COST ACCOUNTING

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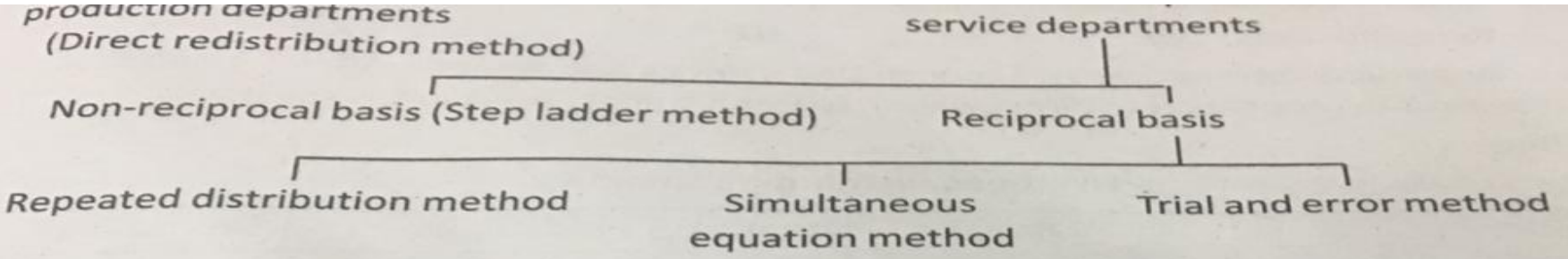
DEPT OF COMMERCE
SUBJECT :COST ACCOUNTING
ACADEMIC YEAR -2020-2021

	Service department	Basis
1.	Stores department	Value / qty of material issued.
2.	Purchase dept.	No. of purchase / value of materials purchased.
3.	Personnel dept and labour welfare expense	No. of employees.
4.	Repairs & Maintenance	Hours worked / Value of asse
5.	Accounts department	No. of workers



Apportionment to Production Departments only (Direct Method)

Under this method service department costs are directly apportioned to production departments only. This method is called direct redistribution method. This method does not consider the services rendered by one service department to the other.

Example 2

The following data were obtained from the books of Light Engineering Company for the half year ending 30th September, 2021. Calculate the departmental overhead rates for each of the production departments, assuming that the overheads are recovered as a percentage of direct wages:

	Production Depts.			Service Depts.	
	A	B	C	X	Y
Direct wages (₹)	7,000	6,000	5,000	1,000	1,000
Direct material (₹)	3,000	2,500	2,000	1,500	1,000
Employees (Nos.)	200	150	150	50	50
Electricity (Kwh)	8,000	6,000	6,000	2,000	3,000

Light points (Nos)	10	15	15	5	5
Asset value (₹'000)	50	30	20	10	10
Area occupied (Sq. yd)	800	600	600	200	200

The expenses for six months were:	₹
Stores overhead	400
Motive power	1,500
Electric lighting	200
Labour welfare	3,000
Depreciation	6,000
Repairs & Maintenance	1,200
General overheads	10,000
Rent and taxes	600

Apportion the expenses of Service Department X in the ratio of 4:3:3 and that of Department Y in proportion to direct wages, to Departments A,B and C respectively.

ITEMS	BASE	TOTAL	A	B	C	X	Y
Direct wages	Direct allocation	2000				1000	1000
Direct material	Direct allocation	2500				1500	1000
Stores overhead	Direct material	400	120	100	80	60	40
Motive power	kwh	1500	480	360	360	120	180
Lighting	No of points	200	40	60	60	20	20
Labour welfare	No of employees	3000	1000	750	750	250	250
Depreciation	Asset value	6000	2500	1500	1000	500	500
Repairs and maintanNCE	Asset value	1200	500	300	200	100	100
General overhead	Direct wages	10000	3500	3000	2500	500	500
Rent and taxes	Area	600	200	150	150	50	50
Total		27400	8340	6220	5100	4100	3640

Expenses	Basis of apportionment	Total	A	B	C
As per primary distribution summary					
Overhead cost of x department					
Overhead cost y dept					

STEP LADDER METHOD

- Method of reapportionment of overhead.
- Service department are arranged in the order of serviceability.
- The overhead of most service department is first apportioned
- To all other departments including production department and service department.
- Then the cost of second most serviceable department is apportioned.

EXAMPLE

TIME KEEPING DEPARTMENT
STORES DEPARTMENT
POWER DEPARTMENT

PRODUCTION

SERVICE

X DEPARTMENT
Y DEPARTMENT

Century production Ltd. has two production department A and B and three service departments- time, stores and maintenance. Following are the expenses as per primary distribution summary for the month of March,2010:

Production departments:	Service departments:
A 80,000	Time keeping - 20,000
B - 50,000	Stores - 30,000
	Maintenance - 24,000

Following information is available in respect of the departments

	Service departments			Production departments	
departments	Time keeping	Stores	Maintenance	A	B
Number of employees	5	10	5	10	25
Number of stores requisitions	-	-	18	72	165
Machine hours	-	-	-	350	360

Redistribute the service department costs to the production departments using step method.

DEPARTMENT	BASIS OF APPORTION MENT	AS PER PRIMARY DISTRIBUTIO N				
TIME KEEPING	NO OF WORKERS (10:5:10:25)5 0	20000	-20000			
STORES DEPSRTMENT	NO OF REQUISITION S(18;72:165)2 55	30000	4000	34000		
MAINATANCE	MACHINE HOURS(35:36)71	24000	2000	2400	28400	
DEPT A		80000	4000	9600	14000	107600
DEPT B		50000	10000	22000	14400	96400

Working note :

Reapportionment of timekeeping on the basis of no.of workers to other departments

Ratio (10:5:10:25)

Stores Dept = 20000 * 10/50 = 4000

Maintenance = 20000 * 5/50 = 2000

Dept. A = 20000 * 10/50 = 4000

Dept . B = 20000 * 25/50 = 10000

Working note :

Reapportionment of Stores on the basis of no.of Stores requisitions to other departments

Ratio (18:72:165)

Maintenance = 34000 * 18/255 = 2400

Dept. A = 34000 * 72/255 = 9600

Dept . B = 34000 * 165/255 = 22000

Working note :

Reapportionment of Maintenance on the basis of to other departments

Ratio (35:36)

Dept. A = 28400 * 35/71= 14000

Dept . B = 28400 * 35/71= 14400

Example 3

A manufacturing company has two production departments X and Y and three service departments - time keeping, stores and maintenance. The departmental distribution summary showed the following expenses for September, 2021:

Production departments :	₹
X	36,000
Y	24,000
Service departments:	
Stores	7,500
Time keeping	6,000
Maintenance	4,500

Other information:

	Production Departments		Service Departments		
	X	Y	Stores	Time keeping	Maintenance
No.of employees	20	15	10	8	5
No.of stores requisition	24	20	–	–	6
Machine hours	18,000	12,000	–	–	–

Apportion the cost of the service departments to production departments.

DEPARTMENT	BASIS OF APPORTIONMENT	AS PER PRIMARY DISTRIBUTION				
TIME KEEPING	NO OF EMPLOYEES (2;1 4 3=10	6000	-6000			
STORES	NO OF STORES ACQUISITION(3 12 10 =25	7500	1200	8700		
MAINTANANCE	MACHINE HOURS{3 2=5	4500	600	1044	6144	
X		36000	2400	4176	3686	46262
Y		24000	1800	3480	2458	31738
		78000				78000

A factory has two production depts and three service depts. The following are the details of primary distribution summary.

Production depts

A - Rs. 16000
B - Rs. 10000

Service depts

Timekeeping dept - Rs. 4000
Stores dept - Rs. 5000
Maintenance dept - Rs. 3000

Additional information:

Base	Service depts			Production depts	
	T.K	Stores	Main:	A	B

Stores dept - Rs.5000

Maintenance dept - Rs.3000

Additional informations:

Base	Service depts			Production depts	
	T.K dept	Stores dept	Main: dept	A	B
No: of employees	5	20	10	40	30
No: of stores req:	-	-	6	24	20
Machine Hours	-	-	-	2400	1600

Apportion the overheads of service depts to production depts by using step ladder method.

DEPARTMENT	BASIS	AS PER [PRIMARY DISTRIBUTION				

Repeated Distribution Method

Under this method,the overhead expenses as per primary distribution summary are re - distributed to production departments as well as to the service departments on equitable basis.Usually the basis of re - apportionment is given in percentages.

Repeated Distribution Method

The costs of service departments are repeatedly shared to the production and service departments till the figure in service departments becomes too small or negligible to be shared. When it becomes very negligible, the last amount to be shared is distributed only to the production depts.

YOU are supplied with the following data and required to work out the production hour rate of recovery of overheads in departments A B C under the repeated distribution method.

	Production department			service department	
	A	B	C	P	Q
Primary overhead	7810	12543	4547	4000	2600

Expenses of service departments P and Q are apportioned as under

	A	B	C	P	Q
P	30%	40%	20%	-	10%
Q	10%	20%	50%	20%	-

Estimated working hours of production are as under

Dept A 1000hrs , B 2500hrs , C 1400hrs

SECONDARY DISTRIBUTION SUMMARY OF OVERHEADS
(REPEATED DISTRIBUTION METHOD)

PRODUCTION DEPARTMENT SERVICE DEPARTMENT

ITEM	A	B	C	P	Q
PRIMARY OVERHEAD	7810	12543	4547	4000	2600
DEPT P(3,4,2,1)10	1200	1600	800	(4000)	400
DEPTQ(1,2,5,2) 10	300	600	1500	600	(3000)
DEPT P(3,4,2,1,)10	180	240	120	(600)	60
DEPTQ(1,2,5.2) 10	6	12	30	12	(60)
DEOT P	4	5	3	(12)	
TOTAL	9500	15000	7000		
WRK HRS	1000	2500	1400		