SENGAMALA THAYAAR EDUCATIONAL TRUST WOMEN'S COLLEGE-MANNARGUDI

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CLASS :II-B.COM

SUBJECT :COST ACCOUNTING

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UNIT :IV

What Is Overhead

- What Is Overhead?
- Overhead refers to the ongoing business expenses not directly attributed to creating a product or service. It is important for budgeting purposes but also for determining how much a company must charge for its products or services to make a profit. In short, overhead is any expense incurred to support the business while not being directly related to a specific product or service

Types of Overheads

- **1. Fixed overheads**
- Fixed overheads are costs that remain constant every month and do not change with changes in business activity levels. Examples of fixed overheads include salaries, rent, property taxes, depreciation of assets, and government licenses

- ***2.* Variable overheads**
- Variable overheads are expenses that vary with business activity levels, and they can increase or decrease with different levels of business activity. During high levels of business activity, the expenses will increase, but with reduced business activities, the overheads will substantially decline or even be eliminated.

- **3. Semi-variable overheads**
- A business may incur such costs at any time, even though the exact cost will fluctuate depending on the business activity level. A semi-variable overhead may come with a base rate that the company must pay at any activity level, plus a variable cost that is determined by the level of usage.

Overhead Problem

	Rs.
Total Overhead for the period	24,000
Total Direct Labour hours	3,200
Total Direct Wages	6,400
Total Direct Materials used	12,000
Total Machine hours	4,800
Total Units produced	180

Direct Labour hour OAR = Rs. $\frac{24,000}{3,200}$ = Rs. 7.5

Direct Wages OAR = Rs. $\frac{24,000}{6,400} \times 100$ = 375% of wages

Direct Materials Overhead

Absorption rate = Rs. $\frac{24,000}{12,000} \times 100$ = 200% of materials

Prime Cost OAR = Rs. $\frac{24,000}{18,400} \times 100$ = 130% of Prime Cost

Machine Hour OAR = Rs. $\frac{24,000}{4,800}$ = Rs. 5.00 per machine hour

Cost Unit OAR = Rs. $\frac{24,000}{180 \text{ units}}$ = Rs. 133.33 overhead per unit produced.

S. will Ltd. has two production departments A, B and one service department S. The actual costs for a period are as follows:

	Rs.		Rs.
Power	1,750	Sundries	1,600
Lighting	1,600	Depreciation on Machinery	6,000
Rent and Rates	6,000		
Indirect wages	4,000		

The other particulars are :

	Production Departments		Service Department
	A	B	S
Working Hours	4,000	3,000	2,000
Direct wages (Rs.)	3,000	2,000	3,000
Cost of Machinery	75,000	50,000	25,000
H.P. of Machinery	60	30	10
Light points	18	12	10
Floor Area (sq. ft.)	1,000	1,200	800

Apportions the costs of the various departments on most equitable basis.

Solution

Primary Distribution Summary

Items	*Basis of Apportionment*	*Total* Rs.	*A* Rs.	*B* Rs.	*S* Rs.
Power	Horse Power × hours 24 : 9 : 2	1,750	1,200	450	100
Lighting	Light points 9 : 6 : 5	1,600	720	480	400
Rent and Rates	Area occupied 5 : 6 : 4	6,000	2,000	2,400	1,600
Indirect Wages	Direct wages 3 : 2 : 3	4,000	1,500	1,000	1,500
Sundries	Direct wages 3 : 2 : 3	1,600	600	400	600
Depreciation	Cost of Machinery 3 : 2 : 1	6,000	3,000	2,000	1,000
		20,950	9,020	6,730	5,200

Classification

- According to elements overhead is divided into : i) Indirect materials ii) Indirect labour iii) Indirect expenses
- i) Indirect materials : It is that material which does not form a part of the finished product or saleable service. Examples of indirect materials are : coal, lubricating oil, grease, sand paper used in polishing, etc. There are some items which may become a part oil the Fish product like nuts, screws, bolts, pins, etc., but these are still considered as indirect materials for costing purposes as their cost is comparatively small.

- ii) Indirect labour : Indirect labour is not directly engaged in the production operations. They only assist or help in production operations. Examples of indirect labour are supervisor, clerk, cleaner, inspector, peon, watchmen, etc. Remuneration paid to these employees is considered as indirect labour cost.

Cost Reconciliation Statement

- **Cost Reconciliation Statement**
- In a manufacturing concern two accounts financial and cost accounts both are used. They are two different accounting systems that are maintained separately. Profit and loss account is prepared under financial account. Unlike that cost sheet is prepared under cost account. Profit and loss account shows net profit or net loss of the firm by summarizing actual incomes and expenses for a specified period.

- **NEEDS OF RECONCILIATION**
- It ensures the reliability of cost data.
- It helps to check the arithmetic accuracy of both sets of account.
- It helps to decision making internal control.
- Management is enabling to know the reason for the difference in results of both cost and financial accounts

- **METHODS OF PREPARING COST RECONCILIATION STATEMENT**
- **1.On the basis on net profit**
- Net profit of cost account
  Net profit of financial account
- **2.On the basis of net loss**
- Net loss of cost account
  Net loss of financial account

Memorandum Reconciliation Account

Dr. | Cr.

		Rs.			Rs.
To	Financial Expenses debited in financial accounts :		By	Profit as per Cost Accounts	***
	Discount ***		"	Financial Incomes not recorded in Cost Accounts	
	Fines and Penalties ***			Rent received ***	
	Loss on Sale of Assets ***			Interest received ***	***
	Bank Interest ***		"	Dividend/Profit on Sale of Assets	***
	Donations ***		"	Items charged only in cost accounts	***
	Preliminary expenses &		"	Over-absorption of overheads	***
	Goodwill written off ***	***	"	Over-valuation of opening stock (in cost)	***

Reconciliation Statement

- **1. From the following data, prepare a Reconciliation Statement to find out profit as per Financial Accounts:**

	Rs.
Profit as per Cost Accounts	2,50,000
Works overheads over-absorbed	20,000
Administration overheads under-absorbed	45,000
Under valuation of opening Stock in Cost Accounts	15,000
Bad Debt written off during the year	14,000
Preliminary expenses written off during the year	10,000

[C.U. B.Com. (Hons.) 2005]

Solution :

Reconciliation Statement

	Rs.	Rs.
Profit as per Cost Accounts		2,50,000
Add : Over-absorbed works overhead in Cost Accounts		20,000
		2,70,000
Less : Under-absorbed Administration Overheads in Cost Accounts	45,000	
Under-valuation of Opening Stock in Cost Accounts	15,000	
Items not charged in Cost Accounts		
— Bad debts written off	14,000	
— Preliminary expenses written off	10,000	84,000
Profit as per Financial Accounts		1,86,000

Over-Absorption and Under-Absorption of Overheads:

- Usually overheads are absorbed on the basis of predetermined rates. Since predetermined overhead rates are based on budgeted overheads and budgeted production, invariably the overheads absorbed by this process do not agree with the actual overheads incurred for the period.

- If the absorbed overheads at predetermined rates are greater than actual overheads, this is known as OVER-ABSORPTION. Conversely, if absorbed overheads ae less than the actual overheads, this is known as UNDER-ABSORPTION.

- **Treatment of Over-absorption or Under-absorption in Cost Accounts:**
- (i) Rs.2,40,000 should be transferred to Costing Profit & Loss Account as under- absorption has been caused by abnormal factors.
- (ii) Rs.1,60,000 should be charged to units produced.
- **So, the distribution should be as follows:**
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Cost of Sales A/c $= \frac{1,60,000 \times 30,000}{40,000} =$ Rs. 1,20,000

Finished Goods Stock A/c $= \frac{1,60,000 \times 10,000}{40,000} =$ Rs. 40,000

(Ratio 3 : 1 i.e. 40,000 - 30,000 = 10,000 finished goods stock).

Definition of Absorption Costing

- Absorption costing (also known as full absorption costing) indicates that all of the manufacturing costs have been assigned to (absorbed by) the units of goods produced. In other words, the cost of a finished product includes the costs.
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Classification Of Overheads

- The overheads can be classified into in the following ways on the basis of function wise classification.
- **. Production Overhead**
- It is otherwise called as manufacturing overhead, works overhead and factory overhead. All the indirect expenses, which are incurred in the factory premises in connection with the production of any goods and services, are treated as production overhead. Factory rent, rates, lighting, heating, idle time wages, depreciation of factory, building, plant and machinery, canteen expenses and the like are some of the examples of production overhead.

- **2. Administration Overhead**
- The term administration refers to the formulation of policy, direction, control and management of affairs. The general functional expenses are included in the administration overhead. In other words, administrative services are necessary for the effective operation of any business. Hence, such service expenses are treated as administration overhead. The printing and stationary for administration, rent, rates, insurance of general office, bank charges, telephone, postage, and the like are the examples of administration overhead.

- **3. Selling Overhead**
- The selling overhead refers to the cost of selling function ie the cost of activities relating to create and stimulate demand for company products and to secure orders. Salaries, Commission and traveling expenses of sales representatives and executives, advertising and publicity expenses, samples, printing of price lists, discounts, rebates, bad debts and the like are the examples of selling overhead.

- **4. Distribution Overhead**
- The term distribution refers to the activities relating to the sequence of operation starts from making the packed product available for dispatch and ends with making reconditioned returned empty package available for reuse.

- **5. Research and Development Overhead**
- Research overhead is the cost of searching for new products, new techniques for production or finding new equipment. The development overhead is the cost of implementation of research result on commercial basis. Cost of raw materials used for research, salaries and wages of R and D department staff, subscription to books and journals, subscription to research association, patent feeds and the like are examples of research and development overhead.

UNIT-V

- **Definition of Job Costing:**
- According to Eric Kohler, “Job costing is a method of cost accounting whereby cost is compiled for a specific quantity of product, equipment, repair or other service that moves through the production process as a continuously identifiable unit, applicable material, labor, direct expenses and usually a calculated portion of the overhead being charged to job order”

- **<u>Features of Job Costing</u>:**
- **1.Job costing is adopted in concern where the work done is analysed into different jobs, each job being considered a separate unit of cost..**
- **2.A separate account is opened for each job to which all expenses incurred on that job, from the date of commencement till the date of completion are debited. This will enable the concern to know the cost of each job.**
- **3.As each job is different from other jobs, each job needs separate treatment under job costing.**

- 4.By comparing the actual cost of each job against the price charged for each job, the profit or loss made on each job is ascertained.
- 5.Under this method, the cost of each job and the profit or loss made on each job undertaken is found out separately.
- 6.Under this method, production is intermittent and not continuous

- (Problem)
- A job No. 58 passes through three departments namely X, Y and Z. The following information is given to you regarding this job:

	Departments		
	X	Y	Z
Materials Issued to Job	$8,000	$1,000	$500
Direct Labor hours for job	1,000	2,000	5,000
Rate of direct labor per hour	$1.00	$1.50	$2.00
Sale of scrap of materials arising from job	$1,000	$150	$100
Total overhead for the departments	$10,000	$15,000	$25,000
Total labor hours for the departments	10,000	30,000	40,000

Job Cost Sheet

			$
Materials (Less Scrap):	$		
Dept. X	7,000		
Dept. Y	850		
Dept. Z	400		8,250
Direct Wages:			
Dept. X: 1,000 hours @ $1 per hour	1,000		
Dept. Y: 2,000 hours @ $1.50 per hour	3,000		
Dept. Z: 5,000 hours @ $2 per hour	10,000		14,000
		Prime Cost	**22,250**
Overheads:	$		
Department X	1,000		
Department Y	1,000		
Department Z	3,125		5,125
		Total Cost	**27,375**

Calculation of overhead chargeable to Job No. 58 has been made as follows:

Department X:

$$= \frac{\text{Total Overheads in the Department}}{\text{Total labor hours in the Department}} \times \text{Labor hours in Dept. for job No. 58}$$

$$= \frac{10{,}000}{10{,}000} \times 1{,}000 = \$1{,}000$$

Department Y:

$$= \frac{15{,}000}{30{,}000} \times 2{,}000 = \$1{,}000$$

Department Z:

$$= \frac{25{,}000}{40{,}000} \times 5{,}000 = \$3{,}125$$

- **Contract Costing:**
- Contract Costing is a special type of job costing where the unit of cost is a single contract. The contract itself is a cost center and is executed under the customer's specifications. Contract costing is a variant of job costing system applicable particularly in case of the organization's doing construction work. It is also known as terminal costing. Each contract, short term or long term is treated as a job

- **Difference between Job Costing and Contract Costing**
- The difference between job costing and contract costing are:
- **Size**
- Job costing refers to very small work while contract costing refers to large work like building a bridge.

- **Recording of expense**
- All kinds of expenses are not charged to the job account. All kinds of expenses either direct or indirect are charged to the contract account.

- **Profit Determination**
- Under job order costing profit is determined after all cost related to the job is incurred.
- But under contract costing as it is operated for several years so each year-end an estimated profit is determined which is known as notional profit.

- **Complexity in accounting**
- Under job order costing Complexity in accounting is lower. But Under contract costing Complexity in accounting is high.
- **Work Place**
- Under job order costing work is done in the company’s factory. But Under contract costing work is done in the worksite

- **Payroll**
- The payroll is prepared either at the site or at a central administrative office.
- **Control**
- The scale of operations and cost control becomes difficult due to the theft of materials, labor time utilization, pilferages, etc.

Contract Costing Problem

- **From the following particulars relating to a contract, prepare (a) the Contract Account, (b) Contractee's Account and (c) relevant entries in the Balance Sheet:**

	Rs.
Materials sent to site	85,349
Labour engaged on site	74,375
Plant installed at cost	15,000
Direct expenditure	4,126
Establishment charges	3,167
Materials returned to stores	549
Work certified	1,95,000
Cost of work not certified	4,500
Materials on hand, Dec. 31	1,883
Wages accrued on December, 31	2,400
Direct expenditure accrued on Dec. 31	240
Value of plant, Dec. 31	11,000

- The contract price has been agreed at Rs.2,50,000. Cash has been received from the contracted amounting to Rs.1,80,000.
- SOLUTION:

Solution

Contract Account

Dr.			Rs.				Cr. Rs.
To	Materials sent to site		85,349	By	Materials returned to store		549
"	Wages	74,375		"	Materials on hand		1,883
	Add Accrued	2,400	76,775	"	Plant		11,000
"	Plant		15,000				13,432
"	Direct Exp	4,126		"	Work-in-Progress :		
	Add Accrued	240			Work certified	1,95,000	
			4,366		Cost of work		
"	Establishment charges		3,167		not certified	4,500	1,99,500
"	Profit c/d		28,275				2,12,932
			2,12,932				
"	Profit & Loss a/c		17,400	By	Profit b/d		28,275
"	Work-in-Progress		10,875				
			28,275				28,275

Contractee's Account

		Rs.			Rs.
To	Contract A/c	1,95,000	By	Bank	1,80,000
			"	Balanced c/d	15,000
		1,95,000			1,95,000

Balance Sheet

as on Dec. 31

	Rs.			Rs.
Outstanding wages	2,400	Work-in-Progress :		
Outstanding expenditure	240	Value of work certified	1,95,000	
		Cost of work uncertified	4,500	
			1,99,500	
		Less : Profit in suspense	10,875	
			1,88,625	
		Less : Cash received	1,80,000	
				8,625
		Materials on hand		1,883
		Plant at site		11,000

Note : Calculation of Profit taken to the credit of Profit and Loss Account :

$$\frac{2}{3} \times 28,275 \times (1,80,000 \div 1,95,000) = \text{Rs. } 17,400$$

- **Process Costing: Definition**
- Process costing is a form of operations costing which is used where standardized homogeneous goods are produced. This costing method is used in industries like chemicals, textiles, steel, rubber, sugar, shoes, petrol, etc. Process costing is also used in the assembly type of industries. It is assumed in process costing that the average cost presents the cost per unit.

- **Features of Process Costing**
- The production is continuous
- The product is homogeneous
- The process is standardized
- The output of one process becomes the raw material of another process
- The output of the last process is transferred to finished stock
- Costs are collected process-wise
- Both direct and indirect costs are accumulated in each process
- If there is a stock of semi-finished goods, it is expressed in terms of equivalent units
- The total cost of each process is divided by the normal output of that process to find out the cost per unit of that process

Process Costing Problem :

- The product of a manufacturing concern passes through two processes A and B and then to finished stock. It is ascertained that in each process normally 5% of the total weight is lost and 10% is scrap which from processes A and B realizes Rs.80 per ton and Rs.200 per ton, respectively:
- The following are the figures relating to both the processes:

	Process A	Process B
Materials in tons	1,000	70
Cost of materials in rupees per ton	125	200
Wages in rupees	28,000	10,000
Manufacturing expenses	8,000	5,250
Output in tons	830	780

Solution

Process A Account

Dr. *Cr.*

	Qnt.	Rate	Amount			Qnt.	Rate	Amount
		Rs.	Rs.				Rs.	Rs.
To Materials	1,000	125	1,25,000	By	Normal			
" Wages			28,000		Loss 5%	50		
" Manufacturing			8,000	"	Scrap 10%	100	80	8,000
Expenses				"	Abnormal			
					Loss	20	180	3,600
				"	Process B	830	180	1,49,400
	1,000		1,61,000			1,000		1,61,000

Cost per unit = Rs. $\frac{1,61,000 - 8,000}{31850}$ = Rs. 180

Process B Account

Dr. *Cr.*

	Qnt.	Rate	Amount			Qnt.	Rate	Amount
		Rs.	Rs.				Rs.	Rs.
To Process A A/c	830	180	1,49,400	By	Normal Loss			
" Materials	70	200	14,000		5% of 900	45	—	—
" Wages			10,000	"	Normal			
" Manufacturing			5,250		scrap 10%	90	200	18,000
Expenses				"	Finished	780	210	1,63,800
" Abnormal gains	15	210	3,150		goods			
	915		1,81,800			915		1,81,800

Working Note :

1. Cost per ton = $\frac{\text{Total Cost} - \text{Value of Scrap}}{\text{Output}} = \frac{1,78,650 - 18,000}{900 - 135}$ = Rs. 210 per ton

Meaning of Operating Costing

- Operating costing is a process and technique of accumulating and ascertainment of cost for providing a standardized service to the public or to an undertaking

- Features of Operating Costing
- The basic features of operating costing are presented below.
- 1. Uniform service is provided to all the customers.
- 2. The costs are classified into fixed and variable.
- 3. The fixed and variable cost classification is necessary to ascertain the cost of service and the unit cost of service.
- 4. There is no physical stock of article if an undertaking renders a service.
- 5. If a cost center is operating for an undertaking, there is no sale of service but render the service. In other words, if a cost center is operating for public, it sells its service to the public.
- 6. The cost unit may be simple in certain cases or composite or compound in other cases like transport undertakings.

- 7. Total costs are averaged over the total amount of service rendered.
- 8. The costs are collected from the authentic documents like daily log sheet, operating cost sheet, boiler house cost sheet, canteen cost sheets etc.
- 9. Operating cost is the cost of rendering service.
- 10. Operating costing is the method of ascertaining costs.
- 11. The productive enterprises can quote prices by ascertaining cost data.