

# ***Cost Accounting 1***

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# **UNIT – 1: Introduction To Cost Accounting**

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- 2. Objectives of Cost Accounting**
- 3. Cost Terminology**
- 4. Classification of Costs and Calculation of Various Cost.**
- 5. 4. Home Assignment**

# 1. MEANINGS

## **COST - MEANING**

Cost means the amount of expenditure ( actual or notional) incurred on, or attributable to, a given thing.

## **COST ACCOUNTING - MEANING**

Cost accounting is concerned with recording, classifying and summarizing costs for determination of costs of products or services, planning, controlling and reducing such costs and furnishing of information to management for decision making



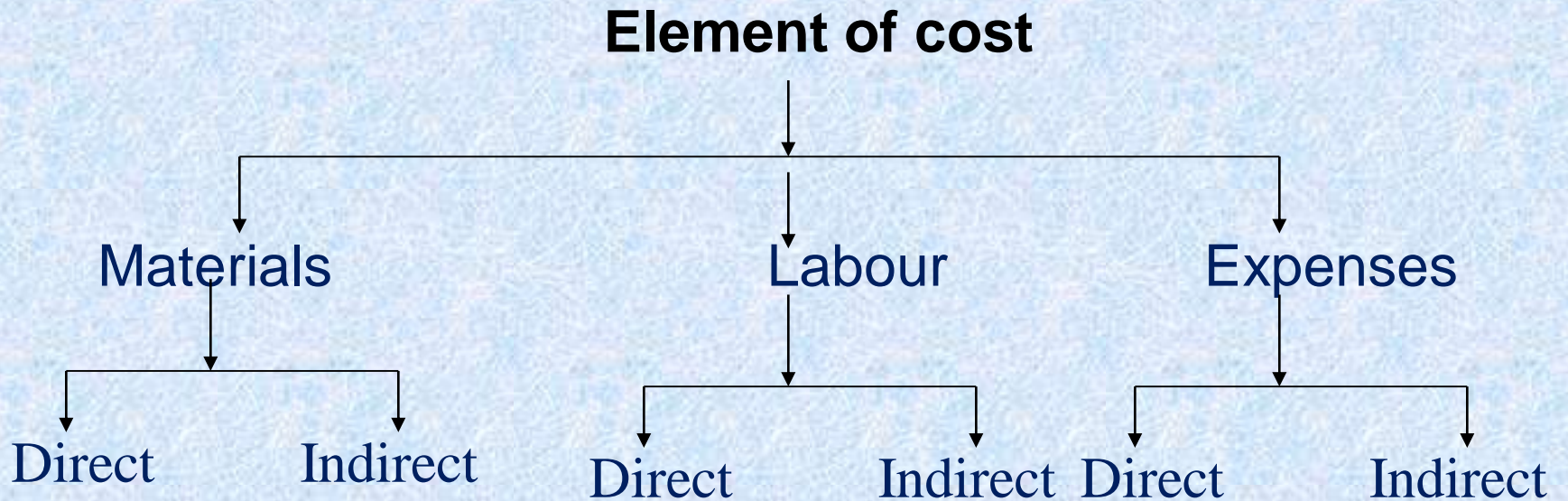
## 2. OBJECTIVES OF COST ACCOUNTING

- Ascertainment of costs
- Estimation of costs
- Cost control
- Cost reduction
- Determining selling price
- Facilitating preparation of financial and other statement
- Providing basis for operating policy

### 3. COST TERMINOLOGY

- **COST:** Cost means the amount of expenditure incurred on a particular thing.
- **COSTING:** Costing means the process of ascertainment of costs.
- **COST ACCOUNTING:** The application of cost control methods and the ascertainment of the profitability of activities carried out or planned”.
- **COST CONTROL:** Cost control means the control of costs by management. Following are the aspects or stages of cost control.
- **JOB COSTING:** It helps in finding out the cost of production of every order and thus helps in ascertaining profit or loss made out on its execution. The management can judge the profitability of each job and decide its future courses of action.
- **BATCH COSTING:** Batch costing production is done in batches and each batch consists of a number of units, the determination of optimum quantity to constitute an economical batch is all the more important.

# ELEMENTS OF COST





**MATERIAL:** The substance from which the finished product is made is known as material.

(a) DIRECT MATERIAL: is one which can be directly or easily identified in the product  
Eg: Timber in furniture, Cloth in dress, etc.

(b) INDIRECT MATERIAL: one which cannot be easily identified in the product.

## *EXAMPLES OF INDIRECT MATERIAL*

At factory level – lubricants, oil, consumables, etc.

At office level – Printing & stationery, Brooms, Dusters, etc.

At selling & dist. level – Packing materials, printing & stationery, etc.

**LABOUR:** *The human effort required to convert the materials into finished product is called labour.*

(a) DIRECT LABOUR: is one which can be conveniently identified or attributed wholly to a particular job, product or process.  
Eg:wages paid to carpenter, fees paid to tailor,etc.

(b) INDIRECT LABOUR: is one which cannot be conveniently identified or attributed wholly to a particular job, product or process.

## **EXAMPLES OF INDIRECT LABOUR**

At factory level – foremen's salary, works manager's salary, gate keeper's salary, etc

At office level – Accountant's salary, GM's salary, Manager's salary, etc.

At selling and dist.level – salesmen salaries, Logistics manager salary, etc.



**OTHER EXPENSES:** are those expenses other than materials and labour.

DIRECT EXPENSES: are those expenses which can be directly allocated to particular job, process or product. Eg : Excise duty, royalty, special hire charges, etc.

INDIRECT EXPENSES: are those expenses which cannot be directly allocated to particular job, process or product.



# Examples of other expenses

At factory level : factory rent, factory insurance, lighting, etc.

At office level : office rent, office insurance, office lighting, etc.

At sales & dist.level : advertising, show room expenses like rent, insurance, etc.

# BASIC COST SHEET

DIRECT MATERIAL .....  
DIRECT LABOUR .....  
DIRECT EXPENSES .....

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PRIME COST .....  
FACTORY OVERHEADS .....

---

FACTORY COST  
OFFICE OVERHEADS

---

COST OF PRODUCTION  
SELL & DIST OVERHEADS

---

COST OF SALES .....  
PROFIT .....

---

SALES

# **COST SHEET - ADVANCED**

OPENING STOCK OF RAW MATERIALS

+PURCHASES

+CARRIAGE INWARDS

-CLOSING STOCK OF RAW MATERIALS

---

**VALUE OF MATERIALS CONSUMED**

+DIRECT WAGES

+DIRECT EXPENSES

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**PRIME COST**

+FACTORY OVERHEADS

+OPENING STOCK OF WIP

-CLOSING STOCK OF WIP

---

**FACTORY COST**

(CONT.)

**FACTORY COST**

**+ADMINISTRATIVE OVERHEADS**

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**COST OF PRODUCTION**

**+OPENING STOCK OF FINISHED GOODS**

**-CLOSING STOCK OF FINISHED GOODS**

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**COST OF GOODS SOLD**

**+SELL. & DIST. OVERHEADS**

---

**COST OF SALES**

**+PROFIT**

---

**SALES**

## **4. COST CLASSIFICATION**

**Classification On basis of :**

- **Nature**
- **Function**
- **Direct & indirect**
- **Variability**
- **Controllability**
- **Normality**
- **Financial accounting classification**
- **Time**
- **Planning and control**
- **Managerial decision making**



# ON THE BASIS OF NATURE

➤ **Materials**

➤ **Labor**

➤ **Expenses**

## ON THE BASIS OF FUNCTION

- **Manufacturing costs**
- **Commercial costs – ADM and S&D Costs**

## ON THE BASIS OF DIRECT AND INDIRECT

- **Direct costs**
- **Indirect costs**

# ON THE BASIS OF VARIABILITY

- **Fixed costs**
- **Variable costs**
- **Semi variable costs**

## ON THE BASIS OF CONTROLLABILITY

- **Controllable costs**
- **Uncontrollable costs**

## ON THE BASIS OF NORMALITY

- **Normal costs**
- **Abnormal costs**

## ON THE BASIS OF FINANCIAL ACCOUNTS:

- **Capital costs**
- **Revenue costs**
- **Deferred revenue costs**



## ON THE BASIS OF TIME:

- Historical costs
- Pre determined costs

## ON THE BASIS OF PLANNING AND CONTROL:

- Budgeted costs
- Standard costs

# ON THE BASIS OF MANAGERIAL DECISION MAKING

- **Marginal costs**
- **Out of pocket costs**
- **Sunk costs**
- **Imputed costs**
- **Opportunity costs**
- **Replacement costs**
- **Avoidable costs**
- **Unavoidable costs**
- **Relevant and irrelevant costs**
- **Differential costs**

# TERMS IN COST ACCOUNTING

- **Cost unit**
- **Cost centre**
- **Cost estimation**
- **Cost ascertainment**
- **Cost allocation**
- **Cost apportionment**
- **Cost reduction**
- **Cost control**

# METHODS OF COSTING

- **Job costing**
- **Contract costing**
- **Batch costing**
- **Process costing**
- **Unit costing**
- **Operating costing**
- **Operation costing**
- **Multiple costing**

# TYPES OF COSTING

- **Uniform costing**
- **Marginal costing**
- **Standard costing**
- **Historical costing**
- **Direct costing**
- **Absorption costing**



# UNIT – 2: *Accounting for Material*

Introduction

FIFO

LIFO

AVCO

# Introduction

As inventory is usually purchased at different rates (or manufactured at different costs) over an accounting period, there is a need to determine what cost needs to be assigned to inventory. For instance, if a company purchased inventory three times in a year at SAR 50, SAR 60 and SAR 70, what cost must be attributed to inventory at the year end?

# Inventory (stock) valuation

A good estimate of closing stock is provided by three methods of stock valuation:

- **First-In-First-Out (FIFO) Method**
- **Last-In-First-Out (LIFO) Method**
- **Average Cost (AVCO) Method**

# First-In-First-Out (FIFO) Method

In this method we assume that the first set of inventory received is the first to leave the warehouse. The resulting ending inventory will be valued at current prices.

# First-In-First-Out (FIFO) Method

## Example

Bike LTD purchased 10 bikes during January and sold 6 bikes, details of which are as follows:

January 1 : Purchased 5 bikes @ \$50 each

January 5: Sold 2 bikes

January 10 : Sold 1 bike

January 15 : Purchased 5 bikes @ 70 each

January 25 : Sold 3 bikes



With reference to FIFO method, complete the following table

Date	Purchase			Issues			Inventory		
	Units	\$/Units	\$ Total	Units	\$/Units	\$ Total	Units	\$/Units	\$ Total
Jan 1									
Jan 5									
Jan 10									
Jan 15									
Jan 15									
Jan 25									
				1	70	70	4	70	280

# Last-In-First-Out (LIFO) Method

In this method we assume that the *last set of inventory received is the first to leave* the warehouse. The resulting ending inventory will be valued at older prices.

# Example (LIFO)

Same example

Date	Purchase			Issues			Inventory		
	Units	\$/Units	\$ Total	Units	\$/Units	\$ Total	Units	\$/Units	\$ Total
Jan 1									
Jan 5									
Jan 10									
Jan 15									
Jan 15									
Jan 25									
							2	70	140
							4		240

# Average Cost (AVCO) Method

In this method, *each time goods are purchased we calculate a new average cost of inventory.* The average cost is calculated using the equation

$$\text{Average cost of inventory} = \frac{\text{Total value of goods on hand} \div}{\text{Quantity of goods on hand}}$$

The resulting ending inventory will be valued at the last calculated average.

# Example:

(same example)

Date	Purchase			Issues			Inventory		
	Units	\$/Units	\$ Total	Units	\$/Units	\$ Total	Units	\$/Units	\$ Total
Jan 1									
Jan 5									
Jan 10									
Jan 15									
	Average Cost of Inventory								
Jan 25				3	64.286	192.858	4	64.286	257.144



# Exercise 1:

*Cindy Sheppard runs a candy shop. She enters into the following transactions during July:*

- *July 1 Purchases 1,200 lollypops at \$1 each*
- *July 13 Purchases 500 lollypops at \$1.20 each.*
- *July 14 Sells 700 lollypops at \$2 each.*

*Calculate the value of inventory in the end of the month*

## Exercise 2:

1 Mar opening balance 880 @ \$9

2 Mar purchase 300 @ \$6

4 Mar sell 400

6 Mar sell 600

10 Mar purchase 400 @ \$8

15 Mar purchase 500 @ \$5

22 Mar sell 900

27 Mar purchase 200 @ \$2

28 Mar sell 100

30 Mar purchase 900 @ \$3

31 Mar sell 700

What is the closing balance if this business uses the FIFO ,  
LIFO, ACCO method?

## UNIT – 3: *Machine Hour Rate (MHR)*

1. Definition
2. Concepts Related to MHR
3. Steps for computation of MHR
4. Components of Overheads
5. Procedures of Allocation of Overheads
6. Home Assignment

## Definition

Machine Hour Rate (MHR) is a method of calculating production overhead absorption rate, where the number of hours the machines are expected to work is divided into the budgeted production overhead to give a rate per hour.

# Concepts Related to MHR

- - Economic Life (N): the period over which the equipment can operate at an acceptable operating cost and productivity.
- Salvage Value (S): the price that equipment can be sold for at the time of its disposal.
- Fixed Costs: : Expenses which independent of the production
- Variable Cost: Cost which increase or decrease when the production increase or decrease.
- Overheads : indirect cost .



# Exercise:

- For each cost specify if it is fixe or variable:

Cost	Fixed	Variable
<u>Depreciation</u>		
<u>Interest</u>		
Taxes		
Rent		
Insurance		
<u>Maintenance and Repair</u>		
<u>Fuel</u>		
Power		

# Components of Overheads

- Overhead includes a large number of types of indirect costs
- Direct cost are identifiable to cost units, but overhead which are often considerable, cannot be related directly to cost units

# Stage method to allocate overhead to products

- Overheads are assigned to the cost centers such as department
- An allocation base is selected for allocating production centre expenses to products

# Procedures of overhead allocation to product

- Assign all factory overheads to cost centers
- Reallocate service-centre overheads to production cost centers
- Calculate separate overhead absorption rate for each cost centre
- Assign cost-centre overhead to products

# Assign all factory overhead to cost centers

- Cost allocation
- Cost apportionment



# Cost allocation

Where a cost can be clearly identified with a cost center or cost unit, then it can be allocated to that cost center or cost unit

# Cost apportionment

It is not possible to identify a discrete item of cost with a cost center and it is necessary to split a cost over several cost centers on some agreed basis

# Bases of apportionment

- Apportionment of indirect expenses to cost centers must be made on fair and reasonable bases
- Different types of expense require different bases according to their individual characteristics

Base of apportionment	Costs
Area	Rent and rates, heat and lighting, insurance of lighting
Machine value	Depreciation, machine insurance
No. of employees	Wages of supervisors, canteen cost

Example textbook P.183

# Reallocate service-centre overheads to production cost centers

- Service departments are not directly involved in production
- They only support service to other production departments in order to facilitate the production process
- Therefore, it is necessary to reallocate the service-centre overheads to production departments so that all production costs can be absorbed into production.
- Typical bases are listed as follows:



- Typical bases are listed as follows:

Service departments	Possible bases of apportionment
Maintenance	Maintenance labour hours, machine value
Stores	Value or weight of materials issued, number of requisitions
inspection	No. of employees, no. of jobs

Example textbook P.183

# Calculate separate overhead absorption rate for each cost centre

- To determine the overheads to be absorbed by a cost centre, it is necessary to establish an overhead absorption rate (OAR)

$$\text{OAR} = \frac{\text{Total overhead of cost centre}}{\text{Total number of units of absorption base applicable to cost centre}}$$

- An appropriate OAR should reflect the effort or time taken to produce the products
- Some commonly used absorption bases are listed as follows:

Direct labour hours	It is frequently used in the <b>labour intensive department</b> because overheads assigned to this department are closely related to the direct labour hours worked
Machine hours	It is most appropriate for the appropriate for the <b>machining department</b> since most of the overheads are closely related to machine hours

Direct wages	It is only suitable in the department where the uniform wage rate is applied
Direct materials	This method is not recommended unless the majority of overheads incurred in a department are related to materials instead of time
Units of output	This method is suitable only where all units produced in a period are identical in the production process and time. Therefore, this application is very rare



THANK YOU