

(COST ACCOUNTING
B.Com (Prog.) Semester IV
MANISHA
ASSISTANT PROFESSOR
DEPARTMENT OF COMMERCE

②

FORMAT OF
OVERHEAD DISTRIBUTION SUMMARY

Particulars	Bases	Total	Production department			Service department	
			A	B	C	D	E
Direct costs	Allocated	xxx	—	—	—	xxx	xxx
Allocated overheads	Allocated	xxx	xxx	xxx	xxx	xxx	xxx
Common expenses	Apportioned	xxx	xxx	xxx	xxx	xxx	xxx
TOTAL (Primary distribution)		xxx	xxx	xxx	xxx	xxx	xxx
Service department D	Apportioned	—	xxx	xxx	xxx	Same Amount ↓ (xxx)	Same Amount ↓ —
Service department E	Apportioned	—	xxx	xxx	xxx	—	(xxx)
↓ Secondary distribution							
TOTAL		xxx	xxx	xxx	xxx	—	—

METHODS OF APPORTIONMENT OF
SERVICE DEPARTMENT OVERHEADS



Appportionment to
production department only
↓
Direct distribution method

Appportionment to production
and other service departments
↓

Non-
Reciprocal
 $S_1 \rightarrow S_2$

Reciprocal
 $S_1 \rightleftarrows S_2$ (Imp.)

- ① Simultaneous equation method
- ② Repeated distribution method

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Unsolved Ques. 1 (Page No. 244)

Overhead distribution Summary (Direct Distribution method)

Particulars	Bases	Total	Production deptt.			Service deptt.	
			A	B	C	X	Y
Direct wages	Allocated	2000	—	—	—	1000	1000
Direct materials	Allocated	2500	—	—	—	1500	1000
Stores overhead (WN 1)	value of Direct material	400	120	100	80	60	40
Motive Power	Kwh	1500	480	360	360	120	180
Lighting	Light Points	200	40	60	60	20	20
Labour welfare	No. of employees	3000	1000	750	750	250	250
Depreciation	value of Asset	6000	2500	1500	1000	500	500
Repair & Maintenance	value of asset	1200	500	300	200	100	100
General overheads	Direct wages	10000	3500	3000	2500	500	500
Rent & Taxes	Area	600	200	150	150	50	50
TOTAL		27400	8340	6220	5100	4100	3640
Service deptt. X	4:3:3	—	1640	1230	1230	(4100)	—
Service deptt. Y	Direct wages	—	1416	1213	1011	—	(3640)
TOTAL		27400	11396	8663	7341	—	—

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* Overhead rate as percentage of Direct wages = $\frac{\text{Overhead}}{\text{Direct wages}} \times 100$

Production department A = $\frac{11396}{7000} \times 100 = 162.8\%$

B = $\frac{8663}{6000} \times 100 = 144.4\%$

C = $\frac{7341}{5000} \times 100 = 146.8\%$

X

* WN1 : Calculation of value of Stores overhead

⇒ Stores overhead = 400

	A	B	C	X	Y	Total
Direct material	3000	2500	2000	1500	1000	10,000

Ist method → Expense * $\frac{\text{Individual value}}{\text{Total value}}$

Stores overhead	$400 \times \frac{3000}{10,000}$	$400 \times \frac{2500}{10,000}$	 & so on
	= 120	= 100	

IInd method → Find ratio of bases

	A	B	C	X	Y	Total
Direct material	3000	2500	2000	1500	1000	10,000
Ratio	6	5	4	3	2	20

Stores overhead	$400 \times \frac{6}{20}$	$400 \times \frac{5}{20}$	 & so on
	= 120	= 100	

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Unolved Ques. NO. 4 (Page No. 246)

(1st method)

Overhead Distribution Summary (Repeated Distribution) method

Particulars	Bases	Total	Production deptt.			Service deptt.	
			A	B	C	D	E
Direct wages	allocated	2000	—	—	—	1500	500
Rent	Floor area (4:5:6:4:1)	5000	1000	1250	1500	1000	250
lighting	light points (2:3:4:2:1)	600	100	150	200	100	50
Indirect wages	Direct wages (6:4:6:3:1)	1500	450	300	450	225	75
Power	HP (6:3:5:1)	1500	600	300	500	100	—
Depreciation	value of machine (12:16:20:11:1)	10000	2400	3200	4000	200	200
Sundries	Direct wages (6:4:6:3:1)	10000	3000	2000	3000	1500	500
TOTAL		30600	7550	7200	9650	4625 ✓	1575 ✓
Service Deptt. D	(2:3:4:1)	—	925	1388	1850	(4625)	463✓
Service Deptt. E	(4:2:3:1)	—	815	408	611	NIL 204✓	2038 (2038)
Service Deptt. D	(2:3:4:1)	—	41	61	82	204 (204)	NIL 20✓
Service Deptt. E	(4:2:3:1)	—	8	4	6	NIL 2✓	20 (20)
Service Deptt. D	(2:3:4:1)	—	—	1	1	2 (2)	NIL —
TOTAL		30600	9339	9062	12200	NIL	NIL
Working hrs			6226	4028	4056		
Overhead rate per hour			1.5	2.25	3		

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* Total overheads of service deptt. D = $4625 + 204 + 2$
= Rs. 4831/-

* Total overheads of service deptt. E = $1575 + 463 + 20$
= Rs. 2058/-

(Ind method)

Overhead Distribution Summary (Simultaneous equation method)

Particulars	Bases	total	Production Deptt.			Service deptt.	
			A	B	C	D	E
TOTAL		30600	7550	7200	9650	4625	1575
Service deptt. D	(2:3:4:1)	—	966	1449	1932	(4831)	483
Service deptt. E	(4:2:3:1)	—	823	412	617	206	(2058)
TOTAL		30600	9339	9061	12199	NIL	NIL
working hrs			6226	4028	4056		
overhead rate per hour			1.5	2.25	3		

* Let total overheads of service deptt. D = D
Let total overheads of service deptt. E = E

$D = 4625 + 0.1E$ — ①

$E = 1575 + 0.1D$ — ②

Put the value of 'E' in ①st equation

$D = 4625 + 0.1(1575 + 0.1D)$

$D = 4625 + 157.5 + 0.01D$

$D = 4831$

Put the value of D in ②nd equation

$E = 1575 + 0.1(4831)$

$E = 2058$

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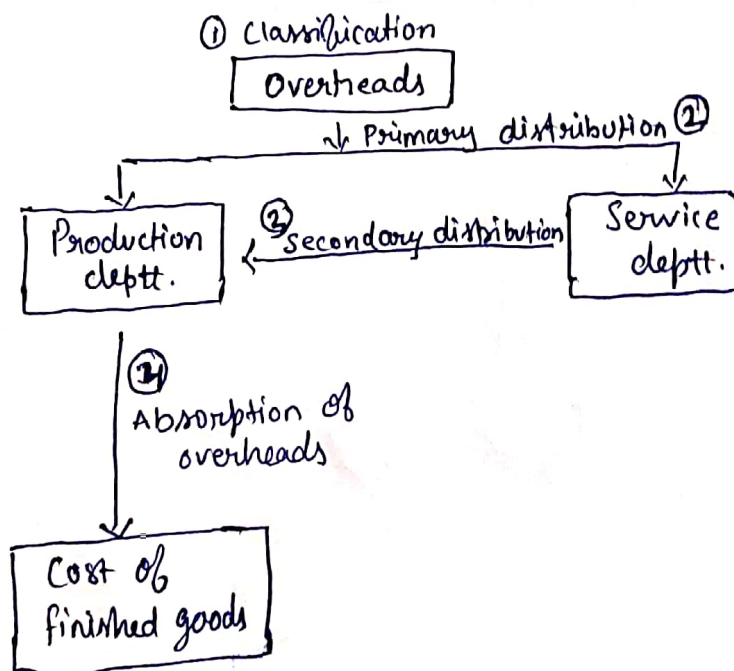
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Cost sheet of an article

Particulars	Amount	Amount
Direct material	50	
Direct Labour	30	
PRIME COST		80
Overheads (Factory) A $\rightarrow$ 4 hrs @ Rs. 1.5	6	
B $\rightarrow$ 5 hrs @ Rs. 2.25	11	
C $\rightarrow$ 3 hrs @ Rs. 3	9	26
FACTORY COST		106



(IV) Absorption of overheads : The absorption of overheads is defined as charging or recovery of overheads to cost units. In other words, overhead absorption is the apportionment of overheads of the cost centres (departments) over cost units.