P.R.GOVT. COLLEGE (AUTONOMOUS) KAKINADA

B.COM – II YEAR – (CECS)

SYLLABUS : III SEMESTER EXAMINATIONS

COURSE 33 : COSTING

W.e.f. 2018 -19 ACADEMIC YEAR

Hours: 5 Hrs. (3 Lectures + 2 Tutorials) **Max. Marks: 100 (60+40)**

CREDITS: Theory 3

OBJECTIVES:

- To impart the Concepts of Costing and Techniques of Costing
- To know the control of Inventory Cost and Labour Cost
- To explain Overheads and their classification
- To make the student to prepare the Cost Sheet.

LEARNING OUTCOME:

- By the end of this course students can have the better understanding of costing and management accounting.
- By the end of this course students can apply different methods of costing.
- By the end of this course students can have the skill of preparation of cost sheet.

MODULE I : FUNDAMENTALS – 5 PPTS

a. **Financial Accounting and its limitations – Cost Accounting – Cost Accounting and Financial Accounting – Cost Accounting and Management Accounting – Objectives of Cost Accounting**

b. **Installation of costing System – Methods and Techniques of costing – Cost concepts – Elements of Cost Classification of cost.**

Self Study: **Installation of costing System**

Advantages and Limitations of Cost Accounting

Assignment: **Methods and Techniques of Costing**

Classification of Cost

MODULE II : **MATERIALS** - 5 PPTS

a. Material Control – Purchase Department – Purchase Routine stores routine – (Problems to be discussed on calculation of Minimum Level, Maximum Level, Re – Ordering level and Economic Order Quantity)
b. Issue of Materials and procedure of Issuing – Pricing of Issues - Problems to discussed on First in First Out , Last in First Out , Simple Average, Weighted Average and Base stock Methods) – Inventory Control.

MODULE III: **LABOUR COST** 5 PPTS

Control Over Lab our costs – Lab our Turnover – Time and Motion Study – Time Keeping and Time Booking – Idle Time Over Time – Systems of Wage Payments – Time Wage System – Price Rate System – Incentive Wage Plans (Problems to be discussed on Time Wage and Price Rate System – Halsey Plan Rowan Plan, Taylor's and Merrik's deferential Piece Rate Systems)

Assignment : Calculation of wages under various plans , Labour Turnover

MODULE IV: OVERHEAD COSTS 5 PPTS

Classification – Allocation and apportionment of Overhead – Absorption of Overhead (Problems to discussed on Apportionment of Overhead, Re - Apportionment of Service Department Costs and methods of Absorption of Factory Overhead.

Assignment: Allocation and Apportionment of Overheads

MODULE V : **METHODS OF COSTING** 5 PPTS

Unit or Output Costing - Preparing Statement of Cost and Profit .

Self Study: Costing Procedure

Assignment: Preparation of Cost Sheet and Tender Cost Sheets.

Suggested Readings:

1.Cost and Management Accounting	Jain and Narang	Kalyani Publishers
2.Cost and Management Accounting	M.N Arora	Himalaya Publishing
3.Cost accounting	Dutt	Pearson Education
7.Cost Accounting	Jawaharlal	Tata Mcgraw Hill
8.Cost Accounting Theory and Practice	Banerjee	PHI

P.R.GOVT.COLLEGE (A), KAKINADA
DEPARTMENT OF COMMERCE
II B.COM (C.S) QUESTION BANK

SUBJECT: COSTING
III RD SEMESTER

UNIT 1:

2. What is meant by costing? Explain its nature and scope.
2. Define costing? Explain the classification of costing?
3. Discuss the various methods of cost classification
4. Explain the nature scope and objectives of management accounting?
5. Define cost accounting .bring out clearly the advantages and limitations of cost accountancy
6. Difference between cost accounting, management accounting and financial accounting.
7. Problem on cost sheet

UNIT-2

5. What is meant by material control .Explain its advantages?
2 Discuss the Difference methods of material issues.
3. Economic order quantity
4. ABC analysis
5. Problem on material issue LIFO, FIFO, SIMPLE, WEIGHTED.

UNIT – 3

1. Discuss about various wages incentive plans.
2. Discuss various incentive plans..
3. Describe the causes for labour turn over
4. Problem on Labour

Unit-4

1. Explain the classification of overheads with examples.
2. Explain the basis allocation of apportionment of overheads
3. Problem on over heads

Unit-5

1. Elements of costing.

2. Tenders and Quotations.

SHORT QUESTIONS

UNIT-1

1. State the objectives of costing
2. Cost centre
3. Prepare form of cost sheet
4. Cost unit

UNIT-2

1. Danger level
2. Re-ordering level
3. Bin –card
4. Double bin

UNIT-3

1. Halsey plan
2. Rowan plan
3. Taylors differential piece rate
4. Merrick efficiency rate

UNIT-4

4. Allocation overheads
5. Machine hour rate
6. Service departments

UNIT-1

Introduction to Cost Accounting

Unit Syllabus

Introduction: Distinguish between Financial Accounting, Cost Accounting and management accounting - Cost Concepts and Classification - Cost Centre and Cost Unit - Preparation of Cost Sheet.

INTRODUCTION

In the earlier times, the concept of costing was defined as the technique and process of ascertaining costs of a given thing. In **sixties**, the definition of cost accounting was modified as, "the application of costing and cost accounting principles, methods and techniques to the science, art and practice of cost control and ascertainment of profitability of goods or services". It includes the presentation of information derived therefore for the purpose of managerial decision-making. Today, the scope of cost accounting has widened enormously to help the organosations to achieve its goals. Modern cost accounting is being termed as management accounting, since managers being the primary user of accounting information are increasingly using the data provided by the accounts, setting objectives and controlling the operations of the business.

Today, the wide usage of cost accounting techniques has led to new concept of information technology, operation control and performance measurement. The concept of costing activity-based on budgeting, strategic, flexible production systems etc., are the recent trend in cost management, Target costing, Life Cycle Costing.

Meaning of Cost

The simple word 'cost' has a variety of meanings according to the context. For a common man, the word cost means the price. But in management terminology, the term cost refers to the amount of expenditure incurred or attributed to manufacture a product and service.

Definition of Costing

According to CIMA terminology, the term costing means, "The techniques and process of ascertaining costs. As a technique costing follows certain principles in ascertaining the cost such as classifying, identifying, of cost into cost unit and cost centre. As a process, it follows a definite procedure in ascertaining the costs. Apply job costing, process costing etc. ascertaining the cost.

Meaning of Cost Accounting

Cost accounting means the process of accounting for cost. It starts recording of income and expenditure and ends with periodical cost reports to management for the purpose of cost control.

Definition of Cost Accounting

Mr. Wheldon defines cost accounting as "The classifying, recording and appropriate allocation of expenditure for the determination of cost of products or services. The relation of these cost to sale value and the ascertainment of profitability".

According to ***Kohler***, "Cost accounting deals with the classification, recording, allocation, summarization and reporting of current and prospective costs".

Meaning of Cost Accountancy

Cost accountancy is defined by CIMA of UK as "the application of costing and cost accounting principles, methods and techniques to the science, art and practice of cost control and the ascertainment of profitability. It includes the presentation of information derived therefrom for the purposes of managerial division-making".

Similarities between Financial Accounts and Cost Accounts

1. The fundamental principles of double entry is applicable in both the system of accounts.
2. Both financial accounting and cost accounting are concerned with the accumulation and presentation of information to serve the needs of management.
3. The source of the two accounts for recording the transaction is the same.
4. Both are in monetary terms.
5. Accuracy of accounts is maintained under both the systems.

OBJECTIVES OF COST ACCOUNTING

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The following are considered to be most important objectives:

1. ***Ascertaining Costs:*** The first objective of cost accounting is to find out cost of a product, process or service. The other objectives which have been mentioned hereafter scan be achieved only when the costs have been ascertained.
2. ***Determining Selling Price:*** After ascertaing the cost of product add certain percentage of profit to cost to determining selling price. Thus necessary that the revenue should be greater than the costs incurred in producing goods and services from which the revenue is to be derived.
3. ***Measuring and Increasing Efficiency:*** Cost accounting involves a study of the various operations used in manufacturing a product or providing a services. The study facilitates measuring of the efficiency of the organization as a whole as well as of the departments besides devising means of increasing the efficiency.
4. ***Cost Control and Cost Reduction:*** Cost accounting assists in cost control it uses techniques such as budgetary control, standard costing etc. for controlling costs. Cost is required to be reduced also constant research and development activities help in reduction of costs without compromising with the quality of goods or services.
5. ***Ascertaining Profits:*** Cost accounting also aims at ascertaining the profits of each and every activity. It produces statements at such intervals as the management may require.
6. ***Providing Basis for Managerial Decision–Making:*** Costs accounting helps the management in formulation operative policies.

SCOPE OF COST ACCOUNTING

1. ***Cost Ascertainment:*** It includes collection, analysis of expenses and measurement of production at different stages of manufacture. The collection, analysis and measurement requires different methods of costing for different types of production such as Historical costs, Standard costs, Actual cost, Process cost, Operation cost etc. After this, cost accountant will use any method of costing like specific order costing, operation costing, and direct costing technique. These techniques and methods may be used for calculating different nature products in same organization.

2. ***Cost Records:*** In this part of cost accounting, cost accountant maintains cost books, vouchers, ledgers, reports and other cost related documents for future comparison and reference. It will also be under the scope of cost accounting. It is also the process of accounting for cost which begins with the recording of expenditure and ends on the preparation of statistical data. It is a formal mechanism by means of which cost of product or services are ascertained and controlled.

3. ***Cost Control:*** Cost control is the guidance and regulation by executive action. In this division, cost accountant used different techniques and methods for controlling the cost. Cost accountant uses budgetary control, standard costing, break even point analysis and many other techniques for controlling the cost. This is the end boundary of cost accounting scope.

SIGNIFICANCE OF COST ACCOUNTING

(i) It is useful for the internal working of an organization.

(ii) It helps in detecting the profitable and unprofitable activities of the business concern.

(iii) It enables to measure the qualitative aspects of a business concern. It gives information on which estimates and tenders are based.

(iv) It helps in detecting the wastages or losses involved in the usage of stock. The exact cause of a decrease or increase in profit or loss can be detected.

(v) The efficient workers can be distinguished from that of inefficient workers.

(vi) It helps the creditors and the investors to know the financial position of the organization.

(vii) It helps the government in the assessment of tax and the formulation of policies regarding the export trade or import trade.

(viii) It is helpful to the consumers in knowing the price levels of the products or services. Costing plays an important role to the public at large.

(ix) It measures the efficiency and profitability of the concern in specific and the interest of the public at large. Thus, cost accounting has a wider application in the modern society.

DIFFERENCES BETWEEN FINANCIAL ACCOUNTING AND COST ACCOUNTING

Basis	*Financial accounting*	*Cost accounting*
1. Purpose	It serves the interest of business and other interested parties by providing suitable information in the financial statements.	It renders information on for the guidance of the management for the proper planning control and decision making.
2. Options	FA are required to be kept as per the requirements of the company act and income tax act.	CA are voluntary kept to serve the management in the discharge of its functions.
3. Analysis	FA reveal the profit of the business as a whole.	CA shows the profit result of each operation process and product.
4. Recording	It consists of classification recording and analysis of transactions in a subjective manner i.e., according to the nature of expenditure.	It records in an objective manner i.e., according to which cost are incurred.
5. Control	It lays emphasis on the recording aspect, no consideration is given to control aspect.	It provides for a detailed system of control with the help of standard costing and budgetary control.
6. Reporting	It involves reporting of business performance at the end of the accounting year.	There is a continuous flow of data information of cost report to management.
7. Obligation	This is to be maintained compulsorily.	This is to be maintained voluntarily.
8. Audit	Audit of FA is statutory	Audit of CA is not compulsory.
9. Duration of	FA provides financial information once a year.	CA furnishes reporting cost data at frequent intervals.
10. Pricing	It fails to guide the formulation of pricing policy.	It provides adequate data for formulating pricing policy.
11. Valuation of stock	Stock is valued at cost or marked rice which ever is less.	Stock is always valued at cost price.

ADVANTAGES OF COST ACCOUNTING

A sound system of cost accounting provides the following advantages:

1. Profitable and Unprofitable activities are disclosed.

2. Costing provides such information upon which estimates and tenders may be based.

3. It reveals losses on inefficiency occurring in any form such as idle time, idle capacity, spoilage etc.

4. Costing guides future production policies.

5. It helps in the preparation of interium final accounts with the help of perpectual inventory system.

6. It helps in controlling the cost with the application of standard costing and budgetary control.

7. It provides an independent and reliable check on the accuracy of Financial Accounting with the help of the reconciliation of the two at the end of the year.

8. The exact cause of a decrease or increase in the profit and loss of business can be located.

9. Costing information helps the management in taking the decisions, such as a make or buy, whether to accept orders below cost etc.

10 Costing system helps the government, wage boards and trade unions in providing data for price fixation and price control tariff protection and wage fixation.

LIMITATIONS OF COST ACCOUNTING

Despite several benefits offered by cost accounting, there are certain limitations also:

1. ***It is expensive:*** The system of cost accounting involves additional expenditure to be incurred in installing it and maintaining it.

2. ***The system is more complex:*** As the cost accounting system involve number of steps in ascertaining cost, it is considered to be complicated system of accounting.

3. ***Inapplicability:*** All business cannot make use of a single method and technique of costing. It all depends upon the nature of business and type of product manufactured by it.

4. ***Not suitable for small organisations:*** A cost accounting system is applicable only to a large organisation but not suitable for small organisation.

5. ***Get distorted national and items.***

6. ***Lack of social accounting:*** Cost account fails to take into account the social obligation of thebusiness. In other words, social accounting is outside the preview of cost account

CLASSIFICATION OF COSTS

Grouping of cost on the basis of related characteristics is know as classification of cost. The important ways characteristics classifications are:

1. Classification of Cost on the basis of Nature

(a) ***Material:*** Material include both the direct and indirect materials. Direct materials are those materials which enter into and form part of the product. *For example,* Wood used in making furniture.

Indirect materials are those which cannot be traced as a part of the product such as nails or success used in making furniture.

(b) ***Labour:*** Labour cost may be classified into direct and indirect labour. Direct labour refers to the time spent in altering the construction. Composition conformations of the products manufactured. *For example,* Time spent by a worker at the factory at the time of production.

The lobour hours which cannot be directly identified with a job or process are treated as indirect labour. *For example,* Salaries and wages paid.

(c) ***Expenses:*** Expenses can be broadly classified into direct expenses and indirect expenses.

Direct expenses are those expenses which can be identified with production. *For example,* Direct expenses involved in production.

Indirect expenses are those which can not be identified with production. All indirect materials, indirect labour and indirect expenses are known as overhead. *For example,* administration overhead, factory overhead and selling and distribution overhead.

COST UNIT

A cost unit is a unit of product, service or time in relation to which cost may be ascertained or expressed.

According to CIMA as "a quantitative unit or product or service in relation to which costs are ascertained". *For example:*

a) The cost of cement is associated in terms of per ton.

b) Cost of carrying a passenger in terms of per kms, the cost of sugar is ascertained in terms of per quintal etc.

Examples of cost units are given below:

Industry or Product	***Cost unit***
Automobile	Number
Biscuit	Kilogram
Hospital	Patient - day

Bricks	Kiln
Coal Cement	Tonne
Gas	Cubic - foot or Cubic - metre
Transport	Passanger - Kilometer

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COST CENTRE

Cost centers is defined as a location, a person or an item of equipment or group of them in respect of which costs may be ascertained and related to cost units for the purpose of cost control. It is the smallest segment of activity or area of responsibility for which costs are accumulated.

Thus cost centres can be of two kinds, namely:

1. Impersonal Cost Centre 2. Personal Cost Centre

The main purposes of cost centers are:

(i) ***Recovery of Cost:*** Costs are collected, classified and accumulated in respect of a location, person or an item of equipment and then the costs are distributed over the products for recovery unincurred cost.

(ii) ***Cost Control:*** Cost centres assist in making a person responsible for the control of expenditure incurred by the cost center. Manager of each cost center shall control costs incurred in his area of responsibility.

The size of the cost center depends on the activity and operation and feasibility of cost control. Sub-cost centers are created if the size of the cost centers become too big from control point of view.

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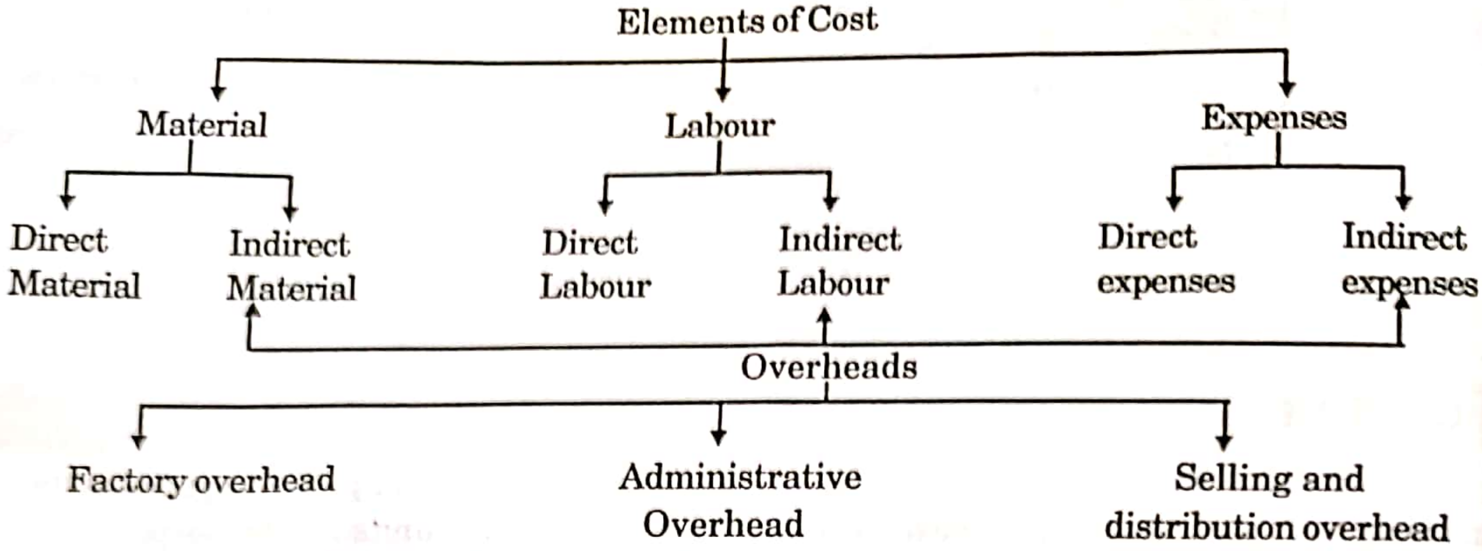
ELEMENTS OF COST

Elements are related to the process of manufacture that is the conversion of raw materials into finished products. Cost are normally classified into three basic elements namely materials, labour and expense.

By grouping the above elements of cost the following divisions of cost are obtained.

1. Prime Cost = Direct material + Direct labour + Direct expenses.
2. Factory Cost = Prime cost + Factory overheads(works cost)
3. Cost of production = Factory cost + Administrative overheads.
4. Total Cost = Cost of production + Selling and distribution overheads.
5. Sales = Total Cost + Profit.



1. **Direct Material:** It is that material which can be conveniently identified with a particular cost unit. Direct material becomes a part of the finished product. *For example,* Timber used in manufacturing furniture, steel used in manufacturing machines, leather used in manufacturing shoes, cotton used in textile mills etc.
2. **Direct Labour:** It is that labour which can be conveniently identified or attributed wholly to a particular job, product or process. It is the labour directly employed on production work. Thus, direct labour includes all labour, example in converting raw-materials into finished goods. It varies directly in relation to the volume of output.
3. **Direct Expenses:** All expenses other than the direct material or direct labour that are specifically incurred for a particular product or process are treated as direct expenses. These are directly charged to products and form a part of prime cost. *For example:* Cost of special design made for a specific product, hire charges of special plant, for a particular job etc.
4. **Indirect Expenses:** Indirect expenses are those expenses that are incurred to operate a business as a whole or a segment of a business, and so cannot be directly associated with a cost object, such as a product, service or customer.

   a) Overheads: Overhead is an accounting term that refers to all ongoing business expenses not including or related to direct labor, direct materials or third-party expenses that are billed directly to customers.

   (i) Factory Overheads: Are those expenses which are incurred in the factory and are concerned with the running of the factory. It includes indirect material, indirect labour, rent of factory, factory lighting, power, water, gas, repairs, factory equipment, depreciation, foreman's salary, factory manager's salary, store-keeping expenses etc.

   (ii) Administrative Overheads: Are those expenses which are incurred in formulating policies, planning and controlling the functions, directing and motivating the personnel of an organisation in the attainment of its objectives. In simple words, it includes all the expenses incurred by the administrative office. *For example:* Office rent, office lighting, office staff salary, manager's salary, directors fees, printing and stationery, postage and telephone, general charges, depreciation on office furniture etc.

   (iii) Selling and distribution overheads: Are those expenses which are incurred in promoting sales and distribution of goods. *For example:* Advertisement, salaries of salesmen, traveling, commission on sales, market research, carriage outwards, warehouse charges, show-room expenses, cost of packing, delivery and maintainence.

COST SHEET

It is a statement showing the details of the total cost of the job, order, or operation. It shows the total cost as well as different components of the total cost and cost per unit. The specimen of the cost sheet is as follows:

Cost sheet of .... Company Ltd.
for the period ending................

Particulars	*Total cost (₹)*	*Cost per unit (₹)*
Direct Materials		
Opening stock of raw material	xx	
Add: Purchase of raw material	xx	
Carriage inwards	xx	
Octroi on purchase	xx	
Import duty or Custom duty	xx	
	xxx	
Less: Closing stock of raw material	xx	
Raw material consumed		xxx
Direct Wages		
Productive wages or Direct labour	xx	
	xx	
Direct Expenses		
Chargeable expenses	xx	
Prime Cost		xxx
Add: Factory overheads	xx	
Factory manufacturing cost	xx	
Add: Opening work in progress	xxx	
	xx	xx
Less: Closing work-in progress	xx	xx
Factory Cost or Works Cost		xxx
Add: Administrative overheads	xx	
All expenses pertsining to office	xx	
Cost of production		xxx
Add: Opening stock of finished goods	xx	
Less: Closing stock of finished goods	xx	
Cost of goods sold		xxx
Add: Selling and distribution overheads	xx	

All expenses pertsining to sales deperatment and distribution expenses	xxx
Cost of sales/total cost	xxx
Profit/ Loss (balancing fig)	xxx
Sales	

UNIT-2

Elements of Cost

Unit Syllabus

Elements of Cost: Materials: Material control - Selective control, ABC technique - Methods of pricing issues - FIFO, LIFO, Weighted average, Base stock methods, choice of method (including problems).

INTRODUCTION

Material management is a function responsible for co-ordination of planning, Sourcing, purchasing, moving, storing and controlling materials in an optimum manner so as to provide pre-determined services to the customer at a minimum cost. The important advantages of materials management are better accountability, better performance, better growth and adaptability to electronic data processing. Material cost to be effective involves the co-operation of various departments namely purchasing department, receiving and inspection department stores, production and stock control department.

CLASSIFICATION OF MATERIALS

The term materials refers to all commodities consumed in the process of manufacture. *Materials can be broadly classified into two types namely:*

1. Direct Material 2. Indirect Material

1. Direct Material

Direct Material is that material which can be conveniently identified with a particular cost unit. It is a part of the finished product.

For example, cotton used in textile mills. Steel used in manufacturing machines, familiar used in manufacturing furniture, leather used in marking shoes etc.

2. Indirect Material

Indirect Material is that material which cannot be conveniently identified with a particular cost unit. Indirect Material also becomes a part of the finished product but is used in small quantities.

Example: Nails used in the manufacturing of furniture, Thread used in the manufacturing of shoes etc.

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INVENTORY OR MATERIAL CONTROL

Material Control is a system which ensures that right quality of material is available in the right quantity at the right time and right place with the right amount of investment. In simple words material control is a systematic control over the purchasing, storing and using of materials so as to have the minimum possible cost of materials.

Features of Material Control

The important features of material cost control are as follows:

(i) The quality and specification of materials should be exact with the requirements of the product.

(ii) The price given to suppliers should be reasonable and the goods should be delivered in time.

Bin Card

Materials are kepts in appropriate bins or containers. A Bin card is made out for each type of material carried and may be attached to storage bins are containers. Bin Card shows quantities of each material received, issued and in stock. It serves the purpose of providing ready references.

Format of a Bin Card is given below:

Bin Card

Bin No :	Maximum Qty : ....
Description :	Minimum Qty : ....
Code :	Ordering Qty : ....
Unit :	Recorder Qty : ....

Date	*Receipt*		*Issue*		*Balance*	*Physical Verification*
	Stores Received Note or Material Transfer Note No.	*Qty.*	*Material Requisition No.*	*Qty.*	*Quantity*	

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ABC ANALYSIS

The ABC method is an analytical method of stock control which aims at concentrating efforts on those items where attention is needed most. It is based on the assumption that a small number of the items in inventory may typically represent the inventory may typically represent the bulk money value of the total materials used in production, while a relatively large number of items may represent a small portion of the money value of stores used and that small no of items should be subject to the greatest degree of continuous control.

Advantages of ABC Analysis

1. Clerical costs are reduced.
2. It facilitates economy in buying.
3. Proper inventory levels facilitate free circulation of funds.
4. Storages cost is reduced.
5. It ensures strict control on costly items in which large amount of capital is tied up.
6. This helps in maintaining high stock turnover ratio.

Types of Stock Level

1. Maximum Level

The maximum stock level is that quantity of material above which the stock of any item should not generally be allowed to go the maximum level may be exceeded in certain special cases.

The formula for computing is as follows Maximum level:

= Reorder level + Reorder Quantity – [Minimum Consumption × Min Reorder period]

2. Minimum Level

The minimum level is that level of stock below which the stock should not normally be allowed to fall. This is essentially a safety stock and will not normally be touched.

The formula for Computing Minimum Level is as follows:

Minimum level = Reorder level – [Normal Consumption × Normal Reorder Period]

3. Reorder Level

It is that level of material at which new order for material is to be placed. In other words this is the level at which purchase requisition is made out. This level will be fixed somewhere b/w max. and min. level.

The formula for computing Reorder level is as follows:

Reorder level = [Maximum Consumption × Maximum Reorder Period]

4. Average Stock Level

This is computed with the help of the following formula:

$$\text{Average stock level} = \frac{\text{Minimum level} + \text{Maximum level}}{2}$$

Average stock level = Min level + ½ of Reorder Quantity.

5. Danger level

It is that level below which stock should not be allowed to follow except under emergency conditions. When stock reaches this level, urgent action for purchases is initiated.

The formula for computing Danger level is as follows:

Danger level = Average Consumption × Maximum Reorder Period for emergency purchases

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Economic Order Quantity [EOQ]

It is the size of the order which gives maximum economy in purchasing any materials and ultimately contributes towards maintaining the material at the optimum level and the minimum cost.

$$EOQ = \sqrt{\frac{2AB}{CS}}$$

Where, EOQ = Economic Ordering Quantity.

A = Annual consumption

B = Buying cost per order

C = Cost per unit of material

S = % of Storage Cost

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METHODS OF PRICING MATERIAL ISSUES

The different methods used for pricing the material issues are summarized below:

1. Actual Cost

(a) Specific Price.

(b) First In First Out Method (FIFO).

(c) Last In First Out Method (LIFO).

(d) Highest In First Out Method (HIFO).

(e) Base Stock Method.

2. Average Cost

(a) Simple Average Price Method.

(b) Weighted Average Price Method.

3. Current Price Method

(a) Replacement Price Method.

(b) Next In First Out Method (NIFO).

4. National Price Method

(a) Standard Price Method.

(b) Inflated Price Method.

(c) Re-ues Price Method.

First In First Out Method (FIFO)

This method assumes that materials are used in the order in which they are received in stores. The issues are priced in the chronological order of receipts. As a result closing stock will be valued at latest purchase price.

Merits of FIFO Method

(i) It is a easier and a simple method.

(ii) This method agrees with the recent purchase price prevailing in the market.

(iii) It is logical method.

(iv) When there is a fall in price in the market this method gives better results.

(v) It is suitable where materials are slow moving bulky and when the cost is high.

(vi) Material cost represents actual cost which should be charged to product or process.

(vii) When materials are purchased at less price, when there is price hike in the market. Profit is inflated and it is beneficial to the company.

Demerits of FIFO Method

(i) When materials are purchased frequently complicated calculations will invite clerical errors.

(ii) When prices fluctuate, calculations become tedious.

(iii) It overstates profit at the time of rising prices.

(iv) If prices change frequently, comparison of one job with the other will not serve useful purpose.

(v) The old materials which are returned to stores from production centers will be send to other production units as fresh issues.

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Last In First Out Method (LIFO)

This method is based on the assumption that the last items purchased are first to used. Here, issues are valued at current prices, while stock remains at historical cost. T method has advantage under inflationary condition of the market. LIFO method is use where materials are used less frequently and under inflationary condition.

Merits of LIFO Method

(i) Under this method issues are charged at current price which is more appropriate.

(ii) Profit is realistic.

(iii) Since issues are charged at actual cost, no adjustment for profit or loss is necessary.

(iv) It ensures complete recovery of material cost from production.

(v) It is more useful during the period of rising prices.

Demerits of LIFO Method

(i) If purchases are made frequently calculations becomes tedious.

(ii) Unfair comparison of job cost when price changes too frequently.

(iii) Stock value does not represent current market price.

(iv) Stock taking on LIFO basis is not acceptable for income tax purposes.

(v) It does not show the true position of stock.

Closing Stock = 8 tons at the rate of ₹ 10

= ₹ 80

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Simple Average Price Method

Simple average price is the average of the prices without any regard to quantities. The calculation of simple average price involves adding of different prices and dividing by the no. of different prices.

Under this method issues are valued at simple price of the number of prices available at the time of issue irrespective of the quantities purchased. The lot which is exhausted based on first out principle is excluded in computing the average.

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Weighted Average Price Method

This method gives due importance on quantities received. Issue prices are calculated at the average cost price of materials in mind. Weighted average rate is calculated each time a fresh lot is received. Average price remains the same till the next issue is received. Thus issue prices are derived at the time of receipt not at the time of issues.

Weighted Average price is calculated by dividing the total cost of materials in stock by the total quantity of materials in stock. This method averages prices after weighting by their quantities. The average price at any time is simply the balance value figure divided by the balance units figures.

Merits of Weighted Average Price Method

(i) Under this method calculations are simple and easy.

(ii) When prices fluctuate considerably, it smoothes out the fluctuations.

(iii) Closing stock value is acceptable.

(iv) It is suitable in case of materials subject to wide price fluctuations.

(v) Another merit of this method is for every new issue, new rate is not calculated.

Demerits of Weighted Average Price Method

(i) Fresh calculations will have to be made every time fresh purchases are made.

(ii) Errors are more possible in this method.

(iii) Under fluctuating prices and purchase of different quantities at each time, this method gives incorrect results.

(iv) Verification of closing stock becomes difficult.

(v) Issuing and closing stock are not at current cost.

UNIT-3

Labour and Overheads

Unit Syllabus

Labour and Overheads: Labour: Control of labor costs - time keeping and time booking - Idle time - Methods of remuneration - labour incentives schemes - Overheads: Allocation and apportionment of overheads - Machine hour rate.

INTRODUCTION

Labour cost is an important element in a concern using more manual operations. The management objective of keeping labour cost as low as possible is achieved by balancing productivity with wages.

In the big organization the control of labour cost involves the co-ordinated efforts of the following departments:

1) In case of cost department it collects and classifies all cost data relating to labour utilization by departments and allocates them to respective job as per the available documents.

2) In case of payroll department, it undertakes responsibility for computing total and net earning of each worker, preparation of payroll and maintenance of various records relating to pay roll.

3) In case of time office it collects data relating to attendance, time spent on jobs or process by the workmen and providing information on attendance and leave to payroll department.

4) In industrial engineering department it process plans and specifications of each job, supervises production activities undertakes time and motion studies, performs job analysis etc.

5) In case of personal department, it undertakes the responsibility for manpower planning recruitment, training and maintaining records to staff and workmen reporting to chief inspector of factories and to top management on performance, overtime, absenteesm etc.

CLASSIFICATION OF LABOUR COST

Labour cost can be classified into two:

1. Direct Labour Cost.
2. Indirect Labour Cost.

1. Direct Labour Cost

The labour cost incurred on the workers who are directly involved in the production activities of converting raw materials into finished goods are called direct labour cost. *Example:* Wages paid to workers engaged in manufacturing department, assembling.

2. Indirect Labour Cost

The labour cost incurred on the employers who are not directly involved in production but assist in the process by way of supervision maintenance etc. are called indirect labour cost. *Example:* Salaries given to the staff in the office.

CAUSES OF LABOUR TURNOVER

The different causes of labour turnover can be broadly classified into three groups

1. Personal Causes

a) Death of the employee.

b) Permanent disability of the employee.

c) Hasty nature of the employee.

d) Domestic reasons like marriage.

e) Dissatisfied with the job.

f) Dissatisfied with the remuneration.

g) Unhappy with the locality or environment in which the organization is situated.

h) Change for betterment.

i) Retirement and

j) Superannuation taken due to ill-health.

In case of personal causes employer can hardly do anything to prevent it.

2. Unavoidable Causes

a) Redundancy due to seasonal nature of business.

b) Lack of work.

c) Shortage of resources like material, power, finance etc.

d) Change of plant location.

e) Fall in market demand for the product.

f) Discharge for disciplinary action.

In the cases listed above, the employer has to ask some of the employees to leave the organization.

3. Avoidable Causes

a) Dissatisfaction with job.

b) Unsatisfactory working conditions.

c) Lack of future prospects and growth.

d) Dissatisfaction with remuneration.

e) Relationship with superior and co-workers not pleasant.

f) Lack of transport facilities.

g) Lack of accommodation, medical and other facilities.

h) Lack of amenities like sports and recreation centres, schools etc.

i) Lack of incentives.

j) Unsympathetic management and job insecurity.

In the above causes, the management can take remedial action to keep such turnover at the minimum.

EFFECTS OF LABOUR TURNOVER

Generally high labour turnover results in increased cost and low productivity due to the following situations:

1. Fall in production this lower rate of production will increase overall cost of production.
2. Dislocation of even flow of production.
3. Increase in selection and training costs.
4. Increase of scrap, defective work, and additional suppression cost.
5. Higher accident rates.
6. Mishandling of machines.
7. Instability of labour and low team spirit.
8. It disturbs regular work force.
9. Increase in orientation expenses and
10. Breakdown of machines frequently.

Differential Piece Rate

F.W Taylore the father of scientific management introduced differential piece rates terms of money, a lower piece rate for those who failed to achieve the standard and higher piece rate for those who achieved the standard. There was no guaranteed minimu wages. This is called Taylor's differential piece rate system.

Advantages of this system is that is workers who are inefficient are punished. A small error involved there will be a deastic effect in the system. The following are t two differential piece rates.

1) Merrick differential piece rate.

2) Taylor's differential piece rate.

Merrick differential Piece Rate

Under merrick differential piece rate the level of efficient of workers are divided i three categories namely.

Level of efficiency	Differential piece rate
Upto 83%	100% of ordinary piece rate
83% to 100%	110% of ordinary piece rate
Above 100%	120% of ordinary piece rate.

Taylor's Differential Piece Rate

Under Taylor's differential piece rate the level of efficiency is divided into two catego

a)	80% of the ordinary piece rate for the workers below standard.
b)	125% of the ordinary piece rate plus 50% of the ordinary piece rate of bo for the workers who are at or above the standard.

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Bonus System

Under Individual Bonus the following schemes are included:

Halsey Plan

This system combine time wages with bonus for time saved. Under Halsey Plan, the worker receives his guaranteed time wages whether he completes the job or operation written standard hour fixed. He gets bonus equal to 50% of wages for the time saved in addition to his normal time wages.

Thus bonus under Halsey Plan is:

$$\text{Bonus} = \frac{50}{100} \times \textit{Time saved} \times \textit{Time rate}$$

$$\therefore \quad \text{Earnings} = \textit{Time wages} + \textit{Bonus}$$

$$\therefore \quad \text{Earnings} = T\,T \times T\,R + \frac{50}{100} \times T\,S \times T\,R$$

Where, $T\,T$ = *Time Taken* $\quad T\,R$ = *Time Rate* $\quad T\,S$ = *Time Saved.*

Halsey-weir plan

Under Halsey-weir plan the premium is set at 30% of the time saved-other features are similar to Halsey Plan.

Rowan Plan

Under this system, bonus is determined by the ratio of time saved to the standard time. Normal time wages is guaranteed.

Under Rowan Plan bonus is calculated as follows:

$$\text{Bonus} = \frac{\text{Time saved}}{\text{Standard Time}} \times \text{Time Taken} \times \text{Time Rate}$$

$$\text{Earnings} = \text{Time wages} + \text{Bonus}$$

$$= (T\,T \times T\,R) + \frac{TS}{ST} \times T\,S \times T\,R$$

INTRODUCTION TO OVERHEADS

Overhead is defined as the aggregate of Indirect materials, Indirect wages and Indirect expenses. It refers to any cost which is not directly attributable to a cost unit.

Overhead consists of two products. One relating to the product and other relating to the facilities and services maintained for earning of the organisation. It is a group of expenses, which are not identifiable with the cost, but all included generally for the manufacturing and selling activities of the organisation and can be apportioned to and absorbed by the cost units.

Meaning of Overheads

Overhead is the aggregate of Indirect materials, Indirect wages and Indirect expenses. Overheads are of a general nature, their benefits cannot be attached with a particular cost unit. Therefore, they have to be apportioned among cost units on an equitable basis.

Definition of Overhead

"Any cost of doing business other than a direct cost of an output of product or service".
– ***Eric L. Kohler***

"Overheads are cost of an which do not result solely from the existance of individual cost units". – ***W. M. Harper***

"Ovrehead representens the cost of indirect materal, indirect labour and such other expenses including services as cannot conveniently be charged to a specific unit".

According to ***CIMA,*** overhead costs are defined as, 'the total cost of indirect materials, indirect labour and indirect expenses'. Thus all indirect costs like indirect materials, indirect labour and indirect expenses are called as 'overheads'.

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CLASSIFICATION OF OVERHEAD

Classification is defined by CIMA as, 'the arrangement of items in logical groups having regard to their nature (subjective classification) or the purpose to be fulfilled (Objective classification). In other words, classification is the process of arranging items into groups according to their degree of similarity. Accurate classification of all items is actually a prerequisite to any form of cost analysis and control system.

Classification is made according to the following basis:

1. Functions
2. Elements and
3. Behaviour

Allocation of Overheads

Allocation means the alloment of the entire items of cost to the cost centres or cost unit. The nature of expense can easily be identified and allocated to a cost centre.

For example, salary paid to the office staff is allocated to the administration department.

Apportionment of Overheads

Allotment of proportions of items of cost to cost centres or cost units are called apportionment. This is done in the case of those items of overhead which cannot be allocated to a particular department for example, light cannot be allocated to a department only since it is shared by all production department. It has to be proportionally allocated to the various departments on the basis of area.

Principles of Apportionment

1. Use or Service

The overhead should be apportioned on the basis of use received by a particular department. The greater the amount of service or use received by a department the grater the share of an item of overhead to be apportioned to that department.

2. Survey or Analysis

According to the existing conditions overheads are proportioned on the basis of survey for example a supervise two department X and Y giving 60% of his time in department X and 40% of his time in department Y.

His salary will be apportioned between the two departments in the ratio 60 : 40.

3. Ability to pay

Here the apportionment is made on the ability to pay. Thus, higher the revenue of a paricular department, higher shall be proportionate charge for the services.

PRIMARY OVERHEAD DISTRIBUTION SUMMARY

The Distribution of common expenses to all the department's including service department's on some equitable basis is known as Primary Overhead distribution summary

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6. Machine Hour Rate

Machine hour rate is a rate which is calculated by dividing the budgeted or estimated overhead or labour and overhead cost attributable to a machine or a group of similar machines by the appropriate number of machine hours. The machine hour rate may be ordinary machine hour rate or composite machine hour rate. To compute the machine hour rate first the overhead expenses are to be departmentalized. Each machine or a group of machines in a department should be regarded as a cost center and all items are allocated and apportioned to the machine cost centers on some equitable basis. Then the machine hour is determined by dividing total overhead by machine hours.