

6. DEPARTMENTAL ACCOUNTS**SOLUTIONS TO ASSIGNMENT PROBLEMS****PROBLEM No. 1****Departmental Trading and Profit and Loss Account
For six months ending 31.3.2012**

Dr

Cr

Particulars	X	Y	Z	Particulars	X	Y	Z
To Purchase s	70,350	45,300	32,200	By Sales	75,000	50,000	12,500
To Gross Profit c/d	34,700	14,850	2,600	By Closing Stock	30,050	10,150	22,300
	<u>1,05,050</u>	<u>60,150</u>	<u>34,800</u>		<u>1,05,050</u>	<u>60,150</u>	<u>34,800</u>
To Salaries & Wages	6,000	12,000	6,000	By Gross Profit b/d	34,700	14,850	2,600
To Rent	4,700	4,700	1,500	By Net Loss (Departmental)	-	1,850	4,900
To Net Profit (Departmental)	24,000	-	-				
	34,700	16,700	7,500		34,700	16,700	7,500

**General Profit and Loss Account
For six months ending 31.03.2012**

Dr

Cr

Particulars	Amount	Particulars	Amount
To Profit & Loss A/c (Dept. Y)(loss)	1,850	By Profit & Loss A/c (Dept. X)(profit)	24,000
To Profit & Loss A/c (Dept. Z)(loss)	4,900		
To Profit (to be transferred to Balance sheet)	17,250		
	24,000		24,000

Working Notes:

- Salaries and wages are to be allocated first between show room and; workshop in the ratio of 3:1 i.e. Rs.18,000 and Rs. 6,000. Work shop salaries are to be charged to Dept. Z.
- Since Dry cleaners and Dumpsters are sold at show room, salaries are to be allocated to Dept. 'X' and Dept. 'Y' respectively in the ratio of 1 : 2.
- Rent to workshop at Rs. 250 p.m. for six months, Rs. 1,500 is to be charged to Dept. 'Z' First and the balance Rs. 9,400 is to be divided equality between Dept. 'X' and 'Y'.

PROBLEM No. 2**FGH Ltd.
Departmental Trading and Profit and Loss Account
for the year ended 31st March, 2004**

Dr

Cr

Particulars	I	J	K	Total	Particulars	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						

To Inter-Departmental Transfer	-	30,000	60,000	90,000	By Closing Stock	5,000	20,000	5,000	30,000
To Gross profit c/d	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 (30:20:10)	9,000	6,000	3,000	18,000	By Gross profit b/d	5,000	12,000	6,000	23,000
To Rent(5:3:2)	3,000	1,800	1,200	6,000	By Net loss	7,000	-	-	7,000
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 reserve b/d (J + K)	-	-	-	5,000
To Stock reserve (J+K) (Refer W.N.)	-	-	-	3,000	By Net profit (J + K)	-	-	-	6,000
To Balance transferred to profit and loss account	-	-	-	1,000					
	-	-	-	11,000		-	-	-	11,000

WORKING NOTE:**Calculation of unrealized profit on closing stock:**

Particulars	Amount
Cost incurred by dept J	30,000
Transfer from I department	30,000
total	60,000
Closing Stock of J department	20,000

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

$$\text{Stock reserve} = \text{Rs.} 10,000 \times \frac{20}{120} = \text{Rs.} 1,667 \text{ (approx)}$$

Stock reserve of K department:

Particulars	Amount
closing Stock of J department	5,000
Less: Profit (stock reserve) 5,000 × 20% of dept.J	(1,000)
Cost to J department	4,000

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

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

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

$$\text{Stock reserve closing balance to be maintained} = 1667 + 1333 = 3000$$

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Working notes: computation of inter departmental transfers

Particulars	Dept I to J	Dept J to K
opening stock	5,000	8,000
Add: Material consumed	16,000	20,000
Add: Direct labour	9,000	10,000
Add: Transfer from other dept	-	30,000
Less: Closing stock	(5,000)	(20,000)
Cost of goods transferred to other dept.	25,000	48,000
Add: Loading(I to J 20% on cost)	5000	12,000
(J to k 20% on sales OR 25% on cost)		
Value of goods transferred		
To other dept.	30,000	60,000

PROBLEM No. 3**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	1,46,880	3,11,040	4,49,280				
	2,54,400	5,35,680	7,49,520		2,54,400	5,35,680	7,49,520

WORKING NOTE:**1. Profit Margin Ratio:**

Particulars	Amount
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)	7,20,000
Total value of sales, if all purchased units are sold	15,00,000
Less: Purchase (Cost) Value	(6,00,000)
Gross Profit	9,00,000

$$\text{Profit Margin Ratio} = \frac{9,00,000}{15,00,000} \times 100 = 60\%$$

Assumption: It is assumed that all the purchased units are sold for the purpose of computation of gross profit ratio.

Particulars	A	B	C
Selling Price (Per unit)	40	45	50
Less: Profit Margin @ 60%	(24)	(27)	(30)
Purchase price per unit	16	18	20
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

2. Statement showing calculation of department-wise Opening Stock (in Units):

Particulars	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)	720	480	612

3. Statement showing department-wise cost of Opening Stock and Closing Stock:

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

PROBLEM No. 4

Particulars	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>
Less: Unrealised profit on stock (Refer W.N.)	60,000 <u>(6,000)</u>	45,000 <u>(6,750)</u>	30,000 <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>
	48,600	34,425	24,300

Working Notes:

Value of unrealized profit:

Particulars	Amount
Transfer by department R to	
S department (22,500 × 25/125) = 4,500	
T department (16,500 × 10/110) = <u>1,500</u>	6,000
Transfer by department S to	
R department (21,000 × 15/100) = 3,150	
T department (18,000 × 20/100) = <u>3,600</u>	6,750
Transfer by department T to	
R department (9,000 × 20/120) = 1,500	
S department (7,500 × 25/125) = <u>1,500</u>	3,000

PROBLEM No. 5Departmental Trading and Profit and Loss Account for the year ended 31st March, 2011

Particulars	Cloth (Rs.)	Ready Made Cloths (Rs.)	Total (Rs.)	Particulars	Cloth (Rs.)	Ready Made Cloths (Rs.)	Total (Rs.)
To Opening Stock	31,50,000	5,32,000	36,82,000	By Sales	2,31,00,000	47,25,000	2,78,25,000
To Purchases	2,10,00,000	1,68,000	2,11,68,000	By Transfer to Ready-made Clothes Deptt.	31,50,000	-	31,50,000
To Transfer from Cloth Department	-	31,50,000	31,50,000	By Closing stock	21,00,000	6,72,000	27,72,000
To Manufacturing expenses	-	6,30,000	6,30,000				
To Gross profit c/d	42,00,000	9,17,000	51,17,000				
	2,83,50,000	53,97,000	3,37,47,000		2,83,50,000	53,97,000	3,37,47,000
To Selling expenses	2,10,000	73,500	2,83,500	By Gross profit b/d	42,00,000	9,17,000	51,17,000
To Rent & warehousing	8,40,000	5,60,000	14,00,000				
To Net profit	31,50,000	2,83,500	34,33,500				
	42,00,000	9,17,000	51,17,000		42,00,000	9,17,000	51,17,000

General Profit and Loss Account

Particulars	Amount	Particulars	Amount
To General expenses	10,85,000	By Net profit	34,33,500
To Unrealized profit (Refer W.N.)	20,790		
To General net profit (Bal. fig.)	23,27,710		
	34,33,500		34,33,500

WORKING NOTE:

Rate of Gross Profit of Cloth Department, for the year 2010 – 11 = $\frac{\text{Gross Profit}}{\text{Total Sales}} \times 100$

$$\frac{\text{Rs.}42,000 \times 100}{\text{Rs.}(2,31,00,000 + 31,50,000)} \times 100 = 16\%$$

Closing Stock of cloth in Readymade Cloths Department = 75%

i.e. Rs.6,72,000 x 75% = Rs.5,04,000

Stock Reserve required for unrealized profit @ 16% on closing stock

Rs.5,04,000 x 16% = Rs.80,640

Stock reserve for unrealized profit included in opening stock of readymade clothes @ 15% i.e.

(Rs.5,32,000 x 75% x 15%) = Rs.59,850

Additional Stock Reserve Required during the year = Rs.80,640 – Rs.59,850 = Rs.20,790

PROBLEM NO – 6

**Department Trading Account For the year ending on
31.03.2013 In the books of Head Office**

Particulars		Particulars	
To Opening Stock		By Sales	3,00,000
To Purchases	65,000	By Shortage	1,000
To Gross Profit c/d	2,00,000	By Closing Stock	22,880
	58,880		
	3,23,880		3,23,880

Memorandum stock account (for Department A) (at selling price)

Particulars		Particulars	
To Balance b/d ($\frac{65,000 + 25\% \text{ of } 65,000}{100}$)	81,250	By Profit & Loss A/c (Cost of Shortage)	1,000
To Purchases ($\frac{2,00,000 + 25\% \text{ of } 2,00,000}{100}$)	2,50,000	By Memorandum Departmental Markup A/c (Load on Shortage) ($\frac{1,000 \times 25\%}{100}$)	250
		By Memorandum Departmental Mark-up A/c (Mark-down on Current Purchases)	1,200
		By Debtors A/c (Sales)	3,00,000
		By Memorandum Departmental Mark-up A/c (Mark Down on Opening Stock)	600
		By Balance c/d	28,200
	3,31,250		3,31,250

Memorandum department markup A/c

Particulars	Rs	Particulars	Rs.
To Memorandum Departmental Stock A/c ($\frac{1,000 \times 25}{100}$)	250	By Balance b/d	16,250
To Memorandum Departmental Stock A/c	1,200	By Memorandum Departmental Stock A/c ($\frac{2,50,000 \times 25}{125}$)	50,000
To Memorandum Departmental Stock A/c	600		
To Gross Profit transferred to Profit & Loss A/c	58,880		
To Balance c/d	5,320		
	66,250		66,250

* $[\frac{1,200 \times 5,000}{15,000}] = 400$

Working Notes:**(i) Calculation of Cost of Sales**

		Rs.
A	Sales as per Books	3,00,000
B	Add: Mark-down in opening stock (given)	600
C	Add: mark-down in sales out of current Purchases($\frac{1,200 \times 10,000}{15,000}$)	800
D	Value of sales if there was no mark-down (A+B+C)	3,01,400
E	Less: Gross Profit ($\frac{25}{125}$ of $\frac{3,01,400}{100}$) subject to Mark Down($\frac{600}{100} + \frac{800}{100}$)	(60,280)
F	Cost of sales (D-E)	2,41,120

Calculation of closing stock:

		Rs.
A	Opening Stock	65,000
B	Add: Purchases	2,00,000
C	Less: Cost of Sales	(2,41,120)
D	Less: Shortage	(1,000)
E	Closing Stock (A+B-C-D)	22,880

PROBLEM NO – 7**Computation of discount on sales**

Particulars	Dept A	Dept B	Dept C
Sales at normal prices	10,000	3000	1000
(-)sales @ actual prices	7500	2400	600
Discount	2500	600	400

Computation of correct gross profit

Particulars	Dept A	Dept B	Dept C
Actual sales	1,72,500	1,59,400	74600
(+)discount	2500	600	400
Sales @ normal S.P	1,75,000	1,60,000	75000
G.P on S.P (normal)%	35000	40000	25000
(-) Discount	2500	600	400
Correct G.P	32,500	39400	24600

Departmental trading A/c for the year ended 31.12.09

Particulars	Depart A	Depart B	Depart C	Particulars	Depart A	Depart B	Depart C
To opening stock	24000	36000	12000	By sales	1,72,500	1,59,400	7466
To purchases	1,46,000	1,24,000	48,000	By C/s (b/f)	30000	40000	1000
To GP (correct)	32500	39400	24,600				
	202500	199400	84600		202500	199400	8460

PROBLEM NO – 8

In the Books of M/s Omega

Departmental Trading and Profit and Loss Account For the year ended 31st March, 2013

Particulars	Dept. X	Dept. Y	Dept	Total	Particulars	Dept. X	Dept. Y	Dept. Z	Total
	-	-	-	-		-	-	-	-
To Opening Stock	36,000	24,000	20,000	80,000	By Sales	1,80,000	1,35,000	90,000	4,05,00
To Purchases	1,32,000	88,000	44,000	2,64,000	By Closing Stock	45,000	17,500	21,000	83,500
To Carriage Inwards	1,500	1,000	500	3,000					

To Gross Profit c/d	55,500	39,500	46,500	1,41,500					
	2,25,000	1,52,500	1,11,000	4,88,500		2,25,000	1,52,500	1,11,000	4,88,500
To Carriage Outwards	1,200	900	600	2,700	By Gross Profit b/d	55,500	39,500	46,500	1,41,500
To Electricity	1,500	1,000	500	3,000	By Discount received	900	600	300	1,800
To Salaries	20,000	16,000	12,000	48,000					
To Advertisement	1,200	900	600	2,700					
To Discount	1,000	750	500	2,250					
To Rent, Rates and Taxes	3,000	2,500	2,000	7,500					
To Depreciation	400	400	200	1,000					
To Provision for Bad Debts	750	500	500	1,750					
To Labor welfare expenses	1,000	800	600	2,400					
To Net Profit	26,350	16,350	29,300	72,000					
	56,400	40,100	46,800	1,43,300		56,400	40,100	46,800	1,43,300

Working Note:

Basis of allocation of expenses	
Carriage inwards	Purchases (3:2:1)
Carriage outwards	Turnover (4:3:2)
Salaries	No. of Employees (5:4:3)
Advertisement	Turnover (4:3:2)
Discount allowed	Turnover (4:3:2)
Discount received	Purchases (3:2:1)
Rent, Rates and Taxes	Floor Space occupied (6:5:4)
Depreciation on furniture	Value of furniture (2:2:1)
Labor welfare expenses	No. of Employees (5:4:3)
Electricity expenses	Units consumed (3:2:1)
Provision for bad debts	Debtors balances (3:2:2)

PROBLEM NO – 9

	A	B	C	Total		A	B	C	Total
To Opening Stock	37,890	24,000	20,000	81,890	By Sales	1,80,000	1,30,000	90,000	4,00,000
To Purchases	1,40,700	80,600	44,400	2,65,700	By Transfer	10,700	600	-	11,300
To Transfer	-	-	11,300	11,300	By Closing Stock	45,100	22,300	21,600	89,000
To Wages	-	-	12,000	12,000					
To Gross profit c/d	57,210	48,300	23,900	1,29,410					
	2,35,800	1,52,900	1,11,600	5,00,300		2,35,800	1,52,900	1,11,600	5,00,300
					By Gross profit b/d	57,210	48,300	23,900	1,29,410
To General Office	12,000	8,000	4,000	24,000	By Discount Received	400	250	150	800
To Show room	4,000	8,000	-	12,000					

To Showroom	1,080	780	540	2,400				
To Rent	2,400	2,400	6,000	10,800				
To Discount Allowed	540	390	270	1,200				
To Sundry Expenses	5,400	3,900	2,700	12,000				
To Depreciation	250	250	250	750				
To Net Profit c/d	31,940	24,830	10,290	67,060				

Gross profit of Department A is 30% of Sales price (including transfer to Department C). There is some unrealized profit only on inter departmental stock. 30% of 5700 is stock reserve. This will be debited profit and loss A/c

PROBLEM NO – 10

Dr. Department Trading and Profit and Loss A/c for year ended 30.06.2003 Cr.

Particulars	₹	Particulars	₹
To Opening stock	80,000	By Sales	3,20,000
To Purchases	1,80,000	By Abnormal loss	1,200
To Gross Profit c/d	90,150	By Closing stock (48,180 – 11,230)	28,950
	3,50,150		3,50,150

Dr. Memorandum Department A Stock A/c Cr.

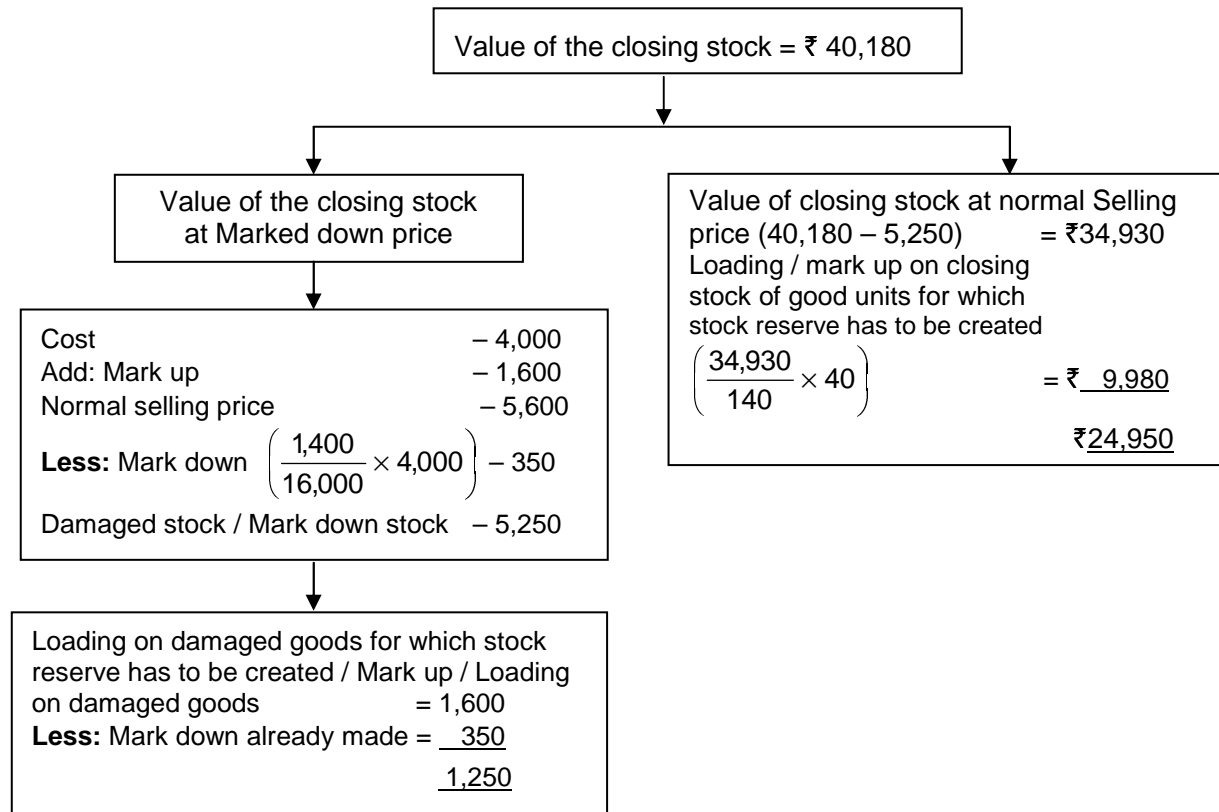
Date	Particulars	₹	Date	Particulars	₹
01.07.02	To Balance b/d Cost – 80,000 Mark-up – 32,000	1,12,000	30.06.03	By Sales	3,20,000
30.06.02	To Purchases Cost – 1,80,000 Mark-up – 72,000	2,52,000	30.06.03	By Mem-mark-up A/c	1,400
		3,64,000	30.06.03	By Abnormal loss Cost – 1,200 Mark-up 480	1,680
			30.06.03	By Memorandum Mark-up A/c	740
			30.06.03	By Balance c/d	40,180
					3,64,000

Dr. Memorandum Department 'A' mark-up A/c Cr.

Date	Particulars	₹	Date	Particulars	₹
30.06.03	To Memorandum stock (Mark down)	1,400	01.07.02	By Stock Reserve (on opening stock)	32,000
30.06.03	To Memorandum stock A/c (Mark up on abnormal loss)	480	30.06.03	By Memorandum stock (on purchases)	72,000
30.06.03	To Memorandum stock (Mark down on o/s)	740			
30.06.03	To Stock Reserve (WN- 1)	11,230			
	To General P & L A/c	90,150			
		1,04,000			1,04,000

Dr. Stock Reserve A/c Cr.

Date	Particulars	₹	Date	Particulars	₹
01.04.02	To Mem. Mark-up	32,000	01.07.02	By Balance b/d	32,000
01.07.02	To Balance c/d	11,230	01.07.02	By Mem. Mark up	11,230
		43,230			43,230
				By Balance b/d	11,230

WORKING NOTE – 1:

Therefore total stock reserve to be created = 9,980 + 1,250 = Rs.11,230

THE END

Verified By: Amaranth Garu

Executed By: Mr. Uday