DEPARTMENTAL ACCOUNTING

Solution to Past Papers

PAGE:
DATE: / /

2015

A firm has two departments - Raw Materials and Manufacturing. The finished goods are produced by the manufacturing department with raw materials supplied by Raw Materials department at selling price. From the following information prepare Departmental Trading and Profit and Loss A/c for the year ended on 31st March 2014

	Raw Material Dept (Rs)	Manufacturing Department (Rs).
Opening Stock	60 000	10,000
Purchases	4,00,000	3000
Raw Materials transferred to Manufacturing Dept	60,000	—
Sales	4,40,000	90,000
Manufacturing Expenses	—	12000
Selling Expenses	800	400
Closing Stock	40,000	12,000

PAGE:
DATE: / /

It is estimated that the cost of closing stock of manufacturing department consists of 75% for Raw materials and 25% for manufacturing expenses. The rate of gross profit earned during the preceding year by the Raw material department was 10%. After allocating the following expenses on reasonable basis between the two departments find out the net profit of the firm as a whole.

(i) Salaries - Rs 2500
(ii) Insurance Premium - Rs 800

PAGE:
DATE: / /

In the books of ----.
Departmental Trading and P/L A/c
for the year end 31.3.2014

Dr		RM	Manufacty		Cr RM	Manufacty
To op stock	60000	10,000	By Transfer to Manufacty	60000	
To purchase	400000	3000			
To Transfer from RM dept	-	60000	By sale	4,40000	90000
To Manufacty expenses	-	12000	By closing st	40,000	12,000
To Gross Profit c/d	80000	17000			
	5,40,000	1,02,000		540000	102000
To selling Expenses.	800	400	By Gross Profit b/d.	80000	17000
To Salaries (WN1)	2075	425			
To Insurace (WN-1)	656	144			
To Net profit c/d.	76469	16031			
	80000	17000		80000	170

PAGE:
DATE: / /

Dr General Profit and Loss Account for the yr ended 31.3.14 Cr

To Stock Reserve. (unrealised profit on closing stock) WN-2	1440	By Net Profit b/d.	
		Raw Materials	76,469
		Manufacturing	16,031
		By Stock Reserve A/c (WN2)	750
To Capital (Net profit of business transferred)	91,810		
	93,250		93,250

Allocation of General Expenses in Department

i Salaries on Sales ratio = 4,40,000 : 90000
44 : 9

Salary of RM Dept = $\frac{2500}{53} \times 44 = 2075$

~~Salary of RM Dept = 2075~~

Salary of Manufacture = $\frac{2500}{53} \times \frac{9}{53}$
= 425

PAGE:
DATE: / /

(11) Insurance Premium:

Insurance Premium should be allocated on the basis of Average Stock of Departments.
Considering Insurance Premium paid for Stock.

Average Stock of RM Dept

$$= \frac{60000 + 40000}{2}$$

$$= 50,000$$

Average Stock of RM Dept.

$$= 800 \times \frac{50}{61}$$

$$= 656$$

Insurance premium of RM Dept

$$= 800 \times \frac{11}{61}$$

$$= 144.$$

PAGE:
DATE: / /

2. Unrealised Profit as Stock of Manufacturing Dept.

(a) Rate of G.P. of RM Dept for the year 13-14

$= \frac{G.P.}{Sales + transfer} \times 100$

$= \frac{80,000}{440000+60000} \times 100 = 16\%$.

(b) ~~Ito~~ Raw materials included in Stock of Manufacturing Dept.

(I) on opening stock $= 10000 \times 75\%$
$= 7500$

(II) on closing stock $= 12000 \times 75\%$
$= 9000$

(c) Unrealised profit on opening stock.

$= 7500 \times 10\%$
$= 750$

Unrealised Profit on closing stock
$9000 \times 16\%$
$= 1440$.

B.Com 1993

In the books of a business house.
Departmental Trading A/c.
for the year ended 31.12.52.

Particulars	A	B	C	Particulars	A	B	C
To op St (4)	7680	5760	12160	By Sales a/c	97920	207,360	299520
To purchase a/c (5)	64000	1,44,000	192000	By closing st (6)	6400	11,520	4,480
To Gross Profit c/d	32640	69120	99840				
	104320	218880	304000		104320	218880	304000
To Dept Exp a/c (7)	9600	19,200	19200	By Gross Profit b/d	32640	69120	99840
To Net Profit	23040	49920	80640				
	32640	69120	99840		32640	69120	99840

Working Notes

sales

Dept A 4080 × 24 = Rs 97,920
B 7,680 × 27 = Rs 2,07,360
C 9,984 × 30 = Rs 2,99,520

closing stock units

op st + Purchase − Sales = cl. st

Dept A 480 + 4000 − 4080 = 400 unit
B 320 + 8000 − 7680 = 640
C 608 + 9600 − 9984 = 224

Rate of Gross Profit and cost of purchase per unit –

Sales Value of Goods purchased	~~96,000~~	
A − 4000 × 24	96000	
B − 8000 × 27	2,16,000	
C − 9600 × 30	2,88,000	6,00,000
Less: Total purchase cost		4,00,000
Gross Profit (Expected)		2,00,000

(a) Rate of Gross Profit $= \frac{\text{Gross Profit}}{\text{Sales}} \times 100$

$= \frac{2,00,000}{6,00,000} \times 100 = 33\frac{1}{3}\% = \frac{1}{3}$ of Sales

PAGE:
DATE: / /

b) Cost per unit = Sales per unit - Gross Profit

A = 24 - 1/3 x 24 or 24 - 8 = 16

B = 27 - 1/3 of 27 or 27 - 9 = 18

C = 30 - 1/3 x 30 or 30 - 10 = 20

4. Cost price of opening stock :-

Dept A : 480 x 16 = 7680

B : 320 x 18 = ~~5780~~ 5760

C : 608 x 20 = 12,160

5. Cost price of Purchase :-

Dept A 4000 x 16 = 64,000

B 8000 x 18 = 1,44,000

C 9600 x 20 = 1,92,000

6. Cost price of closing stock.

A = 400 x 16 = 64000

B = 640 x 18 = 11,520

C = 224 x 20 = 4,480

7. Departmental Expenses

Dept A : 48000 x 1/5 = 9600

B : 48000 x 2/5 = 19,200

C : 48000 x 2/5 = 19,200.

PAGE:
DATE: / /

1995

In the books of M/s ABC.
Departmental Trading and P/L A/c.
for the year ended 31.03.94.

Dr | Cr

Particulars	X Rs	Y Rs	Z Rs	Particulars	X (Rs)	Y (Rs)	Z (Rs)
To opst	151560	96000	80,000	By Sales	7,20,000	5,40,000	3,60,000
To purchase	5,62,800	3,32,400	1,77,600	By cl. stock	1,80,320	69920	86360
To goods transferred	–	–	45200	By goods transferred	42800	2400	—
To gross Profit c/d	2,28,760	183920	143560				
	943120	612320	446360		943120	612320	446360
To salaries & wages	64000	64000	64000	By Gross Profit b/d	228760	183920	143560
To discount Allowed (4:3:2)	2400	1800	1200	By Discount Received a/c	1600	1000	600
To Advertisements (4:3:2)	4000	3000	2000				
To Rent	9600	9600	24000				
To S. Exp (4:3:2)	21600	16200	10800				
To Depn	1000	1000	1000				
To P/L	127760	89320	41160				
Appropiation a/c (Net Profit of depts)	230360	184920	144160		230360	184920	144160

PAGE:
DATE: / /

Profit and Loss Appropriation A/c

for the year ended . . . . . .

Dr. Cr.

Particulars	Amt	Amt	Particulars	Amt	Amt
	Rs/-	Rs/-		Rs/-	Rs/-
To Partners Profit (50% of Dept)			By Dept Trading and P/L A/c. (Net profit		
A	63880				
B	44660		X	127760	
C	20580	129120	Y	89320	
			Z.	41160	
					258240
To Stock Reserve a/c $\left(34200 \times \frac{25}{125}\right)$		6840			
To Partners capital					
A (5/10)	61140				
B (3/10)	36684				
C (2/10)	24456	1,22,280			
		258240			258240

Note - Advertisement, Sundry Expenses & Discount allowed distributed in the ratio of Sales 4:3:2.

1997 – B.Com (HONS)

PAGE:
DATE: / /

Question No 4:-

In the books of A. Bose and Co.
Departmental trading and Profit & Loss A/c
for the year ended 31.03.96.

	P (Rs)	Q (Rs)		P (Rs)	Q (Rs)
To opening st	5,00,000	–	By Goods to Q.	8,00,000	–
To Purchases	28,00,000	3,00,000	By sales	30,00,000	20,00,000
To Goods from P	–	8,00,000	By closing st	8,00,000	2,09,000
To wages	3,50,000	2,00,000			
To Gross Profit c/d	9,50,000	9,09,000			
	46,00,000	22,09,000		46,00,000	22,09,000
To Depⁿ (1:3)	7,200	21,600	By g.P. b/d.	9,50,000	9,09,000
$\left[\frac{30}{100} \times 96000 = 28800\right]$					
To Travelling Exp	20,000	1,60,000			
To Printing & stationery	30000	25,000			
To Salaries (2:1)	2,20,000	1,10,000			
To Advertisement Exp (3:2)	72000	48,000			
To general Exp (3:1)	3,75,000	1,25,000			
To Net Profit	2,25,000	4,19,400			
	9,50,000	9,09,000		9,50,000	9,09,000

PAGE
DATE / /

General P/L A/c for the year ended 31.3.91.

Particulars	Amt Rs	Particulars	Amt Rs
To Stock Reserve a/c (WN1)	38000	By Net Profit b/d P - 225800 Q - 419400	645200
To Net Profit (Transfer to capital a/c	607200		
	645200		645200

Working Notes :-

(I) Unrealised profit on closing stock of Dept Q.

(II) % percentage of G.P on sales of Dept P.

$$\left[\frac{\text{G.P of dept P}}{\text{Sales + transfer to other dept at S.P}} \times 100\right]$$

$$\frac{9,50,000}{30,00,000 + 800000} \times 100 = 25\%$$

(III) Cl. Stock of dept Q consist of own purchase and goods received from Dept P in Ratio of 300 000 : 800 000

3 : 8

∴ Portion of goods received from dept P in the closing stock

of Dept Q is

$$209000 \times \frac{8}{11}$$

$$= Rs\ 152000.$$

So Stock Reserve is $152000 \times \frac{25}{100}$

$$= \underline{Rs\ 3800}$$

Transfer Entry Journal.

Good from dept Q a/c .. dr		800000
to Good from dept P Q a/c		800000

1999 — Question No 5

In the books of Bubbles Ltd.
Departmental Trading and P/L A/c.
for the year ended 31/12/98

Dr. Cr.

	I	II	III		I	II	III
To op St	80000	1,00000	120000	By Sales	400000	6,00000	800000
To Purchase	300000	400000	500000				
				By Transfer to III	1,35000	–	–
To Transfer from I	–	–	135000	By cl. stock.	50000	50000	1,00000
To G.P. c/d.	205000	1,50,000	1,45000				
	585000	650000	900000		585000	650000	900000
By selling Commission (WN1)	8000	12000	16000	By G.P. b/d	205000	150000	145000
To Depn (WN1)	22500	12500	10,000				
To Admin Exp (WN1)	64000	48000	48000				
To Interest on capital (WN1)	22500	33750	33750				
To Net Profit c/d	88000	43750	37250				
	205000	150000	145000		205000	150000	145000

Dr General P/L A/c for the year ended Cr

To Stock Reserve (WN2)	6667	By N.P. b/d. (88000 + 43750 + 37250)	169000
To capital a/c	162333		
	169000		169000

PAGE
DATE / /

Working Notes

I Distribution of Comman Expenses.

	Items	Basis	Total	I	II	III
1.	Selling Commission	Sales of Dept (2:3:4)	36000	8000 $\left(\frac{2}{9} \times 3600\right)$	12000 $\left(\frac{3}{9} \times 36000\right)$	16000 $\left(\frac{4}{9} \times 36000\right)$
2.	Depn	Fixed Assets of Dept 9:5:4.	45000	22500	12500	10000
3.	Admin Exp	Given Ratio 4:3:3	~~[illegible]~~ 160000	64000	48000	48000
4.	Interest on Capital	Capital Employed (2:3:3)	90000	22500	33750	33750.

2. Unrealised profit on closing Stock of Dept III

a) Rate of G.P at transfer Price of Dept I.

G.P of Dept I — 205000

less decrease in G.P. for sales at transfer Price (400000 × $\frac{16}{100}$) 40,000

1,65,000

PAGE:
DATE: / /

Sales of Dept I at transfer Price.

400000 − 10% of 400 000 = 3,60 000

Rate of G.P = $\frac{\text{G.P at transfer Price}}{\text{Sales at transfer Price + Transfer to dep III}} \times 100$

$\frac{165000}{360000 + 135000} \times 100 = 33\frac{1}{3}\%$

b) Unrealised profit on closing stock of Dept III

100000 × 20% × 33 1/3%

= 6667

PAGE:
DATE: / /

C.U. B.Com (Hons) 2012 (dates changed)

Silver and Co has 3 depts. and submits the following information for the year ending on 31.3.2018

	A	B	C	Total
Purchase (units)	5000	10,000	15,000	
Purchase (Rs)	—	—	—	840000
Sales (units)	5200	9800	15300	—
Selling Price per unit (Rs)	40	45	50	—
closing st. (units)	400	600	700	—

You are required prepare Dept Trading A/c of Silver & Co assuming that rate of Gross Profit on sales is uniform in each depts over the years.

PAGE:
DATE: / /

8 Solution (B.com Hons 2012)

Since the Problem mentions the rate of G.P is uniform for all depts. So it implies that the overall G.P. Rate is also same.

To Calculate overall G.P which in turn is used to calculate dept cost p.u. following steps are to be followed.

1. Purchase Sales value of purchase unit

2. Calculate the Uniform G.P Rate by taking difference bet. "Sales value of purchased unit" - amt of Purchase.

3. Calculate cost price per unit as selling price per unit - G.P [applying uniform G.P. Rate]

Value of op st + cl st.

Since the rate of G.P is uniform for diff depts over the years so cost per unit of opening stock & closing stock is same.

PAGE:
DATE: / /

Working Notes.

1. Cost per unit of each dept.

	Rs
Sales value of purchase units	14,00,000
(5000 × 40) + (10000 × 45) + (15000 × 50)	
Less purchase cost (given)	8,40,000
Estimates Gross Profit	5,60,000

∴ Rate of Gross Profit $= \frac{560000}{1400000} \times 100$

$= 40\%$

Cost price p.u. : selling price × (100 − 40%)

∴ Dept A − 40 × ~~50~~ 60% = Rs 24/-
Dept B − 45 × 60% = Rs 27/-
Dept C − 50 × 60% = Rs 30/-

2. Computation of Selling price per unit

	A units	B units	C units
Sales	5200	9800	15,300
add closing Stock	400	600	700
	5600	10400	16000
Less Purchase	5000	10000	15000
∴ op. stock (units)	600	400	1000
∴ op Stock (value)	14400	10800	30000

Dept A 600 × 24 = Rs 14400
400 × 27 = 10800
1000 × 30 = 30000

PAGE:
DATE: / /

3) Value of Purchase Sales & closing St.

	Dept A	Dept B	Dept C.
Purchase	120000 (5000x24)	270000 (10000x27)	4,50,000 (15000x30)
Sales	2,08,000 (5200x40)	441000 (9800x45)	7,65,000 (15300x50)
Cl. Stock.	9600 (400x24)	16200 (600x27)	21000 (700x30)

Silver & Co.

Departmental Trading A/c for the yr ended 31.3.18.

Dr | Cr

	A	B	C.		A	B	C.
To opst (WN 2)	14400	10800	30000	By Sales (WN 3)	208000	441000	765000
To Purchase (WN 3)	120000	270000	450000	By cl. Stock. (WN 3)	9600	16200	21000
To Dept P/L (G.P)	83200	176400	306000				
	217600	457000	786000		217600	457000	786000

DEPARTMENTAL ACCOUNTS

PAGE:
DATE: / /

2013

A Ltd has three departments X Y and Z. From the following particulars prepare a Departmental Trading A/c for year ended Dec 2012.

	X	Y	Z.
Stock on 1.1.12	48000	72000	24000
Purchases.	2,92,000	2,48,000	96000
Actual sales.	3,45,000	3,18800	1,40,000.
Gross Profit on normal selling price	20%.	25%.	33 1/3%.

During the year certain items were sold at discount and these discounts were reflected on the sales figure shown above. The items sold at discounts were:-

~~Selling~~	X	Y	Z.
Sales at normal price	20000	6000	2000
Sales at actual price.	15000	4800	1200

(10 marks)

2013

PAGE:
DATE: / /

In the books of Attal.
Departmental Trading A/c.
for the year ended 31.12.2012.

	X	Y	Z		X	Y	Z
To op st	48000	72000	24000	By Sales a/c	345000	318800	149200
To Purchase	292000	248000	96000				
				By closing st	60000	80000	20000
To Gross Profit	65000	78800	49200				
	405000	398000	169200		405000	398000	169200

Working Notes.

(i) Sales at normal selling price = Actual sales + discount allowed.

Dept X – 3,45000 + (20000 – 15000) = 3,50,000
Y – 3,18,800 + (6000 – 4800) = 3,20,000
Z – 1,49,200 + (2000 – 1200) = 1,50,000

(ii) Closing stock = op st + purchase – cost of goods sold.

Dept X = $48000 + 292000 - \left(350000 \times \frac{80}{100}\right) = 60000$
Y = $72000 + 2,48000 - \left(320000 \times \frac{75}{100}\right) = 80000$
Y = $24000 + 96000 - \left(150000 \times \frac{66\frac{2}{3}}{100}\right) = 20000$.

PAGE:
DATE:

B. Dhar & Co. has two departments M and N.
Dept M supplies goods to Dept N at Selling Price.
From the following particulars prepare Departmental Trading and P/L a/c for the year ended 31.12.12.

	M	N
opening stock.	50000	10000
Purchases	500000	5000
Goods transferred to Dept N.	50000	—
Sales	5,50,000	1,00000
Manufacturing exp.	—	10,000
Selling Exp.	1000	500
Closing st	30,000	10,000

It is estimated that the cost of closing stock in the hands of Dept N consists of 75% of goods transferred from Dept M. The rate of gross profit earned during the ~~year~~ preceding ~~ye~~ year by Dept M was 10%. Expenses were salaries Rs 3000/- and General Exp Rs 1000.

PAGE:
DATE: / /

In the books of B. Dhar & Co. (H.O)
Departmental Trading & P/L A/c for the yr ended 31.3.12

	M	N		M	N
To op Stock	50000	10000	By Good transferred	50000	—
To Purchase	500000	5000	By Sales	5,50,000	1,00,000
To goods Trans-ferred	—	50000			
			By closing Stock	30000	10,000
To Manufacturing Exp	—	10000			
To Gross Profit c/d.	80000	35000			
	6,30,000	1,10,000		630000	1,10,000
To selling Exp	1000	500	By Gross Profit b/d	80000	35000
To Net Profit	79000	34500			
	80000	35000		80000	35000

General Profit and Loss for the year ended 31.3.12.

To salaries	3000	By N.P of Dept M	79000
To General Exp.	1000	" " " Dept N.	34500
To Stock Reserve. on closing stock $\left(10000 \times \frac{75}{100} \times 13.33\%\right)$	1000	By Stock Reserve on opening Stock $(10000 \times 75\% \times 10\%)$	750
To Net Profit	109250		
	1,14,250		1,14,250

Note Rate of G.P on Dept N = $\frac{80000}{5,50000 + 50000} \times 100$

$\frac{80000}{600000} \times 100 = 13.33\%$

St Reserve on cl - $7500 \times 13.33\%$.