

CHAPTER 8

DEPARTMENTAL ACCOUNTS

BASIC CONCEPTS

- An organization usually divides the work in various departments, which is done on the principle of division of labour. This can improve efficiency of each and every department of the organization. Each department prepares its separate accounts to judge its individual performance.
- There are two types of departments: (i) Dependent departments and (ii) Independent departments

Question 1

Department X sells goods to Department Y at a profit of 25% on cost and to Department Z at 10% profit on cost. Department Y sells goods to X and Z at a profit of 15% and 20% on sales, respectively. Department Z charges 20% and 25% profit on cost to Department X and Y, respectively.

Department Managers are entitled to 10% commission on net profit subject to unrealised profit on departmental sales being eliminated. Departmental profits after charging Managers' commission, but before adjustment of unrealised profit are as under :

	₹
Department X	36,000
Department Y	27,000
Department Z	18,000

Stock lying at different departments at the end of the year are as under :

	Dept. X ₹	Dept. Y ₹	Dept. Z ₹
Transfer from Department X	—	15,000	11,000
Transfer from Department Y	14,000	—	12,000
Transfer from Department Z	6,000	5,000	—

Find out the correct departmental Profits after charging Managers' commission (November, 2001)

Answer**Calculation of correct Profit**

	Department X	Department Y	Department Z
	₹	₹	₹
Profit after charging managers' commission	36,000	27,000	18,000
Add back : Managers' commission (1/9)	<u>4,000</u>	<u>3,000</u>	<u>2,000</u>
	40,000	30,000	20,000
Less : Unrealised profit on stock (Working Note)	<u>4,000</u>	<u>4,500</u>	<u>2,000</u>
Profit before Manager's commission	36,000	25,500	18,000
Less : Commission for Department Manager @10%	<u>3,600</u>	<u>2,550</u>	<u>1,800</u>
	<u>32,400</u>	<u>22,950</u>	<u>16,200</u>

Working Note :**Stock lying with**

	Dept. X	Dept. Y	Dept. Z	Total
	₹	₹	₹	₹
Unrealised Profit of:				
Department X		$1/5 \times 15,000 = 3,000$	$1/11 \times 11,000 = 1,000$	4,000
Department Y	$0.15 \times 14,000 = 2,100$		$0.20 \times 12,000 = 2,400$	4,500
Department Z	$1/6 \times 6,000 = 1,000$	$1/5 \times 5,000 = 1,000$		2,000

Question 2

FGH Ltd. has three departments I, J and K. The following information is provided for the year ended 31.3.2011:

	I	J	K
	₹	₹	₹
Opening stock	5,000	8,000	19,000
Opening reserve for unrealised profit	—	2,000	3,000
Materials consumed	16,000	20,000	—

Direct labour	9,000	10,000	—
Closing stock	5,000	20,000	5,000
Sales	—	—	80,000
Area occupied (sq. mtr.)	2,500	1,500	1,000
No. of employees	30	20	10

Stocks of each department are valued at costs to the department concerned. Stocks of I are transferred to J at cost plus 20% and stocks of J are transferred to K at a gross profit of 20% on sales. Other common expenses are salaries and staff welfare ₹ 18,000, rent ₹ 6,000.

Prepare Departmental Trading, Profit and Loss Account for the year ending 31.3.2011.

(November, 2004)

Answer

FGH Ltd.

Departmental Trading and Profit and Loss Account

for the year ended 31st March, 2011

		I	J	K	Total			I	J	K	Total
		₹	₹	₹	₹			₹	₹	₹	₹
To	Opening stock	5,000	8,000	19,000	32,000	By	Sales			80,000	80,000
To	Material consumed	16,000	20,000		36,000	By	Inter-departmental transfer	30,000	60,000		90,000
To	Direct labour	9,000	10,000		19,000	By	Closing stock	5,000	20,000	5,000	30,000
To	Inter-departmental transfer		30,000	60,000	90,000						
To	Gross profit	5,000	12,000	6,000	23,000						
		35,000	80,000	85,000	2,00,000			35,000	80,000	85,000	2,00,000
To	Salaries and staff welfare	9,000	6,000	3,000	18,000	By	Gross profit b/d	5,000	12,000	6,000	23,000
						By	Net loss	7,000			7,000
To	Rent	3,000	1,800	1,200	6,000						
To	Net profit		4,200	1,800	6,000						
		12,000	12,000	6,000	30,000			12,000	12,000	6,000	30,000
To	Net loss (I)				7,000	By	Stock				5,000

To	Stock reserve (J+K) (Refer W.N.)				3,000	By	reserve b/d (J + K) Net profit (J + K)				6,000
To	Balance transferred to Profit and loss account				<u>1,000</u>						
					<u>11,000</u>						<u>11,000</u>

Working Note:**Calculation of unrealized profit on closing stock**

	₹
<i>Stock reserve of J department</i>	
Cost	30,000
Transfer from I department	<u>30,000</u>
	<u>60,000</u>
Stock of J department	<u>20,000</u>

$$\text{Proportion of stock of I department} = ₹ 20,000 \times \frac{\text{Rs.} 30,000}{\text{Rs.} 60,000} = ₹ 10,000$$

$$\text{Stock reserve} = ₹ 10,000 \times \frac{20}{120} = ₹ 1667 \text{ (approx.)}$$

Stock reserve of K department ₹

Stock transferred from J department	5,000
Less: Profit (stock reserve) $5,000 \times 20\%$	<u>1,000</u>
Cost to J department	<u>4,000</u>

$$\text{Proportion of stock of I department} = ₹ 4,000 \times \frac{\text{Rs.} 30,000}{\text{Rs.} 60,000} = ₹ 2,000$$

$$\text{Stock reserve} = 2,000 \times \frac{20}{120} = ₹ 333 \text{ (approx.)}$$

$$\text{Total stock reserve} = ₹ 1,000 + ₹ 333 = ₹ 1,333$$

Question 3

Siva Ltd. has two departments X and Y. From the following particulars prepare departmental trading accounts and general profits and loss account for the year ending 31st March, 2011:

	Department X	Department Y
	₹	₹
Opening stock (at cost)	80,000	48,000
Purchases	3,68,000	2,72,000
Carriage inward	8,000	8,000
Wages	48,000	32,000
Sales	5,60,000	4,48,000
Purchased goods transferred		
By department Y to X	40,000	-
By department X to Y	-	32,000
Finished goods transferred		
By department Y to X	1,40,000	-
By department X to Y	-	1,60,000
Return of finished goods		
By department Y to X	40,000	-
By department X to Y	-	28,000
Closing stock		
Purchased goods	18,000	24,000
Finished goods	96,000	56,000

Purchased goods have been transferred mutually at their respective departmental purchase cost and finished goods at departmental market price and that 25% of the closing finished stock with each department represents finished goods received from the other department.

(May, 2010)

Answer

Departmental Trading Account in the books of Siva Ltd.
for the year ended 31st March 2011

Particulars	Department X	Department Y	Particulars	Department X	Department Y
	₹	₹		₹	₹
To Opening stock	80,000	48,000	By Sales	5,60,000	4,48,000

To Purchases	3,68,000	2,72,000	By Transfers:		
To Carriage inward	8,000	8,000	Purchased goods	32,000	40,000
To Wages	48,000	32,000	Finished goods	1,20,000*	1,12,000*
To Transfers:			By Closing stock:		
Purchased goods	40,000	32,000	Purchased goods	18,000	24,000
Finished goods	1,12,000	1,20,000	Finished goods	96,000	56,000
To Gross profit c/d	<u>1,70,000</u>	<u>1,68,000</u>			
	<u>8,26,000</u>	<u>6,80,000</u>		<u>8,26,000</u>	<u>6,80,000</u>

Profit and Loss A/c
for the year ended 31st March, 2011

Particulars	₹	Particulars	₹
To Provision for unrealized profit included in closing stock		By Gross profit b/d	
Department X (W.N. 3)	7,200	Department X	1,70,000
Department Y (W.N. 3)	3,500	Department Y	1,68,000
To Net profit	<u>3,27,300</u>		
	<u>3,38,000</u>		<u>3,38,000</u>

Working Notes:

1. Calculation of rates of gross profit margin on sales

	Department X	Department Y
	₹	₹
Sales	5,60,000	4,48,000
Add: Transfer of finished goods	<u>1,60,000</u>	<u>1,40,000</u>
	7,20,000	5,88,000
Less: Return of finished goods	<u>(40,000)</u>	<u>(28,000)</u>
	<u>6,80,000</u>	<u>5,60,000</u>
Gross Profit	1,70,000	1,68,000
Gross profit margin =	$\frac{1,70,000}{6,80,000} \times 100 = 25\%$	$\frac{1,68,000}{5,60,000} \times 100 = 30\%$

* Net transfers of finished goods by

Department X to Y = ₹ 1,60,000 – ₹ 40,000 = ₹ 1,20,000

Department Y to X = ₹ 1,40,000 – ₹ 28,000 = ₹ 1,12,000

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2. Finished goods from other department included in the closing stock

	Department X	Department Y
	₹	₹
Stock of finished goods	96,000	56,000
Stock related to other department (25% of finished goods)	24,000	14,000

3. Unrealized profit included in the closing stock

Department X = 30% of ₹ 24,000 = ₹ 7,200

Department Y = 25% of ₹ 14,000 = ₹ 3,500

Question 4

Z Ltd. has three departments and submits the following information for the year ending on 31st March, 2011:

	A	B	C	Total (₹)
Purchases (units)	6,000	12,000	14,400	
Purchases (Amount)				6,00,000
Sales (Units)	6,120	11,520	14,976	
Selling Price (per unit) ₹	40	45	50	
Closing Stock (Units)	600	960	36	

You are required to prepare departmental trading account of Z Ltd., assuming that the rate of profit on sales is uniform in each case. (June, 2009)

Answer

Departmental Trading Account for the year ended on 31st March, 2011

	Particulars	A	B	C		Particulars	A	B	C
		₹	₹	₹			₹	₹	₹
To	Opening Stock	11,520	8,640	12,240	By	Sales	2,44,800	5,18,400	7,48,800
To	Purchases	96,000	2,16,000	2,88,000	By	Closing Stock	9,600	17,280	720
To	Gross Profit	<u>1,46,880</u>	<u>3,11,040</u>	<u>4,49,280</u>					
		<u>2,54,400</u>	<u>5,35,680</u>	<u>7,49,520</u>			<u>2,54,400</u>	<u>5,35,680</u>	<u>7,49,520</u>

Working Notes:

(1)	Profit Margin Ratio	
	Selling price of unit purchased:	₹
	Department A 6,000 x 40	2,40,000
	Department B 12,000 x 45	5,40,000
	Department C 14,400 x 50	<u>7,20,000</u>
	Total Selling Price	15,00,000
	Less: Purchase (Cost) Value	<u>6,00,000</u>
	Gross Profit	<u>9,00,000</u>
	Profit Margin Ratio = $\frac{9,00,000}{15,00,000} \times 100 = 60\%$	

(2) Statement showing department-wise per unit Cost and Purchase Cost

	A	B	C
	₹	₹	₹
Selling Price (Per unit) (₹)	40	45	50
Less: Profit Margin @ 60% (₹)	<u>24</u>	<u>27</u>	<u>30</u>
Purchase price per unit (₹)	<u>16</u>	<u>18</u>	<u>20</u>
Number of units purchased	6,000	12,000	14,400
(Purchase cost per unit x Units purchased)	96,000	2,16,000	2,88,000

(3) Statement showing calculation of department-wise Opening Stock (in Units)

	A	B	C
Sales (Units)	6,120	11,520	14,976
Add: Closing Stock (Units)	<u>600</u>	<u>960</u>	<u>36</u>
	6,720	12,480	15,012
Less: Purchases (units)	<u>6,000</u>	<u>12,000</u>	<u>14,400</u>
Opening Stock (Units)	<u>720</u>	<u>480</u>	<u>612</u>

(4) Statement showing department-wise cost of Opening Stock and Closing Stock

	A	B	C
Cost of Opening Stock (₹)	720 x 16	480 x 18	612 x 20
₹	<u>11,520</u>	<u>8,640</u>	<u>12,240</u>
Cost of Closing Stock	600 x 16	960 x 18	36 x 20
₹	<u>9,600</u>	<u>17,280</u>	<u>720</u>

Question 5

Goods are transferred from Department P to Department Q at a price 50% above cost. If closing stock of Department Q is ₹ 27,000, compute the amount of stock reserve.

(November, 2009)

Answer

	₹
Closing Stock of Department Q	27,000
Goods send by Department P to Department Q at a price 50% above cost	
Hence profit of Department P included in the stock will be -	9,000
$\frac{27,000 \times 50}{150} =$	
Amount of the Stock Reserve will be ₹ 9,000.	

Question 6

Department R sells goods to Department S at a profit of 25% on cost and Department T at 10% profit on cost. Department S sells goods to R and T at a profit of 15% and 20% on sales respectively. Department T charges 20% and 25% profit on cost to Department R and S respectively.

Department managers are entitled to 10% commission on net profit subject to unrealized profit on departmental sales being eliminated. Departmental profits after charging manager's commission, but before adjustment of unrealized profit are as under:

		₹
Department	R	54,000
Department	S	40,500
Department	T	27,000

Stock lying at different departments at the end of the year are as under:

	Deptt. R ₹	Deptt. S ₹	Deptt. T ₹
Transfer from Department R	-	22,500	16,500
Transfer from Department S	21,000	-	18,000
Transfer from Department T	9,000	7,500	-

Find out the correct departmental profits after charging manager's commission.

(November, 2010)

Answer**(a)**

	Departments		
	R ₹	S ₹	T ₹
Profit	54,000	40,500	27,000
Add : Managerial commission (1/9)	<u>6,000</u>	<u>4,500</u>	<u>3,000</u>
	60,000	45,000	30,000
Less: Unrealised profit on stock (Refer W.N.)	<u>(6,000)</u>	<u>(6,750)</u>	<u>(3,000)</u>
	54,000	38,250	27,000
Less: Managers' commission @ 10%	<u>(5,400)</u>	<u>(3,825)</u>	<u>(2,700)</u>
	<u>48,600</u>	<u>34,425</u>	<u>24,300</u>

Working Notes:**Value of unrealised profit**

	₹
<u>Transfer by department R to</u>	
S department $(22,500 \times 25/125) = 4,500$	
T department $(16,500 \times 10/110) = \underline{1,500}$	6,000
<u>Transfer by department S to</u>	
R department $(21,000 \times 15/100) = 3,150$	
T department $(18,000 \times 20/100) = \underline{3,600}$	6,750
<u>Transfer by department T to</u>	
R department $(9,000 \times 20/120) = 1,500$	
S department $(7,500 \times 25/125) = \underline{1,500}$	3,000