

:Chapter1

Introduction to Cost Accounting

1- Cost Accounting

Field of accounting those measures, records and reports information about cost and it is care about determination of business costs especially unit costs of production. It provides the detailed cost information that management needs to control current operations and plan for the future. In other word cost accounting was bourn to adopt the needs of management of manufacturing companies for detailed information about the cost , which cannot be adopt by **Financial accounting**.

Financial accounting:

Field of accounting is mainly concerned with the final preparation of profit and loss account and balance sheet.

Profit and loss account: shows the net result of transactions.

Balance sheet: Shows the financial position of the concern.

2- Meaning and Definitions of Cost Accounting

Cost accounting (broad definition):-

“The process of identifying , summarizing and interpreting information needed for :-

- 1- Planning and control.
- 2- Management decisions.
- 3- Product costing.

Cost accounting:

“ The process of measuring , analyzing, computing and reporting the cost , profitability and performances of operations”

Concept of Cost: It “means an amount of expenditure on a given product or service.

3- The objectives of cost accounting:

- 1-Product Costing.
- 2-Inventory Valuation.
- 3-Income Determination.
- 4-To provide for an effective system.
- 5-To serve as a guide to price fixing of products.
- 6-Planning, Evaluating, and Controlling Operations.
- 7-Determine the causes of the increases and decreases in profit or loss.
- 8- Preparation comparisons of actual costs and estimated costs and report on the differences of the administration.

4- Advantages of cost accounting ✓

- A- Reduce costs by comparing the estimated costs and actual costs.
- B- Development of sales and pricing policies.
- C- To provide accurate reporting of performance at the facility.
- D- Create a spirit of competition between sections of the facility.
- E- Balancing in productivity and conserve resources wastage.
- F- Setting standards quality in the facility.
- G- Identify differences profitability as a result of the different size output.
- H- Reduction of waste in time, materials and automated work.
- I - To take advantage of previous performance reports.
- J - Cost control and reduction.
- k- Actual costs are used as a basis for building Budgets.

5- Importance of Cost Accounting

Cost accounting gives information and reports to the management in the following ways:-

A- Control of Material Cost :

Cost of material is a major portion of the total cost of a product. It can be controlled by regular supply of material and spares for production, maintaining optimum level of funds in stocks of materials and stores.

B- Control of Labour Cost:

If workers complete their work within the specified time cost of labour can be controlled.

C- Control of Overheads:

By keeping a strict check over various overheads such as factory, administrative and selling & distribution, this can be controlled.

D- Measuring Efficiency:

Cost accounting provides information regarding standards and actual performance of the concern activity for measuring efficiency.

E- Budgeting:

The preparation of the budget is the function of costing department and budgeting is done to ensure that the practicable course of action can be chalked out and the actual perform corresponds with the estimated or budgeted performance.

F-Price Determination:

On behalf of cost accounting information, management is enable to fix remunerative selling price for various items of products and services in different circumstances.

G-Expansion: The management may be able to formulate its approach to expansion on the basis of estimates of production of various levels .

6-Classification of Costs:

The various cost classifications are as follows:

1. Natural Classification of Cost: *بیرونی کردن بہ لوہوں سرورسٹی*

- (A) Material
- (B) Labour
- (C) Expenses

2. Classification into direct and indirect costs:

- (A) Direct Cost ✓
- (B) Indirect Cost ✓

3. to Variation in Production *بہ رقوم* Activity and Quantity:

- (A) Fixed Cost ✓
- (B) Variable Cost ✓
- (C) Semi-variable/Fixed Cost (Mixed Cost)

4. Functional Classification of Cost: *عہدہ الوہی دیو لینا کردن بہ ہی کارہ کار*

- (A) Manufacturing Cost *بیشہ ساری*
- (B) Selling and Distribution Cost
- (C) Administrative Cost

1. Normal Classification of Cost:

Costs should be gathered together in their natural groupings such as material, labour and other expenses. Items of costs differ on the basis of their nature. The elements of cost can be classified in the following three categories :

- (A) Material
- (B) Labour
- (C) Expenses

A- **Material Cost:** Is the cost of material of any nature used for the purpose of production of a product or a service.

B- **Labour Cost:** means the payment made to the employees, permanent or temporary, for their services.

166/20
Salaries, wages

C- **Expenses:** are other than material cost or labour cost which are involved in an activity.

2. **Classification into direct and indirect costs:**

(A) Direct Cost (B) Indirect Cost

A) Direct Material cost: all materials that become a part of the product For example, raw cotton, crude oil to make diesel etc.

B) Indirect Material Cost: “is the material that cannot be traced part of the product.

e.g. oil, grease, consumable stores etc.

C) Direct Labour Cost: the cost of wages paid to operatives who are immediately concerned with the manufacture of product.

D) Indirect Labour Cost: Some workers does not engage directly in conversion of output but contribute indirectly.e.g. wages of store-keepers, Inspectors etc.

E) Direct Expenses Cost: includes any expenditure other than direct material or direct labour.

F) Indirect Expenses Cost: “includes any expenditures other than indirect materials and indirect labour which cannot be apart of the product ” For example, insurance, power, rent, etc.

3. According to Variation in Production Activity and Quantity: Costs can be divided into

A) Fixed Cost: cost that remains unchanged in total in proportion to production volume ,e.g., rent of building, Salaries etc.

B) Variable Cost: Cost that vary in total in proportion to changes in production volume.

C) Semi-variable/Fixed Cost (Mixed Cost): cost that partly variable. In other word , an item of cost containing both fixed and variable elements; they are also known as semifixed costs. e.g. Direct Materials, Direct labour, Fuel .

4. Functional Classification of Costs:

Under this costs are classified according to the purpose for which they are incurred . on the basis of activity , the classification leads different groups they are:

A- Production cost :

Cost of an organization that has been identified with particular units of production. This , they include direct costs and appropriate elements of overhead costs.

B- Administration costs:

Cost required managing the organization and providing staff support including executive salaries , cost of data processing and legal costs.

C- Selling and distribution (marketing) costs:

Cost required obtaining customer orders and providing customer with finished products , including advertising , sales commissions , and shipping costs.



Eg1: The following information are related to one of the industrial companies to specialize production (500) units of product (A).
(Amount in dollars)

Expenses 2500 , Wages 5000 ,Materials 20000

* If you Know the sales price as following:

(250 units per 50\$ for one unit)

(200 units per 62\$ for one unit)

Required:

1- Prepare a Table shows total production cost and cost per unit by the natural classification.

2- Find profit or loss per unit and total sales.

Solution:

Details	Total cost\$	Cost per unit\$
Materials	20000	40
Wages	5000	10
Expenses	2500	5
Total cost	27500	55

$$1- \text{Cost per unit} = \frac{\text{Total cost}}{\text{Units}} = \frac{27500}{500} = 55\$$$

3- Sales price – Cost = Profit or loss

$$50-55=5\$ \text{ loss per unit}$$

$$250 \times 5= 1250\$ \text{ losses}$$

$$62-55=7\$ \text{ Profit per unit}$$

$$200 \times 7=1400\$ \text{ Profit}$$

$$1400-1250=150\$ \text{ profit}$$

Eg2: The following data are related to one of the industrial companies to specialize production (6000) units of product (A). (Amount in dollars)

Administration 6000
 Marketing cost 12000
 Manufacturing cost 36000



Required:

- 1- Prepare a table shows total production cost and cost per unit by the functional classification.
 - 2- Find profit or loss per unit and total sales.
- If you know the sales price following:
 3000 units per (12\$) for one units.
 1600 units per (7\$) for one units.

Solution:

Details	Total cost\$	Cost per unit\$
Manufacturing	36000	6
Marketing	12000	2
Cost of goods sold	48000	8
Administration	6000	1
Total cost	54000	9

Profit or loss = sales price – cost per unit
 $12 - 9 = 3\$$ profit per unit
 $3000 \times 3 = 9000\$$ profit
 $7 - 9 = -2\$$ loss per unit
 $1600 \times 2 = 3200\$$ losses
 $9000 - 3200 = 5800\$$ profit

Eg3: The following data are related to one of the industrial companies to specialize production (2000) units of product.

Direct wages 40000 Indirect wages 20000

Direct marketing expenses 4000 Indirect marketing expenses 16000

Direct materials 50000 In direct materials 16000

Direct expenses 16000 In direct expenses 8000

Administration expenses 18000 Financing expenses 12000

Required: Prepare a table shows total production cost and cost per unit by direct and indirect cost.

Solution:

Details	Total cost\$	Cost per unit\$
Direct materials	50000	25
Direct wages	40000	20
Direct expenses	16000	8
Direct marketing expenses	4000	2
Total Direct cost	110000	55
In direct materials	16000	8
In direct wages	20000	10
In direct expenses	8000	4
In direct marketing expenses	16000	8
Administration expenses	18000	9
Financing expenses	12000	6
Total in direct cost	90000	45
Total cost	200000	100

$$\text{Cost per unit} = \frac{\text{Total cost}}{\text{Units}} = \frac{200000}{2000} = 100\$$$

Eg4: The following data concerning product (1000) units of (Amount in dollars) . Direct expenses 8000 , In direct expenses 4000

In direct materials 4000 , Direct materials 10000

Administration expenses 2000, Indirect marketing expenses 8000

Direct marketing expenses 4000, Indirect wages 6000

Direct wages 5000

- Required:** 1- Prepare a table shows total production cost and cost per unit by
 a-direct and indirect cost . b-functional classification.
 2- Find profit or loss per unit and total sales,

- If you know the sales price following:
 400 units per (55\$) for one units.
 300 units per (45\$) for one units.
 300 units per (57\$) for one units.

Solution:

Direct and indirect cost

Details	Total cost\$	Cost per unit\$
Direct materials	10000	10
Direct wages	5000	5
Direct expenses	8000	8
Direct marketing expenses	4000	4
Total Direct cost	27000	27
In direct materials	4000	4
In direct wages	6000	6
In direct expenses	4000	4
In direct marketing expenses	8000	8
Administration expenses	2000	2
Total in direct cost	24000	24
Total cost	51000	51

Total cost 51000

$$\text{Cost per unit} = \frac{\text{-----}}{\text{-----}} = 51\$$$

		Units	1000
Details		Total cost\$	Cost per unit\$
Materials	Direct materials	10000	10
	In direct materials	4000	4
Wages	Direct wages	5000	5
	In direct wages	6000	6
Expenses	Direct expenses	8000	8
	In direct expenses	4000	4
Manufacturing cost		37000	37
	Direct marketing expenses	4000	4
	In direct marketing expenses	8000	8
Marketing cost		12000	12
Cost of goods sold		49000	49
	Administration expenses	2000	2
Total cost		51000	51

$$2- \text{ Cost per unit} = \frac{\text{Total cost } 51000}{\text{-----}} = 51\$$$

Units 1000

Profit or loss = sales price – cost per unit

$$55-51 = 4\$ \text{ profit per unit}$$

$$400 \times 4 = 1600\$ \text{ profit}$$

$$45-51 = -6\$ \text{ loss per unit}$$

$$300 \times (-6) = 1800\$ \text{ losses}$$

$$57-51 = 6\$ \text{ profit per unit}$$

$$300 \times 6 = 1800\$ \text{ profit } (1600+1800-1800=1600\$ \text{ Total profit})$$

Eg5:The following data concerning product (400) units and(600) units the cost shows as folloing.(Amount in dollars)

Administration expenses 12000.

Direct expenses 6000 ,

Direct materials 12000, Direct wages 8000

Variable marketing cost 8000

Fixed over head 18000, Fixed marketing cost 6000

Variable over head 8000

Required:

- 1- Calculate total cost and cost per unit at the level (400) units and (600) units by variable and fixed cost.

By variable and fixed cost

Details	Production 400 unit		Production 600 unit	
	Total cost\$	Cost per units	Total cost\$	Cost per unit\$
Direct materials	12000	30	18000	30
Direct wages	8000	20	12000	20
Direct expenses	6000	15	9000	15
Variable overhead	10000	25	15000	25
Variable Marketing cost	8000	20	12000	20
Variable costs	44000	110	66000	110
Fixed over head	18000	45	18000	30
Fixed marketing cost	6000	15	6000	10
Administration expenses	12000	30	12000	20
Fixed cost	36000	90	36000	60
Total cost		200		170

Eg6:The following data concerning with product (1500) units and the cost shows as folloing.(Amount in dollars)

Administration expenses 15000.

Direct expenses 6000 , Direct materials 12000

Direct wages 15000

Variable marketing cost 12000, Variable over head 9000

Fixed over head12000 ,Fixed marketing cost 18000

Required:

- 1- Calculate total cost and cost per unit at the level (1500) units and (2000) units by variable and fixed cost.

By variable and fixed cost

Details	Production 1500 unit		Production 2000 unit	
	Total cost\$	Cost per units	Total cost\$	Cost per unit\$
Direct materials	12000	8	16000	8
Direct wages	15000	10	20000	10
Direct expenses	6000	4	8000	4
Variable overhead	9000	6	12000	6
Variable Marketing cost	12000	8	16000	8
Variable costs	54000	36	72000	36
Fixed over head	12000	8	12000	6
Fixed marketing cost	18000	12	18000	9
Administration expenses	24000	16	24000	12
Fixed cost	54000	36	54000	27
Total cost	108000	72	108000	63