

# Accounting for Overheads

## Overhead Cost

### Production O/H cost

O/H cost that incurred in the production process.

EX:

1. Factory rent,
2. Factory machine depreciation
3. Factory building rent
4. Factory building electricity expense
5. Supervisor salary

### Selling & Distribution O/H cost

O/H cost that incurred in promoting sales & retaining customers, and the expenses incurred from the stage the product is finished till it reach to customers.

EX:

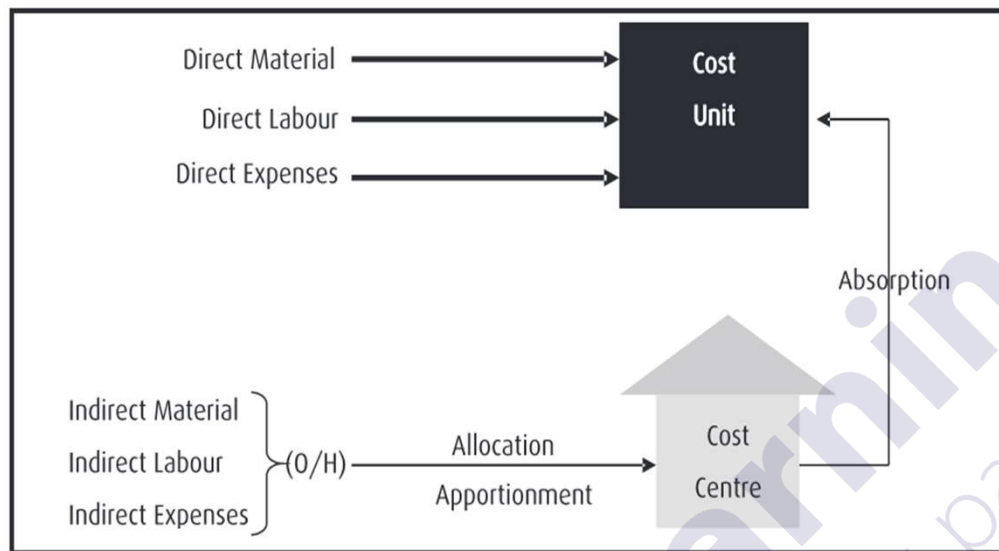
1. Sales staff salary
2. Advertising expense
3. Market research exp
4. Travelling Exp
5. Carriage Outwards

### Administration O/H cost

O/H cost that incurred for daily operations of the company other than Production O/H and marketing O/H.

EX:

1. Office rent
2. Office staff salary
3. Audit fee
4. Legal expenses
5. Insurance expense
6. Office electricity expense



#### **Process of distribution overheads**

Distribution overhead costs among cost centres which can't be identified easily for each cost centres. This is known as distribution of overheads and following are the relevant steps.

1. Collection of overhead costs
2. Allocation of overhead costs
3. Apportionment of overhead costs
4. Absorption of overhead costs

### Collection of overhead costs

Cost could be recognized by the following source documents relevant for each expenses.

|           |                                                                                                                                            |                                                                                                                                           |
|-----------|--------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| Example : | <b>Overhead cost item</b>                                                                                                                  | <b>Source document</b>                                                                                                                    |
|           | <ul style="list-style-type: none"><li>• Indirect wages</li><li>• Electricity expenses</li><li>• Depreciation used for production</li></ul> | <ul style="list-style-type: none"><li>• Salary pay sheet</li><li>• Electricity bill / voucher</li><li>• General journal voucher</li></ul> |

### Allocation of overhead costs

- Distribute overhead costs among cost centres which can be identified easily for each cost centre.

|                  |                                                                                                                                                                   |
|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Example :</b> | <ul style="list-style-type: none"><li>• Receipt of electricity bill for each cost centre</li><li>• Preparation of salary pay sheet for each cost centre</li></ul> |
|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### Apportionment of overhead head costs

Distribute overhead costs among cost centres which cannot be identified directly for each cost centre by using reasonable base.

Primary Distribution

Secondary Distribution

- Distribute overhead costs which cannot be directly or easily identified with a particular cost center over the production and service departments known as primary distribution.

- Redistribution of overhead costs of service cost centres to the production department by using reasonable base.

### Examples for bases of Apportionment

| Cost item                                                      | Base of portionment      |
|----------------------------------------------------------------|--------------------------|
| Electricity<br>Rent<br>Rates<br>Repair of building<br>Lighting | Floor area / square feet |
| Water bills<br>Electricity bills<br>Telephone expenses         | Units consumed           |

|                                                                                                                                        |                                                  |
|----------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|
| Medical expenses<br>Restaurant Keeping expenses<br>Indirect wages<br>Expenses of welfare<br>Employee insurance<br>Supervision expenses | Number of employees                              |
| Machine depreciation<br>Machine insurance                                                                                              | Value of machinery / carrying value              |
| Expenses of service department                                                                                                         | Number of stores requisitions / consumption rate |
| Maintenance expenses                                                                                                                   | Number of hours spent for maintenance            |
| Expenses of air conditioning                                                                                                           | Volume                                           |

### **Absorption of overhead costs**

Charging or absorbing total over head cost pertaining to production department to a cost unit can be termed as absorption of overheads.

Overhead absorption rates can be calculated by dividing budgeted overhead cost from a number of units or using an appropriate base.

**Example :**

| Overhead Absorption Rate      | Method of Calculation                                                                            |
|-------------------------------|--------------------------------------------------------------------------------------------------|
| 1. Output Basis               | $\frac{\text{Total estimated overhead costs}}{\text{Estimated number of units product}}$         |
| 2. Direct material cost basis | $\frac{\text{Total estimated overhead costs}}{\text{Estimated direct material cost}} \times 100$ |

|                             |                                                                                                |
|-----------------------------|------------------------------------------------------------------------------------------------|
| 3. Direct labour cost basis | $\frac{\text{Total estimated overhead costs}}{\text{Estimated direct labour cost}} \times 100$ |
| 4. Prime cost basis         | $\frac{\text{Total estimated overhead costs}}{\text{Estimated prime cost}} \times 100$         |
| 5. Direct labour hour basis | $\frac{\text{Total estimated overhead costs}}{\text{Estimated direct labour hours.}}$          |
| 6. Machine hour basis       | $\frac{\text{Total estimated overhead costs}}{\text{Estimated machine hours}}$                 |

**Example : 01**

PWS PLC has five departments; P1, P2, P3 and P4 are production departments and S1 is a service department. The information given below relates to a two-weeks period of PWS.

|                         | Rs.   |
|-------------------------|-------|
| Repairs to plants       | 4,000 |
| Rent                    | 5,000 |
| Depreciation on plants  | 2,400 |
| Supervision             | 8,000 |
| Insurance on stocks     | 3,000 |
| Employees' insurance    | 1,200 |
| Electricity on lighting | 3,600 |

The following data are also available in respect of the five departments:

|                       | P <sub>1</sub> | P <sub>2</sub> | P <sub>3</sub> | P <sub>4</sub> | S <sub>1</sub> |
|-----------------------|----------------|----------------|----------------|----------------|----------------|
| Area occupied (Sq.ft) | 140            | 120            | 110            | 90             | 40             |
| No. of employees      | 25             | 20             | 10             | 10             | 5              |
| Total wages (Rs.)     | 10,000         | 8,000          | 5,000          | 5,000          | 2,000          |
| Value of plant (Rs.)  | 20,000         | 18,000         | 16,000         | 10,000         | 6,000          |
| Value of stock (Rs.)  | 15,000         | 10,000         | 5,000          | 2,000          | -              |

You are required to apportion the costs to the various departments on the equitable basis.

**Overhead apportionment sheet**

| Item                    | Basis            | Total<br>Rs. | Production     |                |                |                | Service        |
|-------------------------|------------------|--------------|----------------|----------------|----------------|----------------|----------------|
|                         |                  |              | P <sub>1</sub> | P <sub>2</sub> | P <sub>3</sub> | P <sub>4</sub> | S <sub>1</sub> |
| Repairs to plants       | Plant value      | 4,000        | 1,143          | 1,029          | 914            | 571            | 343            |
| Rent                    | Area occupied    | 5,000        | 1,400          | 1,200          | 1,100          | 900            | 400            |
| Depreciation-plant      | Plant value      | 2,400        | 686            | 617            | 548            | 343            | 206            |
| Supervision             | No. of employees | 8,000        | 2,857          | 2,286          | 1,143          | 1,143          | 571            |
| Insurance on stocks     | Stock value      | 3,000        | 1,406          | 937            | 469            | 188            | -              |
| Employees' insurance    | Wages            | 1,200        | 400            | 320            | 200            | 200            | 80             |
| Electricity on lighting | Area occupied    | 3,600        | 1,008          | 864            | 792            | 648            | 288            |
|                         |                  | 27,200       | 8,900          | 7,253          | 5,166          | 3,993          | 1,888          |

### Production cost per unit

#### Direct Cost

|                 |     |
|-----------------|-----|
| Direct Material | 100 |
| Direct Labour   | 200 |
| Direct Other    | 300 |

#### Production Overhead cost

|               |            |
|---------------|------------|
| Cost center A | 50         |
| Cost center B | <u>120</u> |

Total Production Cost **770**

Under or Over  
Absorption of  
Overheads

Under absorption of O/H

When the amount absorbed is less than the actual overhead incurred, there is under absorption.

Amount absorbed < Amount incurred  $\Rightarrow$  Under absorption

Over absorption of O/H

When the amount absorbed is more than the amount of overhead incurred, there is over absorption.

Amount absorbed > Amount incurred  $\Rightarrow$  Over absorption

2025 July

1.4 The following information has been extracted from **Sun Ltd.** for the month of June 2025:

|                                            |              |
|--------------------------------------------|--------------|
| Actual overhead cost for the month         | Rs.840,000/- |
| Budgeted overhead cost for the month       | Rs.800,000/- |
| Budgeted direct labour hours for the month | 25,000 hours |
| Actual direct labour hours for the month   | 28,000 hours |

The under / over absorbed overhead cost for the month is:

- (1) Rs.56,000/- over absorbed.                      (2) Rs.56,000/- under absorbed.  
(3) Rs.100,800/- over absorbed.                    (4) Rs.100,800/- under absorbed.  
(02 marks)

2024 January

**1.4** The following information has been extracted from **Susara Ltd.** for the month of January 2024:

|                                      |              |
|--------------------------------------|--------------|
| Actual overhead cost for the month   | Rs.210,000/- |
| Budgeted overhead cost for the month | Rs.200,000/- |
| Budgeted machine hours for the month | 10,000 hours |
| Actual machine hours for the month   | 12,000 hours |

The under or over absorbed overhead cost for the month is:

- (1) Rs.30,000/- over absorbed.                      (2) Rs.30,000/- under absorbed.  
(3) Rs.10,000/- over absorbed.                      (4) Rs.10,000/- under absorbed.  
(02 marks)

## Activity Based Costing method (ABC)

### Example: Two Students Sharing Expenses.

Imagine two students renting an apartment. They share the same place but use resources differently.

- Student A cooks every day → uses more gas and electricity
- Student B orders food → uses less cooking gas
- Both use Wi-Fi equally
- Student A washes clothes twice a week; B washes once

If they split the bills equally, it's un-fair. Instead, you allocate costs based on activities:

Gas → based on cooking hours

Water → based on number of washes

Wi-Fi → split equally

This is exactly what ABC does for products.

ABC is a **costing method that finds the real cost of making a product by looking at the activities it uses**. Products don't consume costs—activities do.

| Step 01                                                                                                                                                  | Step 02                                                                                  | Step 03                                                                                                                                                                    | Step 04                            |
|----------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|
| <b>Identify Activities</b>                                                                                                                               | <b>Calculate Activity Cost</b>                                                           | <b>Choose Cost drivers</b>                                                                                                                                                 | <b>Assign the cost to products</b> |
| Examples: <ul style="list-style-type: none"><li>•Setting up machines</li><li>•Quality Inspection</li><li>•Packaging</li><li>•Material Handling</li></ul> | <ul style="list-style-type: none"><li>• Calculate total O/H cost per activity.</li></ul> | Ex: <ul style="list-style-type: none"><li>1. Number of setups</li><li>2. Number of inspections</li><li>3. Hours of packaging</li><li>4. Number of material moves</li></ul> |                                    |

#### Example - ABC method

ABC company produce following two products:

- Product A
- Product B

In relation to the production the relevant information as follows.

| Activity           | Overhead Cost (Rs.) |
|--------------------|---------------------|
| Machine Setups     | 150,000             |
| Quality Inspection | 200,000             |
| Packaging          | 250,000             |

| Cost Drivers          | Product A | Product B | Total |
|-----------------------|-----------|-----------|-------|
| Number of setups      | 20        | 30        | 50    |
| Number of inspections | 30        | 70        | 100   |
| Packing hours         | 200       | 300       | 500   |

Based on the ABC method calculate the overhead cost per unit for Product A & Product B.

| Activity           | Cost Driver           | Total O/H | Product A | Product B |
|--------------------|-----------------------|-----------|-----------|-----------|
| Machine Setups     | Number of setups      |           |           |           |
| Quality Inspection | Number of inspections |           |           |           |
| Packaging          | Packing hours         |           |           |           |
| O/H cost per unit  |                       |           |           |           |

Thank You