accounting rules.
2. Discuss the objectives; functions; importance and limitations of accounting.

1.13 References

1. Grewal, T.B, Double Entry Book Keeping.
2. Jain & Narang, Advanced Accountancy.
3. R.L. Gupta, Advanced Accountancy.

i) Business Entity Concept: A business unit is an organization of persons established to accomplish an economic goal. Business entity concept implies that the business unit is separate and distinct from the persons who provide the required capital to it. This concept can be expressed through an accounting equation, viz., Assets = Liabilities + Capital. The equation clearly shows that the business itself owns the assets and in turn owes to various claimants. It is worth mentioning here that the business entity concept as applied in accounting for sole trading units is different from the legal concept. The expenses, income, assets and liabilities not related to the sole proprietorship business are excluded from accounting. However, a sole proprietor is personally liable and required to utilize non-business assets or private assets also to settle the business creditors as per law. Thus, in the case of sole proprietorship, business and non-business assets and liabilities are treated alike in the eyes of law. In the case of a partnership, firm, for paying the business liabilities the business assets are used first and it any surplus remains thereafter, it can be used for paying off the private liabilities of each partner. Similarly, the private assets are first used to pay off the private liabilities of partners and if any surplus remains, it is treated as part of the firm's property and is used for paying the firm's liabilities. In the case of a company, its existence does not depend on the life span of any shareholder.

ii) Money Measurement Concept: In accounting all events and transactions are recode in terms of money. Money is considered as a common denominator, by means of which various facts, events and transactions about a business can be expressed in terms of numbers. In other words, facts, events and transactions which cannot be expressed in monetary terms are not recorded in accounting. Hence, the accounting does not give a complete picture of all the transactions of a business unit. This concept does not also take care of the effects of inflation because it assumes a stable value for measuring.

iii) Going Concern Concept: Under this concept, the transactions are recorded assuming that the business will exist for a longer period of time, i.e., a business unit is considered to be a going concern and not a liquidated one. Keeping this in view, the suppliers and other companies enter into business transactions with the business unit. This assumption supports the concept of valuing the assets at historical cost or replacement cost. This concept also supports the treatment of prepaid expenses as assets, although they may be practically unsaleable.

iv) Dual Aspect Concept: According to this basic concept of accounting, every transaction has a two-fold aspect, Viz., 1.giving certain benefits and 2. Receiving certain benefits. The basic principle of double entry system is that every debit has a corresponding and equal amount of credit. This is the underlying assumption of this concept. The accounting equation viz., Assets = Capital + Liabilities or Capital = Assets – Liabilities, will further clarify this concept, i.e., at any point of time the total assets of the business unit are equal to its total liabilities. Liabilities here relate both to the outsiders and the owners. Liabilities to the owners are considered as capital.

V) Periodicity Concept: Under this concept, the life of the business is segmented into different periods and accordingly the result of each period is ascertained. Though the business is assumed to be continuing in future (as per going

2.4.18 Voucher

A voucher is a written document in support of a transaction. It is a proof that a particular transaction has taken place for the value stated in the voucher. Voucher is necessary to audit the accounts.

2.5.19 Proprietor

The person who makes the investment and bears all the risks connected with the business is known as proprietor.

2.4.20 Discount

When customers are allowed any type of deduction in the prices of goods by the businessman that is called discount. When some discount is allowed in prices of goods on the basis of sales of the items, that is termed as trade discount, but when debtors are allowed some discount in prices of the goods for quick payment, that is termed as cash discount.

2.4.21 Solvent

A person who has assets with realizable values which exceeds his liabilities is insolvent.

2.4.22 Insolvent

A person whose liabilities are more than the realizable values of his assets is called an insolvent.

2.5 ACCOUNTING EQUATION

As indicated earlier, every business transaction has two aspects. One aspect is debited other aspect is credited. Both the aspects have to be recorded in accounts appropriately. American Accountants have derived the rules of debit and credit through a 'novel' medium, i.e., accounting equation. The equation is as follows:

Assets = Equities

The equation is based on the principle that accounting deals with property and rights to property and the sum of the properties owned is equal to the sum of the rights to the properties. The properties owned by a business are called assets and the rights to properties are known as liabilities or equities of the business. Equities can be subdivided into equity of the owners which is known as capital and equity of creditors who represent the debts of the business know as liabilities. These equities may also be called internal equity and external equity. Internal equity represents the owner's equity in the assets and external represents he outsider's interest in the asset. Based on the bifurcation of equity, the accounting equation can be restated as follows:

Assets = Liabilities + Capital

(Or)

Capital = Assets – Liabilities

(Or)

Liabilities = Assets – Capital.

June 4	To Anwar's A/c		5,000	June 30	By Balance C/d		5,000
			5,000				5,000
July 1	To Balance b/d		5,000				

Anwar's A/c

Dr. Cr.

Date	Particulars	J.F.	Rs.	Date	Particulars	J.F.	Rs.
1998				1998			
June 26	To Purchases Returns A/c		100	June 4	By Purchases A/c		5,000
June 29	To Cash A/c		4,800				
June 29	To Discount A/c		100				
			5,000				5,000

Sales A/c

Dr. Cr.

Date	Particulars	J.F.	Rs.	Date	Particulars	J.F.	Rs.
1998				1998			
June 30	To Balance c/d		6,000	June 6	By Anbu's A/c		4,000
				June 8	By Cash A/c		2,000
			6,000				6,000
				July 1	To Balance b/d		6,000

Anbu's A/c

Dr. Cr.

Date	Particulars	J.F.	Rs.	Date	Particulars	J.F.	Rs.
1998				1998			
June 6	To Sales A/c		4,000	June 10	By Sales Returns A/c		50
				June 28	By Cash A/c		3,900
				June 28	By Discount A/c		50
			4,000				4,000

Purchases Returns A/c

Dr. Cr.

Date	Particulars	J.F.	Rs.	Date	Particulars	J.F.	Rs.
1998				1998			
June 30	To Balance c/d		100	June 26	By Anwar's A/c		100
			100				100
				July 1	By Balance b/d		100

Sales Returns A/c

Dr. Cr.

Date	Particulars	J.F.	Rs.	Date	Particulars	J.F.	Rs.
1998				1998			
June 10	To Anbu's A/c		50	June 30	By Balance c/d		50
			50				50
July 1	To Balance b/d		50				

Furniture A/c

Dr. Cr.

Date	Particulars	J.F.	Rs.	Date	Particulars	J.F.	Rs.
1998				1998			

invoice number with which the sales have been effected in the 'Out-ward Invoice Number Column' and the money value of the sales in the 'Amount Column', The LF column is entered while posting is effected.

Posting: The total of the Sales Book for a specified period is credited to the Sales Account in the Ledger. The personal account is posted by debiting the individual accounts.

The specimen ruling of a Sales Book is as follows:

Sales Book

Date	Particulars	L.F.	Outward Invoice Number	Amount Rs.

4.2.3 Purchases Returns Books

This book is used to record all transactions relating to the goods returned to suppliers. This book is also known as 'Purchases Returns journal' or 'Returns Outward Book', the specimen ruling of a Purchases Returns Book is given below:

Purchases Returns Book

Date	Name of supplier	L.F.	Debit Note	Amount Rs.

The columns in this book are similar to those of Purchases Book except the Debit Note Column in which the debit note number is recorded. A debit note represents a note sent to the supplier for the value of goods retuned by the business. While posting, all the personal accounts are debited in the Ledger and the total of Purchases Returns Book is credited to Purchases Returns Account.

4.2.4 Sales Returns Book

This book is used to record all transactions relating to goods returned by customers. This book is also known as 'Sales Return Journal' or 'Returns Inwards Book', the specimen ruling of sales returns book is given below:

Sales Returns Book

Date	Name of Customer	L.F.	Credit Note	Amount Rs.

The columns in this book are similar to those of Sales Book except the Credit Note Column in which the credit note number is recorded. A credit note represents a note sent to the customer for the value of the goods returned by him. While posting, all the personal accounts are credited in the Ledger and the total of sales returns book is debited to Sales Returns Account

4.2.5 Bills Receivable Book:

This book is used to record all the bills received by the business from its customers. It contains details regarding the name of the acceptor, date of the bill, cash as in a Single Column Cash Book, one additional column is introduced, viz., 'Discount Column'. The discounts allowed by the business are entered on the debit side and discounts received are entered on the credit side of the Cash Book. The discount columns as such cannot be balanced since they are purely memorandum columns and will not serve the purpose of a ledger account as cash columns do. To know the balance of discount columns, separate ledger accounts, viz., Discount Allowed Account and Discount Received Account can be opened. The ruling of a two column Cash Book is as follows.

Two Column Cash Book (with Cash and Discount Columns)

Dr. Cr.

Date	Particulars	R.No.	L.F.	Discount allowed	Rs.	Date	Particulars	V.No.	L.F.	Discount received	Rs.

Posting: The following points should be kept in mind while posting from the Cash Book is effected.

1. The opening and closing balances should not be posted.
2. From the debit side of the Cash Book, all the concerned accounts are given credit.
3. From the credit side of the Cash Book, all the concerned accounts are given debit.
4. While posting cash received from a debtor or cash paid to a creditor, due care should be taken to credit the personal account with the amount of both cash and discount allowed or debit the personal account with the amount of both cash and discount received.
5. Separate accounts should be opened for discount allowed and discount received. The total of the discount allowed column represents a loss sustained by the business and the same should be debited to discount allowed account by writing 'To sundries' in the particulars column. The total of the discount received column represent as gain made by the business and it should be credited to the discount account by writing 'By Sundries' in the particulars column.

c) Three Columnar Cash Book or Cash Book with Cash, Bank and Discount Columns: Nowadays, every businessman invariably has a bank account to reap the advantages of safety, convenience, credit facilities and less clerical work. Thus, when a business is maintaining a bank account, the transactions can be made through cheques. Instead of maintaining the bank account in the ledger, it is found more convenient if it is included in the Cash Book as Cash Column. Thus, the three column Cash Book is the resultant effect where in addition to cash and discount columns, bank column is also included. The ruling of a three columnar cash book is as follows:

Three Columnar Cash Book (with Cash, Bank and Discount Columns)

Dr. Cr.

Date	Particulars	R.No.	L.F.	Discount allowed Rs.	Cash Rs.	Bank Rs.	Date	Particulars	V.No.	L.F.	Discount received Rs.	Cash Rs.	Bank Rs.

Where the debit side (Receipts) exceeds that of the credit side (in the totals column-Payments), it represents the unspent balance of cash remaining with the petty cashier.

4.3 BASIC DOCUMENT FOR SUBSIDIARY BOOKS

4.3.1 Inward Invoice:

This is the document sent by the suppliers of goods giving details of goods sent, price, value, discount etc. It is the basis for entries in purchases book.

4.3.2 Outward Invoice:

This is a document sent by the firm to the customers, showing the details of goods supplied, their price and value, discounts etc., it is the basis for writing sales book.

4.3.3 Debit Note:

It is a simple statement sent by a person to another person showing the amount debited to the account of the latter along with a brief explanation. The debit notes are issued by a trader relating to purchase returns in order to put up his claim for abatement of his dues to the other party. Debit notes are serially numbered and are similar to invoices although they are usually printed in red ink.

4.3.4 Credit Note:

It is nothing but a statement sent by one person to another person showing the amount credited to the account of the latter along with a brief explanation. The credit notes are used for sales return in order to intimate related abatement and are similar to invoice although they are usually printed in red ink.

4.3.5Cash Receipts and Vouchers:

These are the vouchers and receipts for cash received and paid. Entries in cash book are made on the strength of the vouchers and receipts. They are also useful for auditing purpose.

Contra Entries

For any single transaction the same account cannot be debited and credited. But since cash and bank accounts are maintained in the cash book, the debit and credit may be found in the two different accounts in the Cash Book. They are transactions which affect both the sides of the Cash Book. For instance, when cash is deposited into the bank, bank account should be debited and cash account should be credited. Hence, on the debit side of the Cash Book. 'To Cash' is written in the particulars column and the amount is entered in the bank column. Similarly, on the credit side of the Cash Book, 'By Bank' is written in the particulars column and the amount is entered in the cash column.

When cash is withdrawn from the bank, on the debit side of the Cash Book, 'To Bank' is written in the particulars column and the amount is written in the cash column. Likewise, on the credit side of the Cash Book, 'By Cash' is written in the particulars column and amount is entered in the bank column. Therefore, those entries which appear on both the sides of the Cash Book are called Contra Entries and they are identified and denoted in the Cash Book itself by writing the letter 'C' in the Ledger Folio Columns on either side. For these transactions, as

Abi's A/c

Dr. Cr.

Date	Particulars	Rs.	Date	Particulars	Rs.
2001			2001 Aug. 8	By Purchase A/c	500

Illustration 2

Enter the following transactions in sales Book and post the same in the relevant ledger accounts.

			Rs.
2002			
Aug.	15	Sold goods to Prabu	2,000
Aug.	18	Sold goods to Bala	1,500
Aug.	22	Sold goods to Mano	1,000

Solution:

Sales Book

Date	Particulars	L.F.	Inward Invoice Number	Amount Rs.
2002 Aug. 15 Aug. 18 Aug. 22	 Prabu Bala Mano			 2,000 1,500 1,000
				4,500

Ledger

Sales A/c

Dr. Cr.

Date	Particulars	Rs.	Date	Particulars	Rs.
2002			2002 Aug. 31	By Sundries	4,500

Prabu's A/c

Dr. Cr.

Date	Particulars	Rs.	Date	Particulars	Rs.
2002 Aug.15	To Sales A/c	2,000	2002		

Shankar's A/c

Dr. Cr.

Date		Particulars	Rs.	Date		Particulars	Rs.
1998				1998			
July	31	To Balance c/d	1,100	July	6	By Cash A/c	1,100
			1,100				1,1000
				Aug.	1	By Balance b/d	1,100

Vignesh's A/c

Dr. Cr.

Date		Particulars	Rs.	Date		Particulars	Rs.
1998				1998			
July	19	To Cash A/c	120	July	31	By Cash A/c	120
			120				120

Dinesh's A/c

Dr. Cr.

Date		Particulars	Rs.	Date		Particulars	Rs.
1998				1998			
July	31	To Balance c/d	150	July	20	By Cash A/c	150
			150				150
				Aug.	1	By Balance b/d	150

Check your progress 4

List out any three different between Trade discount and Cash discount

Notes: (a) Write your answer in the space given below.

(b) Check your answer with the ones given at the end of this Lesson (pp. 68)

…………………………………………………………………………

…………………………………………………………………………

…………………………………………………………………………

…………………………………………………………………………

…………………………………………………………………………

Illustration 7

Enter the following transactions in a two column Cash Book and prepare discount account in the ledger

1998			Rs.
July	1	Cash on Hand	1,200
July	2	Received from X	3,900
		Allowed him discount	100
July	5	Purchased goods for cash	4,100
July	7	Paid to M	850
		Discount allowed by him	50
July	9	Cash Sales	4,900

July	11	Withdrew from bank	5,500
July	15	Credit purchase from Y	3,000
July	21	Paid to Y in full settlement	2,800
July	22	Received from K	1,250
		Allowed him discount	50
July	23	Drew Cheque for office use	200
July	25	Paid office rent	800
July	28	Received interest on investments	3,000
July	31	Paid into bank	3,150

Solution

Two Column Cash Book (with Cash and Discount Columns)

Dr. Cr.

Date	Particulars	R.No.	L.F.	Discount allowed	Rs.	Date	Particulars	V.No.	L.F.	Discount allowed	Rs.
1998						1998					
July 1	To Balance b/d				1,200	July 5	By Purchases A/c (Cash Purchases Made)				4,100
July 2	ToX's A/c (Amount received from X and discount allowed)			100	3,900	July 7	By M's A/c (Amount paid to M and discount received)			50	850
July 9	To Sales A/c (Cash Sales effected)				4,900	July 21	By Y's A/c (Amount paid to Y and discount received)			200	2,800
July 11	To Bank A/c (Withdrawn from bank)				5,500	July 25	By Office Rent A/c (Office rent paid)				800
July 22	To K A/c (Amount received from K and discount allowed)			50	1,250	July 31	By Bank A/c (Amount paid into the bank)				3,150
July 23	To Bank A/c (Withdrawn from bank for office use)				200	July 31	By Balance c/d				8,250
July 28	To Interest on investment A/c (Interest received on investments)				3,000						
				150	19,950					250	19,950
Aug. 1	To Balance b/d				8,250						

March	10	Bought goods from Mano	2500
March	12	Bought goods from Sethu	2800
March	15	Goods return to Mano	500

2. From the following transaction you are require to prepare Three Column Cash book.

2000			Rs.
Jan.	1	Cash balance	4000
		Bank balance	25000
Jan.	2	Cash sales	31000
Jan.	8	Cash purchases	22000
Jan.	15	Purchases of machinery by issue of cheque	10000
Jan.	20	Paid into bank	15000
Jan.	25	Rent paid by the cheque	1500
Jan.	30	Salary paid	2500

4.14 References

1. Gupta R.L. – Advanced Accountancy
2. Grwal T.B. – Double Entry Book Keeping.

Purchases A/c To Raja A/c [Purchased goods]	Dr.		4,000	4,000
Somu A/c To Sales A/c [Sold goods on credit]	Dr.		5,000	5,000
Raja A/c To Cash A/c [Paid cash]	Dr.		2,500	2,500
Cash A/c To Somu A/c [Received from Somu]	Dr.		3,000	3,000
Rent A/c To Cash A/c [Paid rent]	Dr.		200	200
Cash A/c To Commission received A/c [Received commission]	Dr.		100	100

Cash Account

	Rs.		Rs.
To Capital	8,000	By Furniture	1,000
To Sales	7,000	By Purchases	6,000
To Somu	3,000	By Raja	2,500
To Commission	100	By Rent	200
		By Balance c/d	8,400
	18,100		18,100
To Balance b/d	8,400		

Capital Account

	Rs.		Rs.
To Balance c/d	8,000	By Cash	8,000
	8,000		8,000
		By Balance b/d	8,000

Furniture Account

	Rs.		Rs.
To Cash	1,000	By Balance c/d	1,000
	1,000		1,000
By Balance b/d	1,000		

Purchase Account

	Rs.		Rs.
To Cash	6,000	By Balance c/d	10,000
To Raja	4,000		
	10,000		10,000
To Balance b/d	10,000		

6.6 ILLUSTRATIONS

Illustration 1

From the following balances in the ledger of Mr. Kannusamy for the year ended 31-3-2002, prepare manufacturing account.

	Rs.
Opening work-in-progress	1,00,000
Opening stock of raw materials	55,000
Purchases of raw materials	10,00,000
Closing stock of raw materials	40,000
Carriage on purchases	10,000
Factory wages	50,000
Fuel and coal	45,000
Factory power	20,000
Depreciation on plant and machinery	15,000
Factory supervisor's salary	75,000
Closing work-in-progress	20,000

Solution

Manufacturing Account of Mr. Kannusamy for the year ended 31-3-2002

Particulars	Rs.	Rs.	Particulars Rs.	Rs.
To opening work-in- progress		1,00,000	By Closing work-in-progress	20,000
To Raw materials used:			By Cost of goods	
Opening stock	55,000		Manufactured,	13,10,000
Add: Purchases			transferred to trading A/c (Bal.fig)	
	10,00,000			
	10,55,000			
Less: Closing stock	40,000	10,15,000		
To Carriage on purchase		10,000		
To Factory wages		50,000		
To Fuel and coal		45,000		
To Factory power		20,000		
To Depreciation on plant and machinery		15,000		
To Supervisor's salary		75,000		
		13,30,000		13,30,000

Fuel and coal	5,000
Factory cleaning	4,000
Factory lighting	2,000
Depreciation: Factory machinery	4,000
Factory building	2,000
Factory watchman's salary	2,000
Stores consumed	200
Opening work-in-progress	5,000
Closing work-in-progress	2,000

6.11 References

1. Grewal T.B. – Double Entry Book Keeping
2. Jain & Navamy – Advanced Accountancy.

7.6 LET US SUM UP

At the end of the year, trading account is prepared to know the trading results. Trade expenses like wages, carriage inward are considered. Cost of goods sold is compared with sales in order to know gross profit / gross loss.

7.7 LESSON – END ACTIVITIES

1. What is trading account? Why it is prepared?
2. Distinguish between trading and manufacturing account?

7.8 Check your progress answer

Your answer may include the following :

(i) For opening stock, purchases and direct expenses.

Trading A/c	Dr	xxx	
To Opening Stock A/c			xxx
To Purchases (Net) A/c			xxx
To Direct expenses A/c			xxx
[Being transfer of trading a/c debit side items]			

(ii) For transfer of sales (after reducing sales returns)

Sales (net) A/c	Dr	xxx	
To Trading A/c			xxx
[Being transfer of sales to Trading A/c]			

(iii) For transferring gross profit

Trading A/c	Dr	xxx	
To Profit & Loss A/c			xxx
[Being transfer of gross profit to P&L A/c]			

(iv) For Gross Loss

Profit & Loss A/c	Dr	xxx	
To Trading A/c			xxx
[Being transfer of gross loss to P&L A/c]			

(1) Operating expenses: These expenses are incurred to operate the business efficiently. They are incurred in running the organisation. Operating expenses include administration, selling, distribution, finance, depreciation and maintenance expenses.

(2) Non operating expenses: These expenses are not directly associate with day today operations of the business concern. They include loss on sale of assets, extraordinary losses, etc.

8.3.2 Credit side

Gross profit is the first item appearing on the credit side of profit and loss account. Other revenue incomes also appear on the credit side of profit and to account. The other incomes are classified as operating incomes and non operating incomes.

(1) Operating incomes: These incomes are incidental to business and earned from usual business carried on by the concern. Examples: discount received, commission earned, interest received etc.

(2) Non operating incomes: These incomes are not related to the business carried on by the firm. Examples are profit on sale of fixed assets, refund of tax etc.

8.4 CLOSING ENTRIES FOR PROFIT AND LOSS ACCOUNT

1. For transferring expenses to profit and loss account:

Profit and Loss A/c	Dr	xxx	
To expenses A/c			xxx
[Being transfer of all P&L A/c debit side items]			

2. For transfer of incomes to profit and loss account

Incomes A/c	Dr	xxx	
To Profit and Loss A/c			xxx
[Being transfer of Incomes to P&L A/c]			

3. For net profit:

P&L A/c	Dr	xxx	
To Capital A/			xxx
[Being net profit credited to capital]			

4. For transfer of Net Loss

Capital A/c	Dr	xxx	
To P&L A/c			xxx
[Being net loss transferred to capital]			

Repairs	xxx		
To Financial expenses			
Interest ob borrowings	xxx		
Discount allowed	xxx		
To abnormal losses			
Loss on sale of assets	xxx		
To Net profit transferred to capital A/c (bal.fig)	xxx		
	xxx		xxx

Note: *Either net profit or net loss is the balancing figure in P & L A/c

The purpose and importance of preparing profit and loss account.

To determine the future line of action

To know the net profit or loss of business

To calculate different ratios

To compare the actual performance of the business with the desired one.

8.6 PRINCIPLES OF PREPARING PROFIT OF LOSS ACCOUNT

1. Only revenue receipts should be entered
2. Only revenue expenses together with losses should be taken into account.
3. Expenses and incomes relating only to the period for which the accounts are being prepared should be considered.
4. All expenses and income relating to the period concerned should be considered even if the expense has not yet been paid in cash or the income has not yet been received in cash.
5. All personal expenses of the proprietor and pertners must be debited to the capital or drawings accounts and must not be debited to the profit and loss account. Similarly any income has been earned from the private assets of the proprietor which is received by firm, it must be credited to the capital or drawings account.

Solution

Saravanan Traders

Balance Sheet as on 31st December 2004

Liabilities		Rs.	Assets		Rs.
Capital	2,50,000		Fixed assets	2,00,000	
Add : Net profit	70,000		Less: Depn.	20,000	
					1,80,000
Less: Drawings	3,20,000		Investments		15,000
	12,000		Closing stock		20,000
		3,08,000	Sundry debtors		52,000
Bills payable		2,000	Bills receivable		21,000
Sundry creditors		25,000	Cash at bank		30,000
Liabilities for expenses		10,000	Cash in hand		40,000
Bank overdraft		13,000			
		3,58,000			3,58,000

Illustrations 2

The reserve for doubtful debts account showed a credit balance of Rs.1,500 on 1.1.90. During 1990, bad debts amounted to Rs.1,100. The debtors on 31.12.90 owed Rs.40,000. Maintain a 5% reserve for doubtful debts. During 1991, bad debts came to Rs.800. On 31.12.91 the debtors owed Rs.44,000. The bad debts in 1992 amounted to Rs.400. On 31.12.92, the debtors owed Rs.32,000. The same 5% reserve for doubtful debts is maintained in all the years. Pass necessary journals and ledger accounts.

Solution

Journal Entries

Date	Particulars		Rs.	Rs.
1990	Bad debts A/c	Dr.	1,100	
Dec.31	To Sundry debtors A/c			1,100
	[Being bad debts written off]			
”	Prov. For doubtful debts A/c	Dr.	1,100	
	To Bad debts A/c			1,100
	[Being bad debts transferred]			
”	Profit & Loss A/c	Dr.	1,600	
	To Provision for doubtful debts A/c			1,600
	[Being amount transferred to P&L A/c			
1991	Bad debts A/c	Dr.	800	

9. Provision for discount on debtors

Sometimes the goods are sold on credit to customers in one accounting period whereas the payment of the same is received in the next accounting period and discount is to be allowed.

Profit and Loss A/c Dr.

To Provision for discount on debtors A/c

P&L A/c

To Provision for discount on debtors	

Balance Sheet

	Debtors (-) Bad debts (-) Provision for double debts (-) Discount on debtors

10. Reserve for discount on creditors

Prompt payment, if made, enables a business man to receive discount. So on last day of accounting period if some amount is still payable to creditors, a provision should be created for such probable income and the amount should be credited to the profit and loss account of that year in which purchases are made.

Reserve for discount on creditors A/c Dr.

To Profit and Loss A/c

P & L A/c

	By Provision for discount creditors

Balance Sheet

Creditors (-) Provision for discount on creditors	

11. Interest on capital

Sometimes interest is paid on the proprietor's capital. Such interest is an expense to the business and is debited to profit and Loss Account.

Interest on capital A/c Dr

To Capital A/c

P&L A/c

To Interest on capital	

Balance Sheet

Capital (+) Interest on Capital	

12. Interest on Drawings

Often, interest is charged on drawings made by the proprietor. It is a gain to the business.

Solution:

Trading and profit and Loss A/c for the year ended 31st December1989.

Particulars		Rs.	Particulars		Rs.
To Opening stock		3,460	By Sales	15,450	
To Purchases	5,475		Less: Sales returns	200	15,250
Less: Purchase returns	125		By Closing stock		3,250
	5,350				
Less: Purchase of furniture	200	5,150			
To Gross profit c/d		9,890			
		18,500			18,500
To Advertising		450	By Gross profit b/d		9,890
To Interest	118		By Commission	375	
Add: Outstanding	85	203	Less: Received in advance	125	250
To Bad debts	125				
Add: New Bad debts	100				
Add: Provision required (3,800 – 100) x 5%	185				
	410				
Less: Existing provision	200	210			
To Taxes and insurance	1,250				
Less: Insurance prepaid	100				
	1,150				
Add: Taxes outstanding	120	1,270			
To Depreciation:					
Buildings (7,500 x 5%)	375				
Furniture x (640+200)10%	84				
Motor vehicles (6,250x20%)	1,250	1,709			
To General expenses		782			
To Salaries	3,300				
Add: Outstanding	300	3,600			
To Net profit, transferred to Capital account		1,916			
		10,140			10,140

Balance sheet as on 31.3.1996

Liabilities		Rs.	Assets		Rs.
Sundry creditors	6,000		Debtors	15,000	
Less: Provision for discount	600		Less: Provision for bad debts	1,500	
		5,400		13,500	
Loans		38,000			
Wages outstanding		2,000	Less: Provision for discount on debtors	675	
Rent outstanding		1,000			12,825
Capital	30,000		Closing stock		38,000
Add: Net profit	26,425		Samples in stock		2,000
Add: Interest on capital	3,000		Insurance claim Receivable		5,000
	59,425		Plant		20,000
Less: Interest on drawings	1,000		Premises	20,000	
	58,425		Less: Depreciation	3,000	17,000
Less: Drawings	10,000				
		48,425			
		94,825			94,825

Illustration - 10

The following is the Trial balance of N.Gopal on 30th June 1981:

	Debit Rs.	Credit Rs.
Cash in hand	540	
Cash at bank	2,630	
Purchases account	40,675	
Sales account		98,780
Returns inward account	680	
Returns outward account		500
Wages account	10,480	
Fuel and Power A/c	4,730	
Carriage on Sales A/c	3,200	
Carriage on Purchases A/c	2,040	
Stock Account (1st July, 1980)	5,760	
Buildings Account	30,000	
Freehold Land A/c	10,000	
Machinery A/c	20,000	
Patents A/c	7,500	

To Salaries	15,000				
Add: Outstanding	1,500	16,500			
To General expenses		3,000			
To Insurance	600				
Less: Prepaid 170 x 6/12	85	515			
To Depreciation:					
Machinery					
20,000 x 10%	2,000				
Patents 7.500 x 20%	1,500	3,500			
To Provision for doubtful debts (14,500 x 5%)		725			
To Net profit transferred to capital A/c		16,275			
		43,715			43,715

Note:

1. Carriage on Purchased is carriage inward;
   Carriage on Sales is carriage outward.
2. Wages for erecting cycleshed is a capital expenditure. It should be reduced from wages and added to the asset i.e., cycleshed (or) Buildings.
3. Out of insurance Rs.600. Rs.170 is paid of a policy which is upto Dec. 81. So, $170 \times \frac{6}{12}$ = Rs.85 it's the insurance prepaid.

Balance sheet of B. Gopal as on 30th June 1981

Liabilities	Rs.	Rs.	Assets	Rs.	Rs.
Sundry creditors		6,300	Cash in hand		540
Salaries unpaid		1,500	Cash at bank		2,630
Capital	71,000		Sundry debtors	14,500	
Add: Net profit	16,275		Less: Provision for doubtful dents	725	
	87,275				13,775
Less: Drawings	5,245		Closing stock		6,800
		82,030	Prepaid insurance		85
			Machinery	20,000	
			Less: Depreciation	2,000	18,000
			Patents	7,500	
			Less: Written off	1,500	6,000
			Freehold land		10,000
			Building	30,000	
			Add: Wages incurred for cycleshed erection	2,000	
					32,000
		89,830			89,830

2. Give the Proforma of Balance Sheet.

9.14 REFERENCES

1. Gupta & Radhaswamy – Advanced Accountancy.
2. Jain & Naway – Advanced Accountancy.
3. Shukla & Grewal – Advanced Accountancy.

10.7.2 Cost Accounting is unnecessary

It is felt by a few that cost accounting is of recent origin and an enterprise can survive without cost accounting.No doubt financial accounting may be helpful to draw P & L Account and Balance Sheet but an enterprise can work efficiently with the help of cost accounting and it is necessary to increase efficiency and profitability in the long run.

10.7.3 Cost Accounting involves many forms and statements

It is pointed against cost accounting that it involves usage of many forms and statements which leads to monotony in filling up of forms and increase of paper work. It is true that cost accounting is operated by introducing many forms and preparation of statements. This will become routine and as time passes the utility of forms is realized and the forms can be reviewed, revised, simplified and minimized.

10.7.4 Costing may not be applicable in all types of Industries

Existing methods of cost accounting may not be applicable in all types of industries. Cost accounting methods can be devised for all types of industries, and services.

10.7.5 It is based on Estimations

Some people claim that costing system relies on predetermined data and therefore it is not reliable. Costing system estimates costs scientifically based on past and present situations and with suitable modifications for the future. This leads to accurate cost figures based on which management can initiate decisions. But for the predetermined costs, cost accounting also becomes another 'Historical Accounting'.

10.8. CHARACTERISTICS OF A GOOD COSTING SYSTEM

An ideal system of cost accounting must possess some characteristics which bring all the advantages discussed above; to the business, in order to be ideal and objective. The main characteristics are:

10.8.1 Simplicity

It must be simple, flexible and adaptable to the changing conditions. And it must be easily understandable to the personnel. The information provided must be in the proper order, in right time and to the right persons so as to be utilized fully.

10.8.2 Flexibility and Adaptability

The costing system must be flexible to accommodate the changing conditions and circumstances. The expansion, contraction of changes must be adopted in the existing system with minimum changes.

10.8.3 Economy

The costing system must suit the finance available. The expenditure must be less than the benefits derived from the system adopted.

The selection of cost unit is important in cost accounting. It should be carefully selected to suit the nature of business operation. The selected unit should be neither too small nor too big, but ideal for cost ascertainment. Cost unit may be expressed in terms of number (units), weight, area, length etc. The following are the cost units in various industries.

Industry	Cost Unit
Refrigerators, Cars, Scooters	Per unit
Television sets, Motor Cycles	Per unit
Watches, Radios	Per unit
Sugar	Per quintal
Cement, Steel, Coal	Per tonne
Paper	Per tonne
Textiles	Per metre
Chemicals	Per kg/tonne/litre
Electricity	Per kilowatt hour (kwh.)
Passenger transport	Per passenger k.m.
Goods transport	Per tonne k.m.
Ceramic tiles	Per square foot or per unit
Bricks	Per 1,000 Nos.
Road contract	Per. k.m.

Thus, cost units may vary from industry to industry. An enterprise which produces more than one type of product may have more than one cost unit.

10.10.2 Cost Centre

A large business is divided into a number of functional departments (such as production, marketing and finance) for administrative convenience. These departments are further divided into smaller divisions for cost ascertainment and control. These smaller divisions are called cost centers.

A cost centre is a location, person or item of equipment (or group of these) in relation to which cost can be ascertained and controlled. In simple words, it is a sub-division of the organization to which cost can be charged.

A cost centre can be: (a) a location i.e. an area such as works department, store yard (b) a person such as supervisor, sales man (c) an item of equipment e.g. delivery van, or a particular machine.

The determination of suitable cost centre is very important for the purpose of cost ascertainment and control. The manager of a cost centre is held responsible for control of cost of his cost centre. The number and size of cost centers vary from organization to organization. The selection of a suitable cost centre depends on the following factors:

a. Nature and size of the business.

b. Layout and organization of the factory.

c. Availability of various cost data and information.

d. Management policy regarding cost ascertainment and control.

Types of cost centres: Cost centres may be of the following types.

Production cost centre: A cost centre is which production is carried on is known as production cost centre. e.g., machine shop, welding shop, assembly shop, etc.

Service cost centre: A cost centre which renders service to production cost centre is known as service centre e.g. power house, stores department, maintenance department etc.

Personal cost centre: It consists of a person or a group of persons e.g. Sales manager, Works manager etc.

Impersonal cost centre: It consists of a location or a machine or a group of machines. e.g. canteen.

Operation cost centre: It consists of machines and / or persons carrying out similar operations. e.g. machines and operators engaged in welding or turning.

10.10.3 Profit Centre

A profit centre is a responsibility centre which accumulates revenues as well as costs. In other words, it is a department or segment of the organization which has been assigned control over both revenues and cost. For instance, if there are two divisions in a textile company, say readymade and clothing, each one may be regarded as a profit centre.

10.10.4 Distinguish between cost centre and profit centre

Important differences between cost centre and profit centre are:

i) Cost centre is created by the cost accountant. On the other hand, a profit centre is created by the top management.

ii) Cost centre is created for the purpose of cot ascertainment and control. But the profit centre is created for the purpose of evaluation of performance.

iii) Cost centre is a small segment, whereas profit centre is a large segment.

iv) Cost centres do not enjoy autonomy. But, profit centres enjoy autonomy.

v) Cost centre does not have a target of costs. But a profit centre has a target of profit for performance evaluation.

11.5 FUNCTIONS OF MANAGEMENT ACCOUNTING

Main objective of management accounting is to help the management in performing its functions efficiently. The major functions of management are planning, organizing, directing and controlling. Management accounting helps the management in performing these functions effectively.

11.5.1 Presentation of Data

Traditional Profit and Loss Account and the Balance Sheet are not analytical for decision making. Management accounting modifies and rearranges data as per the requirements for decision making through various techniques.

11.5.2 Aid to Planning and Forecasting

Management accounting is helpful to the management in the process of planning through the techniques of budgetary control and standard costing. Forecasting is extensively used in preparing budgets and setting standards.

11.5.3 Decision Making

Management accounting provides comparative data for analysis and interpretation for effective decision making and policy formulation.

11.5.4 Communication of Management Policies

Management accounting conveys the polices of the management downward to the personnel effectively for proper implementation.

11.5.5 Effective Control

Standard costing and budgetary control are integral part of management accounting. These techniques lay down targets, compare actual with standards and budgets to evaluate the performance and control the deviations.

11.5.6 Incorporation of non-financial information

Management accounting considers both financial and non-financial information for developing alternative courses of action which leads to effective and accurate decisions.

11.5.7 Co ordination

The targets of different departments are communicated to them and their performance is reported to the management from time to time. This continual reporting helps the management in coordinating various activities to improve the overall performance.

11.7 LIMITATIONS OF MANAGEMENT ACCOUNTING

Management accounting suffers from the following limitations:

11.7.1 Based on Accounting Information

Management accounting derives information from past financial accounting and cost accounting records. If the past records are not reliable, it will affect the effectiveness of management accounting.

11.7.2 Wide scope

Management accounting has a very wide scope incorporating many disciplines. This results in inaccuracy and other practical difficulties.

11.7.3 Costly

The installation of management accounting system requires a large organization. Hence, it is very costly and only big concerns can afford to adopt it.

11.7.4 Evolutionary Stage

Management accounting is still in its initial stages. Tools and techniques are not fully developed. This creates doubts about the utility of management accounting.

11.7.5 Opposition to Change

Introduction of management accounting system requires a number of changes in the organization structure, rules and regulations. This rearrangement is not generally liked by the people involved.

11.7.6 Intuitive Decisions

Management accounting helps in scientific decision making. Yet, because of simplicity and personal factors the management has a tendency to arrive at decisions by intuition.

11.7.7 Not an Alternative to Management

Management accounting will not replace the management and administration. It is a tool of the management. Decisions are of the management and not of the management accountant.

11.8 DISTINGUISH BETWEEN MANAGEMENT ACCOUNTING AND COST ACCOUNTING

Cost accounting and Management accounting are tow modern branches of accounting. Both the systems involve presentation of accounting data for the purpose of decision making and control of day-to-day activities. Cost accounting is concerned not only with cost ascertainment, but also cost control and managerial decision making. Management accounting makes use of the cost accounting concepts, techniques and data. The functions of cost accounting and management accounting are complimentary. In cost accounting the emphasis is on cost determination while management accounting considers both the cost and revenue. Though it appears that this, standard costs are concerned with each and every aspect of business operation carried in a department. Thus, budgeted costs deal with aggregates whereas standard costs deal with individual parts which make the aggregate. For example, budgeted costs are calculated for different functions of the business i.e. production, sales, purchases etc. whereas standard costs are compiled for various elements of costs i.e. materials, labour and overhead.

12.3.10 For Managerial Decisions

On this basis, costs may be classified into the following costs:

i) Marginal cost: Marginal cost is the total of variable costs i.e. prime cost plus variable overheads. It is based on the distinction between fixed and variable costs. Fixed costs are ignored and only variable costs are taken into consideration for determining the cost of products and value of work in progress and finished goods.

ii) Out of pocket costs: This is that portion of the cost which involves payment to outsiders i.e., gives rise to cash expenditure as opposed to such costs as depreciation, which do not involve any cash expenditure. Such costs are relevant for price fixation during recession or when make or buy decision is to be made.

iii) Differential costs: The change in costs due to change in the level of activity or pattern or method of production is known as differential costs. It the change increases the cost, it will be called incremental cost. If there is decrease in cost resulting from decrease of output, the difference is known as decremental cost.

iv) Sunk costs: A sunk cost is an irrecoverable cost and is caused by complete abandonment of a plant. It is the written down value of the abandoned plant less its salvage value. Such costs are not relevant for decision making and are not affected by increase or decrease in volume.

v) Imputed costs: These costs are those costs which appear in cost accounts only e.g. national rent charged on business premises owned by the proprietor, interest on capital for which no interest has been paid. These costs are also known as notional costs. When alternative capital investment projects are being evaluated it is necessary to consider the imputed interest on capital before a decision is arrived as to which is the most profitable project.

vi) Opportunity cost: It is the maximum possible alternative earning that might have been earned if the productive capacity or services had been put to some alternative use. In simple words, it is the advantage, in measurable terms, which has been foregone due to not using the facility in the manner originally planned. For example, if an owned building is proposed to be used for a project, the likely rent of the building is the opportunity cost which should be taken into consideration while evaluating the profitability of the project.

vii) Replacement cost: It is the cost at which there could be purchased an asset or material identical to that which is being replaced or revalued. It is the cost of replacement at current market price.

viii) Avoidable and unavoidable cost: Avoidable costs are those which can be eliminated if a particular product or department, with which they are directly related, is discontinued. For example, salary of the clerks employed in a particular department can be eliminated, if the department is discontinued. Unavoidable cost is that cost which will not be eliminated with the discontinuation of a product or

Machine hour worked 8,000
Machine hour rate Rs.4
Office overhead 10% of works cost
Selling overhead Rs.1.50 Per unit
Unit produced 4,000
Units sold 3,600 at Rs.50 each.

Prepare cost sheet and show (a) cost per unit and (b) profit for the period.

Solution:

Cost sheet for January (output: 4,000 Units)

	Total Cost Rs.	Cost per Unit Rs.
Raw Materials	80,000	20,00
Direct Wages	48,000	12,00
Prime Cost	1,28,000	32,00
Factory Overhead (8,000 x Rs.4)	32,000	8,00
Works Cost	1,60,000	40.00
Office overhead (10% of work cost)	16,000	4.00
Cost of production	1,76,000	44.00

Statement of Profit (3,600 units sold)

	Rs.	Rs.
Cost of Production (3,600 x Rs.44)	1,58,400	44.00
Selling Overhead (3,600 x Rs.1.50)	5,400	1.50
Cost of Goods Sold	1,63,800	45,50
Profit	16,200	4.50
Sales (3,600 x Rs.50)	1,80,000	50.00

(a) Cost per unit = Rs.44 (b) Total Profit = Rs.16,200

Note: Cost Sheet discloses the total cost and the cost per unit during the given period.

Illustration 4

From the following particulars prepare a statement showing the components of the total sales and the profit for the year ended 31st December.

	Rs.
Stock of finished goods (1st Jan.)	6,000
Stock of raw materials (1st Jan.)	40,000
Work-in-progress (1st Jan.)	15,000
Purchase of raw materials	4,75,000
Carriage inwards	12,500
Factory rent, taxes	7,250
Other production expenses	43,000
Stock of goods (31st Dec.)	15,000
Wages	1,75,000
Work manager's salary	30,000
Factory employees' salary	60,000

Power expenses	9,500
General expenses	32,500
Sales for the year	8,60,000
Stock for the year	50,000
Work-in-progress (31st Dec.)	10,000

Solution:

Cost Sheet for the year ending 31st Dec.

		Rs.	Rs.
	Stock of raw materials on 1st Jan.	40,000	
Add:	Purchase during the year	4,75,000	
		5,15,000	
Less:	Stock of materials on 31st Dec.	50,000	
	Cost of materials consumed		4,65,000
Add:	Wages		1,75,000
	Carriage inwards		12,500
	Prime Cost		6,52,500
Add:	Factory on cost:		
	Works manager's salary	30,000	
	Factory employees' salary	60,000	
	Factory rent, taxes and insurance	7,250	
	Power expenses	9,500	
	Other production expenses	43,000	
Add:	Works-in-progress 1st Jan.		1,49,750
			15,000
			1,64,750
Less:	Works-in-progress 31st Dec.		10,000
	Factory Cost		1,54,750
Add:	Office on cost:		8,07,250
	General expenses		32,500
	Total Cost		8,39,750
Add:	Stock of finished goods 1st Jan.		6,000
			8,45,750
Less:	Stock of Finished goods 31st Dec.		15,000
	Cost of sales		8,30,750
	Profit		29,250
	Total sales		8,60,000

Illustration 5: On August 15, 2003 a manufacturer Sethu desired to quote for a contract for the supply of 500 radio sets. From the following details prepare a statement showing the price to be quoted to give the same percentage of net profit on turnover as was realized during 6 months ending on 30th June 2003:

	Rs.
Stock of materials as on 1st Jan. 2003	20,000
Stock of materials as on 30th June 2003	25,000
Purchases of materials during 6 months	1,50,000

Factory wages during 6 months	1,20,000
Indirect charges during 6 months	25,000
Opening stock of completed sets	Nil
Closing stock of completed sets	100
Sales during 6 months	3,24,000

The number of radio sets manufactured during these six months was 1450 sets including those sold and those stocked at the end of the period. The radios to be quoted are of uniform quality and size as were manufactured during the six months to 30th June 2003. As from August 1, the cost of factory labour has gone up by 10%.

Solution:

Statement of cost and profit of Radio sets for six month ending 30th June 2003

Particulars	Rs	Per unit Rs
Opening stock of raw material	20,000	
(+) Purchases of material	150,000	
	170,000	
(-) Closing stock of material	25,000	
Material consumed	145,000	100
Factory wages	1,20,000	82.76
Prime cost	2,65,000	182.76
(+) Indirect wages	25,000	17.24
(+) Opening work-in-progress	-	
(-) Closing work-in-progress	-	
Work cost	2,90,000	200.00
(+) Administration overhead	-	
Cost of production	2,90,000	200.00
(+) Opening stock of finished goods	-	
(-) Closing stock of finished goods (100 x 200)	20,000	
Cost of goods sold	2,70,000	200
(+) Selling & Distribution overhead	-	
Cost of sales	2,70,000	200
Profit	54,000	40
Sales (1450-100)	324,000	240

Working Note

1.	Profit on sales	:	$\frac{Profit}{Sales} x\ 100$	$\frac{54000}{324000} x\ 100$	16.66%
	Profit on costs	:	$\frac{Profit}{Cost} x\ 100$	$\frac{54000}{270000} x\ 100$	20%
2.	Factory wages	:	Per unit	82.76	
	(+) 10% increase	:	$\left(82.76\ x\ \frac{10}{100}\right)$	8.28	
	Wages per unit for quotation			91.04	

Statement showing quotation for 500 radio sales

Particulars	Total	Per unit
Materials	50,000	100.00
Factory wages	45,520	91.04
Prime cost	95,520	191.04
(+) Indirect changes	8,620	17.24
Cost of sales	1,04,140	208.28
Profit 20% on cost 104140 x $\frac{20}{100}$	20,828	41.66
sales	1,24,968	249.94

13.10 LET US SUM UP

Cost sheet shows the elements of cost at different levels. Work-in-progress at the beginning and at the end adjusted in factory cost. We can take cost as the base for preparing quotation foe a job. Overheads are absorbed on the basis of the information given in cost sheet. Expenses and losses are purely financial nature, capital, expenses and less written off and appropriations are not taken into consideration while preparing cost sheet.

13.11 LESSON END ACTIVITIES

1. What is cost sheet?
2. What are the purposes of cost sheet?
3. What do you understand overhead?
4. Write short notes on:
   (i) Prime cost (ii) Work cost
   (iii) Work-in-progress (iv) Cost of production
   (v) Cost of sales.
5. How are 'Tenders' prepared?
6. From the following information prepare a cost sheet for the month of January

The cost of raw materials is the largest elements of cost. Therefore it is imperative that utmost importance should be given to storekeeping. The main functions of the storekeeper are as follows:

i) He must receive the materials, store them properly according to the goods inspection report or the invoice.
ii) Materials are classified according to the nature, size, shape, price, etc. He mush places them in definite places (racks or bins) and number them for easy identification.
iii) He must initiate the purchase requisition when the material reaches the ordering level.
iv) He should not allow unauthorized persons to enter the store room.
v) He must maintain stock registers, entering therein all receipts, issues and balances.
vi) He should issue materials only upon written material requisition duly signed by an authorized person.
vii) All items must be entered in the bin cards and this must be tallied with ledger balances.

14.4 CLASSIFICATION AND CODIFICATION

For an efficient store keeping, proper classification and codification of materials is essential. Materials are to be classified on the basis of their nature and they may be further classified on the basis of type, shape, colour, etc. Once the materials are classified they are to be allotted codes which will be helpful for easy identification. Codes are usually short symbols which replace the longer names of the materials.

14.4.1 Types of coding

The following are the important types of coding

i) Alphabetical method: An alphabet is allotted to each item of stores. For example 'A' for nut, 'B' for bolt, etc. This system is not flexible. If the organization is large, where there are number of items of stores, this method is not suitable.

ii) Mnemonic: It is an improvement over the alphabetical method. In this method, the first sound of the name is considered for each material. For example Petrol can be 'PT', Diesel as 'DS', Kerosine as 'KS', etc. The material can be easily traced without referring to index.

iii) Numerical Method: A number is allotted to each material for example 01, 02, 03, 04 and so on. When large numbers of items are there, this method is suitable. There are two types of numbering – Straight numbering and Block numbering.

iv) Alphabetical-cum-Numerical method: In this method, alphabet and numerals are used in combination. For example, Steelwire-1 "SW1, Copper wire2"- CW2, brasswire 1"- BW1 etc.

v) Standardization and Simplification: Standardization and simplification aim at inventory control by reducing the number of varieties of materials stocked in stores. For each item in store, specifications are allotted. This will facilitate buying of correct materials as it makes it clear to the buyer and seller the correct material are required. The specifications ensure that material of correct quality is used in production to maintain the required quality of finished output.

c. It facilitates maintenance of stocks at appropriate levels so that production is not stopped for want of materials. Thus, it prevents production delays.
d. It ensures up-to-date maintenance of stock records.
e. It avoids over investment in inventories.
f. It facilitates preparation of accurate monthly financial statements required for various management information reports.
g. It furnishes quickly and accurately the value of materials and supplies used in various departments.

14.6 INVENTORY TURNOVER

Kohler defines inventory turnover ratio as "a ratio which measures the number of times a firm's average inventory is sold during a year", In his view the ratio is an indicator of a firm's inventory management efficiency. A high inventory turn over ratio indicates fast movement of material. A low ratio on the other hand indicates over investment and blocking up of working capital.

The Inventory turnover is calculated on the sales or cost of sales. It is measured in terms of value of materials consumed to the average inventory during a period. It indicates number of times the inventory is consumed and replenished. If the number of days in a year is divided by turn over ration, the number of days for which the average inventory is held can be ascertained.

The turnover ratio differs from industry to industry. On the basis of the ratio, a decision is made to reduce investment on slow moving materials and stop over stocking of undesirables material.

(i) Inventory Turnover Ratio = $\dfrac{Cost\ of\ Materials\ Consum}{Cost\ of\ Average\ Stock}$

(ii) Average Stock = $\dfrac{Opening\ Stock\ of\ Material + Closing\ stock\ of\ Material}{2}$

(iii) Inventory Turnover in days = $\dfrac{Days\ in\ the\ period}{Inventory\ Turnover\ Ratio}$

14.6.1. Input-output-Ratio

This is yet another method of inventory control. Input output ratio is the ratio of the quantity of material to production and standard material content of the actual output. This is possible in industries where the product and raw material are being expressed in same quantitative measurement such as kilograms, Metric tonnes, etc.

The Input-output ratio analysis indicates whether the consumption of actual material when compared with standards is favorable or adverse. The raw material cost of the finished product can be arrived at by multiplying material cost per unit by the input-output ratio.

The ratio is obtained as given below:

$$\frac{Standard\ cost\ of\ Actual\ quantity}{Standard\ cost\ of\ Standard\ quantity}$$

B = Buying cost per order

C = Cost per unit

S = Storage and carrying cost per unit

$$\text{EOQ} = \sqrt{\frac{2\ x\ 36{,}000\ x\ 150}{54\ x\ \frac{20}{100}}} = \frac{10{,}00{,}000}{}$$

= 1,000 units.

$$\text{Number of orders per day} = \frac{36{,}000}{1{,}000} = 36$$

Illustration 3

Two components X and Y are used as follows:

Minimum usage	:	50 units per week each.
Maximum usage	:	150 units per week each
Normal usage	:	100 units per week each
Ordering quantities	:	X – 600 units
		Y- 1,000 units
Delivery period	:	X – 4 to 6 weeks.
		Y – 2 to 4 weeks.

Maximum reorder period for emergency purchases X: 2 weeks Y: 2 weeks

Calculate for each component:

a) Recording level

b) Maximum level

c) Minimum level

Solution

The terms 'Delivery period', 'Reorder period', 'Lead time', 'Time lag', etc., are used interchangeably. Similar is the case with the terms 'usage' and 'Consumptions'.

(a) Re-order level = Maximum consumption x Maximum reorder period

Component X = 150 units x 6 weeks = 900 units

Component Y = 150 units x 4 weeks = 600 units

(b) Maximum level = Reorder level + Reorder Quantity – (Minimum Consumption x Minimum reorder period)

Component X = 900 Units + 600 units – (50 units x 4 weeks)

= 1,500 – 200 = 1,300 units.

Component Y = 600 units + 1,000 units – (50 units x 2 weeks)

= 1,600 – 100 = 1,500 units

(c) Minimum stock level = Reorder level – (Normal consumption x Normal Reorder period)

Component X = 900 units – (100 units x $\frac{4+6}{2}$ weeks)

= 900 – 500 = 400 units

Component Y = 600 units – (100 units x $\frac{2+4}{2}$ weeks)

= 600 – 300 = 300 units

Illustration 4

Two components A and B are used as follows:

Reordering quantity	:	A 1,200 units
		B 1,000 units
Reordering period		A 2 to 4 weeks
		B 3 to 6 weeks
Normal usage	-	300 units per week each.
Minimum usage	-	150 units per week each
Maximum usage	-	450 units per week each

You are required to calculate the following for each of the components.

(a) Reordering level (b) Maximum level (c) Minimum level (d) Average stood level.

Solution:

Component A:

(a) Reordering level = Maximum consumption x Maximum reorder period

= 450 x 4 = 1,800 units

(b) Maximum stock level =Reorder level + Reordering quantity – (Minimum consumption x minimum reorder period)

= 1,800 + 1,200 – (150 x 2)

= 2,700 units

The number of employees recruited during a period is taken as basis for calculating labour turnover. This does not consider expansion programmes.

$$\textbf{Labour Turnover} = \frac{\text{Number of employees replaced during a period}}{\text{Average number of employees during a period}}$$

iii) Labour Turnover Under Flux Method: This method takes into account the number of employees who left the organization and those recruited by the organization during a period.

$$\textbf{Labour Turnover} = \frac{\text{Number of employees left + Number of employees recruited during a period}}{\text{Average number of employees during a period}}$$

16.9.3 Causes of Labour turnover:

The causes for labour turnover can be broadly classified under three heads.

(1) Personal Causes
(2) Unavoidable Causes
(3) Avoidable Causes

i) Personal Causes: Some of the employees may leave the organization on account of personal reasons as given below:

(a) Circumstances of family.
(b) Retirement on reaching the prescribed age.
(c) Change in material status in case of women employees.
(d) Dislike for the job or place;
(e) Death of the employee.
(f) Employee getting recruited in a better job.
(g) Permanent disability due to accidents.
(h) Involvement of employee in activities of moral turpitude.

ii) Unavoidable Causes: In certain instances the organization may discharge the employees due to unavoidable reasons as mentioned below:

(a) Termination of workers on account of insubordination or inefficiency
(b) Discharge of workers on account of irregularity or long absence.
(c) Retrenchment of workers by the company on account of shortage of work.

iii) Avoidable Causes: Some of the employees may leave the organization account of the following reasons:

(a) Non availability of promotion opportunities
(b) Dissatisfaction with incentive schemes
(c) Unhappy with remuneration
(d) Unsuitable to job due to wrong placement
(e) Unhappy with working conditions
(f) Non availability of accommodation, health and recreational facilities
(g) Lack of stability of Tenure.

(5) Emerson's efficiency plan
(6) Bedaux point premium system
(7) Accelerating premium plan, etc.

(1) The Halsey premium plan: This system is known as fifty fifty plan. It was introduced by F.A. Halsey, an American engineer. Under this method a standard time is fixed for the performance of each job; worker is paid for actual time taken at an hourly rate plus 50% of time saved as bonus:

Total earnings = Hours worked x Rate per hour

$$+\frac{50}{100}(Time\ \ saved\ \ x\ Rate\ \ per\ \ hour)$$

$$= T \times R + 50\% (S-T) R$$

(2) Halsey- Weir Scheme: Under this method the worker gets a bonus at 30% of time saved unlike 50% under Halsey plan. Except for this change, Halsey and Halsey-weir plans are similar.

(3) Rowan System or Rowan Plan: The scheme was introduced in 1901 by David Rowan of Glasgow, England. The wages are calculated on the basis of hours worked where as the 'bonus is that proportion of the wages of time taken which the time saved bears to the standard time allowed'.

Total Earnings under Rowan plan =

Hours worked x Rate per hour $+\frac{Time\ saved}{S\tan dard\ time}\ x\ Hours\ worked\ x\ Rate\ per\ hour$

$$= T\ x\ R + \frac{S-R}{S}\ x\ T\ x\ R$$

(4) Barth's Variable Sharing Plan: Under this scheme wages are not guaranteed. The earnings in calculated by multiplying the rate per hour by the geometric mean of stander hour and actual hours worked. Thus

Earnings = Rate per hour $\sqrt{S\tan dard\ \ time\ \ x\ \ Actual\ \ time}$

(5) Emerson's Efficiency Plan: Under this plan, a standard time is fixed for every job or work. Worker's output is measured as a percentage of the standard fixed. When a worker's efficiency reaches $66^2/_3$% of the standard, he becomes eligible to get bonus at given rate. The rate of bonus increases gradually when efficiency percentage goes up form 67% to 100% of the basic time rate. For every additional 1% efficiency beyond 100%, additional bonus is 1% of the time rate.

Schedule of bonus

Efficiency %	Bonus
(A) Below $66^2/_3$ %	No bonus. Only time wages are paid.
(B) $66^2/_3$ % to 100%	Bonus starting from 0.01% for 67% efficiency gradually Touches 20% at 100% efficiency.
(C) Above 100%	Bonus of 20% of time rate + 1% additional bonus for each additional 1% efficiency beyond the 100%.

Standard time 10 hours. Number of units to be completed 5. Hourly rate is Re.0.25. Time taken 8 hours. Calculate a worker's total earnings under Rowan plan. Also determine the effective rate of earnings per hour.

Solution:

Earnings under Rowan Plan

$$= T \text{ x } R + \frac{S-R}{S} \text{ x } T \text{ x } R$$

T = Time taken or actual time = 8 hours
R = Rate of wages = Re.0.25 per hour
S = Standard time or time allowed = 10 hours

Total earnings of worker under Rowan plan

$$= 8 \text{ x } 0.25 + \frac{10-8}{10} \text{ x } 8 \text{ x } 0.25$$

= 2 + 0.40 = Rs.2.40

Effective rate of earnings per hour

$$= \frac{\text{Total Earnings}}{\text{Actual time taken}}$$

$$= \frac{2.40}{8} = \text{Re.0.30 per hour}$$

Illustration 6

Ascertain wages of a worker under Bedeaux's point premium system from the following details:

Standard output per day of 8 hours = 160 units
Actual output during a day of 8 hours 200 units
Rate per hour is Rs.5.00

Solution:

Standard production points = 8 x 60 = 480 'B's

One unit of standard output $= \frac{480}{160}$ = 3 'B's

Actual output = 200 x 3 = 600 'B's
Points saved = 600-480 = 120 'B's

Earnings = Time taken x Hourly rate + 75% of time saved x Hourly rate

$$= 8 \text{ x } 5 + \frac{75}{100} \text{ x } \frac{120 \text{ x } 5}{60}$$

= 40 + 7.5 = Rs.47.5

Note (1) Each 'B' represents one minutes standard work.

Note (2) 120 is divided with sixty in earnings

Calculation because time saved is in 'B's or minutes but rate given is hourly rate.

Illustration 7

From the following details, calculate the earnings of a worker under Barth's variable sharing plan:

Standard time 25 hours

(d) **Attainable high performance standards**: They are based on what can be achieved with reasonable hard work and efforts. They are based on the current conditions and capability of the workers. These standards are considered to be of great practical value because they provide sufficient incentive and challenge to the workers to attain them. Any variances from such standard are really significant because the standard which is attainable with effort is not attained.

17.7.4 Determining the expected level of activity

Capacity of operation or level of activity expected over a future period is vital in fixing current or short-term standards. When the activity level is decided on the basis of sales or production, whichever is the limiting factor, all standard can be developed with the activity level as the focal point. The purchase of material, usage of material, labour hours to be worked, etc. are solely governed by the planned level of activity.

17.7.5 Setting standards

Setting standards may also be called developing standards or establishment of standard cost because as a consequence of setting standards for various aspects, standard cost can be computed.

Setting standards is like laying a building foundation. The success of standard costing system depends on the care with which the standards are developed.

It is preferable, particularly in large firms, to establish 'Standard committee' which is responsible for determining standards in all aspects of the business and also making suitable revisions in due course. The standards committee usually consists of all the functional managers like purchase, production and sales, technical experts like Production Engineer, the General Manager and the Cost Accountant. It is the Cost Accountant's role which is crucial because he has to assign the monetary values for the different standards set by the other experts in each area or function.

The following is a brief discussion on the setting of standards for each element of cost.

(1) Standards for Direct Material Cost

Direct material standards are broadly divided into standards for usage or quantity standards and standards for material price. There may be several materials used in the production of a product. It is necessary to set standards for each of the important materials.

Material usage or Quantity standards

These standards deal with the quantity of material needed for each unit of finished product, the quality specifications and tolerances like length, breadth, strength, volume, etc. Based on the past experience, the normal loss to be expected has to be determined. Based on the expected or permitted loss, the quantity standard per unit is fixed. It two or more materials are mixed in the production, the standard proportion of each material has to be fixed.

The production manager and technical expert play the most important role in setting quantity standards. Their knowledge, experience and the shop floor situation are instrumental in deciding upon the quality and quantity of each material. The following are the usual quantity standards set.

(a) Quantity of material per unit of finished product.

(b) Standard loss permitted in the production process.

2.	Budgets are prepared for sales, production, cash etc.	It is determined by classifying recording and allocating expenses to cost unit.
3.	It is a part of financial account, a projection of all financial accounts.	It is a part of cost account, a projection of all cost accounts.
4.	Control is exercised by taking into account budgets and actuals. Variances are not revealed through accounts.	Variances are revealed through difference accounts.
5.	Budgeting can be applied in parts.	It cannot be applied in parts.
6.	It is more expensive and broad in nature, as it relates to production, sales, finance etc.	It is not expensive because it relates to only elements of cost.
7.	Budgets can be operated with standards.	This system cannot be operated without budgets.

17.11. STANDARD COSTING AND MARGINAL COSTING

Standard costing is a system of accounting in which all expense: (fixed and variable) are considered for the determination of standard cost for a prescribed set of working conditions. On the other hand marginal costing is a technique in which only variable expenses are taken to ascertain the marginal cost. Both standard costing and marginal costing are completely independent of each other and may be installed jointly. This system of joint installation may be named as Marginal Standard Costing or Standard Marginal Costing System. Variances are calculated in the same way as in standard costing system with the only difference that volume variances are absent because fixed expenses are charged in totals in each period.

17.12 STANDARD COSTING AND STANDARDISED COSTING

The term ‘standardised costing’ is synonymous to inform costing. Uniform costing is a system of costing under which several undertakings use the same costing principles and practices. With the help of uniform costing, several common processes of various industrial units can be standardised which will be helpful in improving the performance of inefficient units. Both standard costing and standardized costing (i.e. uniform costing) can be used for better management of industrial units.

17.13 STANDARD COST CARD

When all the standard costs have been determined, a Standard Cost Card is prepared for each product or service. The process of setting standards for materials, labour and overheads results in the establishment of the standard cost for the product. Such a cost card shows for a specified unit of production, quantity, quality and price of each type of materials to be used, the time and the rate of pay of each type of

17.18 REFERENCES

1. Jain & Narang – Cost Accounting.
2. S.N. Maheswary – Management Accounting.

variance. Explanation of variance includes the probing and inquiry for causes and responsible persons.

18.3 FAVOURABLE AND UNFAVOURABLE VARIANCE

Variances may be favourable or unfavourable depending upon whether the actual resulting cost is less or more than the standard cost.

18.3.1 Favourable variance:

When the actual cost incurred is less than the standard cost, the deviation is known as favourable variance. The effect of the favourable variance increases the profit. Again, favourable variance would result when the actual cost is lower than the standard cost. It is also known as positive or credit variance and viewed only as savings.

18.3.2 Unfavourable variance:

When the actual cost incurred is mote than the standard cost, there is a variance, known as unfavourable or adverse variance. unfavourable variance refers to deviation to the loss of the business. It is also known as negative or debit variance and viewed as additional costs or losses.

When the profit is greater than the standard profit, it is known as favourable variance. When the profit is less than the standard profit, it is known as unfavourable variance. This favourable variance is a sign or efficiency of the organisation and the unfacourable variance is a sign of inefficiency of the organisation.

18.4 UTILITY OF VARIANCES ANALYSIS

i) Variance analysis sub divides the total variance based on difference contributory causes. This gives a clear picture of the different reasons for the overall variance.

ii) The sub division of variance establishes and highlights the interrelationship between different variances.

iii) Variance analysis ‘explains’ the causes for each variance. It paves way for fixing responsibility for all variances.

iv) It highlights all inefficient performances and the extent of inefficiency.

v) It is a powerful tool leading to cost control.

vi) It enables the top management to practice ‘management by exception’ by focusing on the problem areas.

vii) It segregates variance into controllable and uncontrollable, thereby indicating where action is warranted.

viii) It acts as the basis for profit planning

ix) By revealing each and every deviation, along with the causes, variance analysis creates and nurtures ‘cost consciousness’ among the employees.

18.5 TYPES OF VARIANCE ANALYSIS

The following are the different types of variances.

(1) Direct material cost variances (2) Direct labour cost variance (3) Overheads cost variances (4) Sales variances.

Material	Standard			Actual		
	Qty. Kg.	Price Rs.	Total Rs.	Qty. Kg.	Price Rs.	Total Rs.
A	500	6.00	3,000	400	6.00	2,400
B	400	3.75	1,500	500	3.60	1,800
C	300	3.00	900	400	2.80	1,120
	1200			1300		
Less 10% Normal	120			220		
	1080		5,400	1,080		5,320

Calculate material variances

Solution

1. Material Cost Variance = (SQ x SP) – (AQ x AP)

Material A : (500 x 6) – (400 x 6)

: 3,000 – 2,400 = 600 (F)

Material B : (400 x 3.75) – (500 x3. 60)

1,500 – 1,800 = 300 (A)

Material C : (300 x 3) – (400 x 2.80)

900 – 1,120 = 220 (A)

Total Material Cost Variance = 80 (F)

2. Material Price Variance = (SP-AP) AQ

Material A : (6 – 6) 400 = 0

Material B : (3.75 – 3.60) 500 = 75 (F)

Material C : (3-2.80) 400 = 80 (F)

Total Material Price Variance = 155 (F)

3. Material Usage Variance = (SQ – AQ) SP

Material A : (500 – 400) 6 = 600 (F)

Material B : (400 – 500) 3.75 = 375 (A)

Material C : (30 – 400) 3 = 300 (A)

B	30	5	150
	100		850
Loss 15%	15		-
	85		850

(ii) Actual results for January 1987:

Material	Quantity units	Rate Rs.	Amount Rs.
A	400	11	4,400
B	200	6	1,200
	600		5,600
Loss 15%	60		-
	540		5,600

Calculate: (1) Material price variance (2) Material mix variance (3) Material usage variance (4) Material yield variance (5) Material cost variance

8. Calculate material price variance in each of the following:

(a)	Standard	:	2,740 units at Rs.15 each
	Actual	:	3,000 units at Rs.17 each
(b)	Standard	:	5,000 units at Rs.4 each
	Actual	:	2,000 units, purchased at Rs.4.5 each
			2,600 units, purchased at Rs.5 each
			1,300 units, purchased at Rs.5.5. each
(c)	Opening stock	:	Nil
	Purchase of material	:	14,600 tons at Rs.15 per ton
	Closing stock	:	1,600 tons
	Standard price	:	Rs.16 per ton
(d)	Standard Price per k.g. of chemical 'Y'	:	Rs.400
	Stock at the beginning of the period	:	200kgs.

costs and are charged to production. Fixed costs are not allocated to cost unit; and these are charged directly to profit and loss account during the period and are called as period costs or capacity costs.

19.2 DEFINITION OF MARGINAL COST

Marginal cost is the additional cost of producing an additional unit of a product.

Marginal cost is defined by I.C.M.A, London as ‘the amount at any given volume of output by which aggregate costs are changed if the volume of output is increased or decreased by one unit. In practice, this is measured by the total variable costs attributable to one unit”.

19.3 DEFINITION OF MARGINAL COSTING

Marginal costing is defined by I.C.M.A. as “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.

19.4 APPLICATION OF MARGINAL COSTING

Marginal costing is the most powerful and popular technique in aid of managerial decision making. As already seen, it reveals the cost, volume profit relationship in all its ramifications which is useful in profit planning, selling price determination, selection of optimum volume of production, etc. Marginal costing, with its focus on variability of costs and avoidance of overhead apportionment, is so versatile that it is applied in varied circumstances and to tackle divers problems by those in charge of such situations.

The following are some of the more popular areas of application of marginal costing:

(1) Key factor (or) Limiting factor
(2) Make or buy decision
(3) Fixation of selling prices
(4) Export decision
(5) Sales mix decision
(6) Product elimination decision
(7) Plant merger decision
(8) Plant purchase decision
(9) Further processing decision
(10) Shut down decision

The above list is not exhaustive. There are numerous situations suitable for applying the principles of marginal costing and the situations chosen above are only a few of the popular areas of application of marginal costing.

19.5 ABSORPTION COSTING

Absorption costing is the practice of charging all costs, both fixed and variable to operations, process or products. In marginal costing, only variable costs are charged to productions.

The Institute of Cost and Management Accountants (U.K.) defines it as, “the practice of charging all costs, both variable and fixed to operations, processes or

$$\text{Margin of safety ration} = \frac{Margin\ of\ safety}{Actual\ sales} \times 100$$

19.8.7 Angle of Incidence

In graphic presentation of marginal cost data, i.e., a break-even chart, the total cost line and sales line cross each other. The point of their crossing is termed ‘Break-even point’. The angle at which the sales line crosses the total cost line is called the ‘Angle of incidence’.

‘The bigger is the angle, the more will be the contribution and profit with every additional sale. Firms with higher P/V ratio and comparatively less variable costs have a higher angle of incidence. Such firm can magnify their profits in high demand conditions.

The angle of incidence at a glance can signify or reveal the ability of a firm to earn higher profits with every increase in sales.

19.9 BREAK EVEN CHARTS

The technique of break-even analysis can be made easy with the help of graph or mathematical formula. Graphical representation of break-even point is known as the break-even chart. Dr.Vance is of the opinion that “it is a graph showing the amount of fixed variable costs and the sales revenue at different volumes of operation. It shows at what volume the firm first covers all costs with revenue of break-even”. B.E.C. show the profitability or otherwise of an undertaking at various levels of activity, and indicates the point at which neither profit nor loss is made. Break-even point is known as “no profit, no loss point”. So the chart is also known as break-even chart. At this point, the total costs are recovered and profit begins.

19.9.1 Advantage

i) Total cost, variable cost and fixed cost can be determined.
ii) B.E. output or sales value can be determined.
iii) Cost, volume and profit relationship can be studied, and they are very useful to the managerial decision-making.
iv) Inter-firm comparison is possible.
v) It is useful for forecasting plans and profits.
vi) The best products mix can be selected.
vii) Total profits can be calculated.
viii) Profitability of different levels of activity, various products or profit, i.e., plant can be known.
ix) It is helpful for cost control.

19.9.2 Limitations of B.E.C.

B.E.C. is constructed under some unrealistic assumptions.

i) Constant selling price is not true.
ii) Detailed information cannot be known from the chart. To know all the information about fixed cost, Variable cost and Selling price, a number of charts must be drawn.
iii) No importance is given to opening and closing stocks.

be effectively utilised by efficient conduct of its operations. This requires careful working out of proper plans in advance, co-ordination and control of activities on the part of management.

A proper planning and control are essential for an efficient management. A good number of tools and devices are available. Of all these, the most important device used is budget. Cost accounting aims not only at cost ascertainment, but also greatly at cost control and cost reduction. This the management aims at the proper and maximum utilization of resources available. It is possible when there is a Pre-planning. Modern management aims that all types of operations should be predetermined in advance, so that the cost can be controlled at every step. The more important point is that the actual programme is compared with the pre-planned programme and the variances are analysed and investigated. All are familiar with the idea of budget, at every walk of life-state, firm, business etc.,

20.2 MEANING AND DEFINITION OF BUDGET:

A budget is the monetary and / or quantitative expression of business plans and policies to be pursued in the future period of time. Budgeting is preparing budgets and other procedures for planning, coordination and control or business enterprises.

I.C.M.A. defines a budget as "A financial and / or quantitative statement, prepared prior to a defined period of time, of the policy to be pursued during that period for the purpose of attaining a given objective".

20.2.1Objectives of Budget

1. It directs the attention of all concerned to the attainment of a common goal.
2. It leads to the disclosure of organisational weakness. The budgets are compared with actual performance; and variances, if any, are investigated.
3. It aims at careful control over the performance and cost of every function.
4. It contributes to co-ordinate efforts of all departments in order to achieve an integrated goal. Budgets grow from bottom and are controlled from top-level.

20.3 BUDGETING

Budgeting refers to the process of preparing the budgets. It involves a detailed study of business environment clearly grasping the management objectives, the available resources of the enterprise and capacity of the enterprise.

Budgeting is defined by J.Batty as under: "The entire process of preparing the budgets is known as budgeting". In the words of Rowland and Harr: "Budgeting may be said to be the act of building budgets".

Thus budgeting is a process of making the budget plans. Preparation of budgets or budgeting is a planning function and their implementation is a control function. 'Budgetary control' starts with budgeting and ends with control.

20.3.1 Objectives of Budgeting

The main objectives of budgeting are:

1. To obtain more economical use of capital.
2. To prevent waste and reduce expenses.
3. To facilitate various departments to operate efficiently and economically.

20.8 CLASSIFICATION OF BUDGETS

Budgets are classified according to their nature. The following ae the different classifications of budgets.

20.8.1. Classification according to time

1. Long-term budgets
2. Short-term budgets
3. Current budgets

20.8.2. Classification based on functions

1. Functional or subsidiary budgets
2. Master budget

20.8.3. Classification on the basis of flexibility

1. Fixed budget
2. Flexible budget

20.8.1 Classification on the basis of Time

(1) **Long-term Budgets:** Long-term budgets are prepared to reflect long-term planning of the business. Generally, the long-term period varies between five to ten years. They are prepared by the top level management. Long-term budgets are prepared for specialised activities like capital expenditure, research and development, long-term finances, etc.

(2) **Short-term Budgets**: These budgets are generally for a duration of one year and are expressed in monetary terms.

(3) **Current Budgets**: The duration of current budgets is generally in months and weeks. These budgets are prepared for the current operations of the business. As per I.C.M.A. London, 'current budget is a budget which is established for use over a short period of time and is related to current conditions".

20.8.2 Classification on the basis of functions

(1) Functional Budgets: These budgets relate to various functions of the concern. Following are the commonly prepared functional budgets:

(a) Purchase Budget
(b) Cash budget
(c) Production budget
(d) Sales budget
(e) Materials budget

(2) Master Budget: This budget is a summary of various functional budgets. It encompasses the activities of the whole organisation. According to I.C.M.A., London "The master budget is the summary budget incorporating its functional budgets". Master budget is prepared to coordinate the activities of various functional departments.

20.8.3 Classification on the basis of flexibility

1. **Fixed Budget:** it is prepared for a given level of activity and remains same irrespective of change of activity.
2 **Flexible budget**: It is a budget prepared for various levels of activity by classification of expenditure under fixed, variable and semi fixed categories.

20.8.4 Some Important Budgets

(1) Sales Budget:

In the budgeting process, sales is a starting point, as sales is the key factor in many cases. W.W.Bigg Writes, "This is probably most important budget, as it is usually the most difficult of forecast to attain".

(2) Production Budget:

This budget is based on sales budget, unless production itself is the key-factor. It shows the budgeted quantity of output to be produced during a specific period. It has two parts, one showing the output for the period and the other showing production costs. The following key elements are considered while preparing the production budget.

(3) Materials Budget:

This budget is prepared in coordination with production budget. Preparation of materials budget is useful and helpful in achieving continuous, uninterrupted production as the non-availability of materials at the right time can affect the production. Material budget consists of two parts, one is the consumption budget and another is materials purchase budget.

(4) Labour budget:

Labour budget is also a part of production budget. Labour budget is prepared by the personnel department. This budget consists of the following details:

(1) Number of different grades of workers required
(2) Rates of wages of workers
(3) Labour hours needed for production.
(4) Labour cost for the period, etc.

(5) Overhead budget:

(a) Production overhead budget: It is a budget of indirect costs in the form of indirect wages, indirect material and indirect expenses to be incurred in the factory. It is prepared with the help of production and labour budgets. It is prepared on the basis of past year's figures and future changes expected.

(b) Administration overhead budget: This budget is prepared to estimate the expenditure to be incurred for planning, organising, direction and control functions of the management. The budget is based on the past year's expenditure incurred with expected future changes.

(c) Selling and distribution overhead budget: This budget is prepared to estimate expenditure to be incurred to sell the product and is distribution. It is based on sales budget. It is generally prepared in consultation with sales managers of each territory.

(6) Research and Development Budget

This budget is prepared to estimate the research and development expenditure to be incurred during specific period. The budget is prepared in two parts, one is for revenue expenditure and another is to estimate the capital expenditure to be incurred.

(7) Capital Expenditure Budget:

This budget is prepared to estimate the capital expenditure on fixed assets-Buildings, machinery, plant, furniture, etc. It is generally a long-term budget. It is prepared for replacement of assets, expansion of production facilities, adoption of new technologies, diversification, etc.

(8) Cash Budget:

20.9 Zero Base Budgeting (Z.B.B.)

The purpose of management control is to ensure better performance and better utilisation of scarce resources. Traditional budgeting fails to achieve this objective of management effectively. 'Zero base budgeting' provides a solution towards this end.

'Zero base budgeting' was originally developed by Peter A. Pyhrr at Texas Instruments. Peter A. Pyhrr has defined ZBB as "an operating, planning and budgeting process which requires each manager to justify his entire budget request in detail from scratch (hence zero base) and shifts the burden of proof to each manager to justify why we should spend any money at all".

20.9.1 Process of Zero Base Budgeting:

The following are the steps involved in ZBB.

1. Specification of decision units.
2. Development of decision packages.
3. Prioritisation of activities projects and programmes.
4. Approval and allotment of funds.

Check your progress

What are the steps involved in preparing the flexible budgets?

Notes: (a) Write your answer in the space given below.

(b) Check your answer with the ones given at the end of this Lesson (pp. 333).

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20.10 ILLUSTRATIONS

Illustration - 1

Larsen Ltd., plans to sell 1,10,000 units of a certain product line in the first fiscal quarter, 1,20,000 units in the second quarter, 1,30,000 units in the third quarter and 1,50,000 units in the fourth quarter and 1,40,000 units in the first quarter of the following year. At the beginning of the first quarter of the current year, there are 14,000 units of product in stock. At the end of each quarter, the company plans to have an inventory equal to one-fifth of the sales for the next fiscal quarter.

How many units must be manufactured in each quarter of the current year?

20.14 POINTS FOR DISCUSSION

1. What are the essential for a sound system of Budgetary Control.
2. Explain the concept of Budget & Budgetary Control.

20.15 REFERENCES

1. B.K. Sharma & K. Gupta – Management Accounting.
2. S.N. Maheswari – Management Accounting.