Overheads example

The following are the figures relating to Cost Centre 10:

Using the above data the following absorption rates could be calculated using the above formula

	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.

Working notes

- 4000@60=240000
- 3000@30=90000
- 2000@10=20000
- Ratio= 24:9:2 power= 1750
- There fore 1750x24/35=1200
- 1750x9/35=450
- 1750x2/35=100

- Lighting expense=1600
- Number of light points = 18 :12: 10
- = 9: 6: 5
- Therefore 1600x9/20=720
- 1600x6/20=480
- 1600x5/20=400

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

- **3. The expenses of these departments as per primary distribution summary were as follows:**
-

		Rs.	Rs.
Production Departments			
X		90,000	
Y		1,17,000	
Z		72,000	
			2,79,000
Service Departments			
Stores		9,000	
Time-keeping and accounts		13,500	
Power	(5,400)	5,400	
Canteen		6,000	33,900
			3,12,900

- **The following information is also available in respect of production departments:**

	X	Y	Z
H.P. of machines	1,200	900	600
No. of workers	120	80	40
Value of store requisitioned (Rs.)	7,500	6,000	4,500

- Apportion the cost of various service departments to the production departments.

Solution

Secondary Distribution Summary

Item	*Basis of apportionment*	*Total*	*Production departments*		
			X	*Y*	*Z*
		Rs.	Rs.	Rs.	Rs.
Cost as per primary distribution	—	2,79,000	90,000	1,17,000	72,000
Stores	Value of stores 5 : 4 : 3	9,000	3,750	3,000	2,250
Time-keeping	No. of workers 3 : 2 : 1	13,500	6,750	4,500	2,250
Power	H.P. of machines 4 : 3 : 2	5,400	2,400	1,800	1,200
Canteen	No. of workers 3 : 2 : 1	6,000	3,000	2,000	1,000
		3,12,900	1,05,900	1,28,300	78,700