

كلية المستقبل الجامعة

قسم المحاسبة

محاسبة التكاليف المتقدمة

**Standard costing**

**Introduction to costs**

استاذ المادة

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**Concept of Cost Accounting :**

Cost accounting is the process of recording, classifying, analyzing, summarizing, and allocating costs associated with a process. Following functional activities are included in the scope of cost accounting :

1. **Cost Book Keeping :** It involves maintaining complete record of all costs incurred from their incurrence to products and services .
2. **Cost Systems :** Systems and procedures are devised for proper accounting for costs . A cost accounting system is a framework used by firms to estimate the cost of their products for profitability analysis .
3. **Cost Ascertainment :** Ascertaining cost of products, processes, jobs, services, etc., it is the important function of cost accounting .
4. **Cost Analysis :** It involves the process of finding out the causal factors of actual costs varying from the budgeted costs and fixation of responsibility for cost increases .
5. **Cost Comparisons :** Cost accounting also includes comparisons between cost from alternative courses of action .
6. **Cost Control :** Cost accounting is the utilization of cost information for exercising control . It involves a detailed examination of each cost .
7. **Cost Reduction :** It is the process used by companies to reduce their costs and increase their profits . Depending on a company's services or product, the strategies can vary .
8. **Cost Reports :** Presentation of cost is the ultimate function of cost accounting . These reports are primarily for use by the management at different levels .

## **Objectives of Cost Accounting :**

There is a relationship among information needs of management, cost accounting objectives, and techniques and tools used for analysis in cost accounting . Cost accounting has the following main objectives to serve :

1. Determining selling price .
2. Controlling cost ,
3. Providing information for decision making .
4. Ascertaining costing profit .
5. Facilitating preparation of financial and other statements .

## **Importance of Cost Accounting :**

The limitation of financial accounting has made the management to realize the importance of cost accounting . The importance of cost accounting are five points, as follows :

1. **Importance to Management :** Cost accounting provides invaluable help to management. It is difficult to indicate where the work of cost accountant ends and managerial control begins .
2. **Importance to Employees :** Worker and employees have an interest in which they are employed . An efficient costing system benefits employees through incentives plan in their enterprise .
3. **Cost accounting and creditors :** Suppliers, investor's financial institution and other moneylenders have a stake in the success of the business concern and therefore are benefited by installation of an efficient costing system .
4. **Importance to National Economy :** An efficient costing system benefits national economy by stepping up the government revenue by achieving higher production .



## Examples :

### Example (1) :

Freedman Company had the following account balances as of August 1, 2018 :

Raw Materials (direct and indirect) Inventory	\$18600
Work in Process Inventory	28000
Finished Goods Inventory	36000

During August, the company incurred the following factory costs :

1. Purchased \$164000 of raw materials on account .
2. Issued \$180000 of raw materials, of which \$134000 were direct to the product .
3. Factory payroll of \$88000 was accrued; \$62000 was for direct labor and the rest was for supervisors .
4. Utility costs were accrued at \$7000; of these costs, \$1600 were fixed .
5. Property taxes on the factory were accrued in the amount of \$2000 .
6. Prepaid insurance of \$1600 on factory equipment expired in August .
7. Straight-line depreciation on factory equipment was \$40000 .
8. Predetermined overhead of \$125000 (\$56000 variable and \$69000 fixed) was applied to Work in Process Inventory .
9. Goods costing \$342400 were transferred to Finished Goods Inventory .
10. Sales on account totaled \$700000, and Cost of goods sold was \$350000 .
11. Selling & administrative costs were \$280000 (credit Various Accounts) .
12. Ending WIP inventory is \$6600, and ending finished goods is \$26000 .

Required : Journalize the transactions for August .

Solution :

- |                            |          |          |
|----------------------------|----------|----------|
| 1. Raw Materials Inventory | \$164000 |          |
| Accounts Payable           |          | \$164000 |

2.	Work In Process Inventory	\$134000	
	Variable Overhead Control	\$46000	
	Raw Materials Inventory		\$180000
3.	Work in Process Inventory	\$62000	
	Fixed Overhead Control	\$26000	
	Salaries and Wages Payable		\$88000
4.	Variable Overhead Control	\$5400	
	Fixed Overhead Control	\$1600	
	Utilities Payable		\$7000
5.	Fixed Overhead Control	\$2000	
	Property Taxes Payable		\$2000
6.	Fixed Overhead Control	\$1600	
	Prepaid Insurance		\$1600
7.	Fixed Overhead Control	\$40000	
	Accumulated Depreciation - Factory Equipment		\$40000
8.	Work in Process Inventory	\$125000	
	Variable Overhead Control		\$56000
	Fixed Overhead Control		\$69000
9.	Finished Goods Inventory	\$342400	
	Work in Process Inventory		\$342400
10.	Accounts Receivable	\$700000	
	Sales		\$700000

Cost of Goods Sold	\$350000	
Finished Goods Inventory		\$350000
11. Selling & Administrative Expenses	\$280000	
Various Accounts		\$280000
12. No Entry		

**Example (2) :**

German Co. manufactures insulated windows . The firm has encountered a problem in budgeting maintenance . The cost is apparently a mixed cost and varies most directly with machine hours worked . The following data have been gathered from recent operations and may help describe the relationship :

<u>Month</u>	<u>Machine Hours</u>	<u>Maintenance Costs</u>
January	1500 Hour	\$7000
February	2000 Hour	\$8000
March	3000 Hour	\$10000
April	2500 Hour	\$9000
May	4000 Hour	\$12000
June	3000 Hour	\$10000

Required : Separate the mixed costs to variable and fixed cost by using the high-low method .

Solution :

<u>Data</u>	<u>Machine Hours</u>	<u>Repairs and Maintenance Costs</u>
High activity	4000 Hour	\$12000
Low activity	1500 Hour	\$7000
Changes	2500 Hour	\$5000



$$\text{Variable Cost Per Unit} = \frac{\text{Change in the Total Cost}}{\text{Change in Activity Level}}$$

$$= \frac{\text{Cost at High Activity Level} - \text{Cost at Low Activity Level}}{\text{High Activity Level} - \text{Low Activity Level}}$$

$$= \frac{12000 - 7000}{4000 - 1500} = \underline{\$2 \text{ Per Hour}}$$

$$\text{Variable Cost at High Activity Level} = \text{Variable Cost Per Unit} \times \text{Activity Volume}$$

$$= 2 \times 4000 = \underline{\$8000}$$

$$\text{Fixed Cost at High Activity Level} = 12000 - 8000 = \underline{\$4000}$$

<u>Month</u>	<u>Fixed Costs</u>	<u>Variable Costs</u>	<u>Total Costs</u>
January	\$4000	\$3000	\$7000
February	\$4000	\$4000	\$8000
March	\$4000	\$6000	\$10000
April	\$4000	\$5000	\$9000
May	\$4000	\$8000	\$12000
June	\$4000	\$6000	\$10000

## Exercises :

### Exercise (1) :

Mandela Company applies overhead at the rate of \$6 per direct labor hour .  
The following transactions occurred during April 2018 :

1. Purchased \$350000 of raw materials on account .
2. Issued \$250000 of raw materials, of which \$200000 were direct to the product .
3. Factory payroll of \$175000 was accrued; \$150000 was for direct labor and the rest was for supervisors .
4. Utility costs were accrued at \$15000; of these costs, \$3000 were fixed .
5. Property taxes on the factory were accrued in the amount of \$5000 .
6. Straight-line depreciation on factory equipment was \$80000 .
7. Goods costing \$525000 were transferred to Finished Goods Inventory .
8. Selling & administrative costs were \$90000 (credit Various Accounts) .

Required : Prepare journal entries for the above transactions .



### Exercise (2) :

The Evanston Games company builds tabletop replicas of some of the most famous lighthouses in North America . The company is highly automated and, thus, maintenance cost is a significant organizational expense . The company's owner has decided to use machine hours as a basis for predicting maintenance costs and has gathered the following data from the prior 6 months of operations :

<u>Month</u>	<u>January</u>	<u>February</u>	<u>March</u>	<u>April</u>	<u>May</u>	<u>June</u>
Machine Hours	2000	3000	2500	3500	4000	3000
Maintenance Costs	\$9000	\$11000	\$9500	\$12000	\$13000	\$10000

Required : Separate the mixed costs to variable and fixed cost by using the high-low method .