

5. DEPARTMENTAL ACCOUNTS

NO. OF PROBLEMS IN 41e OF CA INTER: CLASSROOM - 09, ASSIGNMENT - 11

NO. OF PROBLEMS IN 42e OF CA INTER: CLASSROOM - 08 ASSIGNMENT - 10

NO. OF PROBLEMS IN 43e OF CA INTER: CLASSROOM – 09, ASSIGNMENT - 11

MODEL - WISE ANALYSIS OF PREVIOUS EXAMINATIONS OF IPCC AND CA INTER

MODEL NO.	M-11	N-11	M-12	N-12	M-13	N-13	M-14	N-14	M-15	N-15	M-16	N-16	M-17	N-17	M-18 (O)	M-18 (N)	N-18 (O)	N-18 (N)	M-19 (O)	M-19 (N)
Model – 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	-	5	-	-
Model – 2	-	08	-	-	04	-	-	08	08	-	-	-	8	-	-	-	12	-	08	-
Model – 3	-	-	-	-	-	12	-	-	-	-	-	8	-	-	-	-	-	-	-	-
Model – 4	05	-	-	08	-	-	08	-	-	04	08	-	-	04	-	-	-	-	-	-
Model – 5	-	-	-	-	-	04	-	-	-	-	04	-	-	-	-	-	-	-	-	-

Model – 1 : Allocation of Expenses

Model – 2 : Departmental Transfer

Model – 3 : Memorandum Trading A/c, Stocks and Mark on A/c

Model – 4 : Other Problems – (Special Adjustments)

Model – 5 : Theory

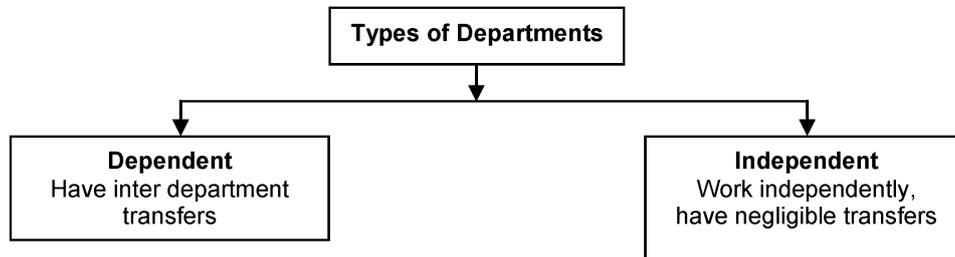
SIGNIFICANCE OF EACH PROBLEM COVERED IN THIS MATERIAL

Problem No. in this material	Problem No. in new SM	Problem No. in old SM	Problem No. in old PM	RTP	MTP	Previous Exams	Remarks
CR 1	ILL - 4	ILL - 1	-	-	-	-	
CR 2							
CR 3	-	-	8	-	M17-1	-	
CR 4	ILL - 2	-	5	-	-	-	
CR 5	PQ - 2	-	1	-	N18 (O)	N18 (N) - 5M	
CR 6	ILL - 5	ILL - 4	-	-	-	-	
CR 7	ILL - 7	-	13	-	-	-	
CR 8	-	-	-	N18 (N&O)	N18 (N)	M 17 - 8M	
CR 9	ILL - 8	ILL - 6	-	-	-	-	
ASG 1	-	-	-	-	-	M-18(O)	
ASG 2	-	-	-	M 16,M18-(N)	-	-	
ASG 3	-	ILL-2	14	-	-	N18-(O)	
ASG 4	-	-	-	-	-	-	
ASG 5	-	-	-	-	-	M11 - 5M	
ASG 6	ILL - 6	ILL - 7	-	-	-	-	
ASG 7	-	-	-	M 14	N15-1	-	
ASG 8	-	-	12	-	-	-	
ASG 9	-	-	10	-	-	M-15	
ASG 10	-	-	-	N11,M-15	-	-	
ASG 11	PQ - 3	-	11	-	-	-	

Introduction: If a business is divided into several departments, the management will be interested not only in finding out the trading results of the business as a whole, but also in ascertaining the trading results of each department individually. The method of accounting employed to obtain such results is known as departmental accounting.

What is Department?

Departments are different sections of same company or concern, located at same place, and doing business in different items, either connected to each other or entirely different.



ADVANTAGES OF DEPARTMENTAL ACCOUNTS:

The main advantages of departmental accounting are as follows:

1. **Evaluation of performance:** The performance of each department can be evaluated separately on the basis of trading results. An endeavour may be made to push up the sales of that department which is earning maximum profit.
2. **Growth potential of each department:** The growth potential of a department as compared to others can be evaluated.
3. **Justification of capital outlay:** It helps the management to determine the justification of capital outlay in each department.
4. **Judgement of efficiency:** It helps to calculate stock turnover ratio of each department separately, and thus the efficiency of each department can be revealed.
5. **Planning and control:** Availability of separate cost and profit figures for each department facilitate s better control. Thus effective planning and control can be achieved on the basis of departmental accounting information.

METHODS OF DEPARTMENTAL ACCOUNTING:

There are two methods of keeping departmental accounts:

1. **Accounts of all departments are kept in one book only:**
 - a) Income and expenditure of department is separately recorded in Subsidiary books and then accumulated under separate heads in a Ledger(s) (using columnar subsidiary Books and a columnar Ledger).
 - b) Gross profit of each department can be determined accurately.
2. **Separate set of books are kept for each department:**
 - a) Separate set of Books is kept for each department, including complete stock accounts of goods received from or transferred to other departments, and also for sales of each department.
 - b) Common Expenses are apportioned to different Departments, using appropriate basis, to ascertain Department wise Net profit in addition to the department-wise Gross Profit.

APPORTIONMENT OF COMMON EXPENSES:

No.	Items of Expenses and Income	Basis of Apportionment
1.	Selling Expenses: Eg: Salesmen's commission, discounts allowed (including provision for such discounts), bad debts, carriage outwards, advertisement, packing expenses etc.	Sales (turnover) of each department

Basis of Inter Departmental Transfers: Goods and services may be charged by one department to another usually on either of the following three bases.

1. Cost
2. Ruling market price
3. Cost plus agreed percentage of profit

Elimination of unrealized profit: When profit is added in the Inter departmental transfers the loading included in the unsold stock at the end of the year is to be excluded before final accounts are prepared so as to eliminate any anticipatory profit included there in.

Stock Reserve: Unrealized profit included in unsold inventory at the end of accounting period is eliminated by creating an appropriate stock reserve by debiting the combined Profit and Loss Account. The amount of stock reserve will be calculated as:

$$\frac{\text{Transfer price of unsold stock} \times \text{Profit included in transfer price}}{\text{Transfer price}}$$

Journal Entry: At the end of the accounting year, the following journal entry will be passed for elimination of unrealized profit (creation of stock reserve):

Profit and Loss Account Dr.
 To Stock Reserve

(Being a provision made for unrealized profit included in closing inventory)

In the beginning of the next accounting year, the aforesaid journal entry will be reversed as under:

Stock Reserve Dr.
 To Profit and Loss Account

(Being provision for unrealized profit reversed.)

Disclosure in Balance Sheet: The unsold closing inventory acquired from another department will appear on the assets side of the balance sheet as under:

(An extract of the assets side of the balance sheet)

Current assets

Inventory	xxx
Less: Stock reserve	<u>xxx</u>
	<u>xxx</u>

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CALCULATION OF STOCK RESERVE:

FIFO Basis: It is explained assuming that there are the departments A, B & C. A transfers goods to B and B transfers goods to C.

1. **Stock of Department A:** Department A's stock will be at cost, because it does not receive goods from other departments, so no stock reserve is required.
2. **Stock of Department B:** Department B's stock will be inclusive of profit charged by Department A in its transfer to Department B. Which will be calculated as follows:

Profit of Department A:

Element of A's material in closing stock of Department B

$$= \frac{\text{Material Transferred from Dept.A}}{\text{Total cost of Dept.B excluding opening stock but including transfer from Dept.A}} \times \text{Closing stock of B}$$

Stock Reserve = Element of Department A's material in closing stock of B x percentage of profit charged by department A on transfer price.

3. Stock of Department C:

Department C’s stock will be inclusive of profit of Department B as well as profit of department A which will be calculated as follows:

Profit of Department B:

Element of B’s material in closing stock of Department

$$= \frac{\text{Material Transferred from Dept. B}}{\text{Total cost of Dept.C excluding opening stockbutincluding transferfromDept.B}} \times \text{Closingstock of C}$$

Stock reserve (Department B’s profit) = Element of department B’s material in closing stock of C x percentage of profit charged by department B on transfer price.

Profit of Department A:

Element of A’s material in closing stock of Department C

$$= \frac{\text{Material Transferred from Dept. A to B}}{\text{Total cost of Dept. B (excluding opening stock)}} \times \text{Element of B's material in cl. stock of Dept.C (-) Profit in it of Dept. B}$$

Stock reserve (Department A’s profit) = Element of department A’s material in closing stock of C x percentage of profit charged by department A to B on transfer price.

Total stock reserve = Profit of Dept. A + Profit of Dept. B included in closing stock of C

Memorandum Stock Account and Memorandum Mark-up Account: For an adequate check on department stock, sometimes a Memorandum Stock Account is maintained at selling price /inflated price. A Memorandum Mark-up Account is also maintained for the loading (selling price – cost price). Departmental gross profit comes out from the Memorandum Mark-up Account. This Account can be compared with the Branch Adjustment Account which is prepared when goods are sent to branch at inflated price.

This method helps to achieve effective control of stock movements of various departments.

ACCOUNTING TREATMENT:

- The opening stock is brought down on the debit side of the Memorandum Stock Account at selling price (cost + mark-up).

Amount of mark-down on opening stock is brought down on the credit side of the Memorandum Stock Account.

- The loading on opening stock is brought down on the credit side of the Memorandum Mark-up Account.

Amount of mark-down on opening stock is brought down on the debit side of the Memorandum Stock Account.

3. For Goods purchased:

Memorandum Stock Account	Dr. [Selling price]	
To Purchase Account	[Cost price]	
To Memorandum Mark-up Account		[Loading]

4. For sale of goods:

Sales Account	Dr. [Selling price]	
To Memorandum Stock Account		[Selling price]

5. For transfer of goods by one department to another (say by X to Y)

Y’s Memorandum Stock Account	Dr. [Cost price]	
To X’s Memorandum Stock Account		[Cost price]

6. For loading on transfer by X Department:

Memorandum Mark-up Account	Dr. [Loading of X Department]	
To Memorandum Stock Account		

Advertisement	2,700
Discount allowed	2,250
Discount received	1,800
Rent, Rates and Taxes	7,500
Depreciation on furniture	1,000
Electricity expenses	3,000
Labour welfare expenses	2,400

You are required to prepare Departmental Trading and Profit and Loss Account for the year ended 31st March, 2013 after providing provision for Bad Debts at 5%. (B) (NEW SM, N13 – RTP) (SIMILAR AS M-18(N))

(ANS: NET PROFIT X – RS.26,350; Y – RS.16,350, Z – RS.29,300, TOTAL RS.72,000)

(SOLVE PROBLEM NO 1 AND 2 OF ASSIGNMENT PROBLEMS AS REWORK)

CONCEPT QUESTIONS:

1. What will be the impact on profit in case of the following?

- (a). When there is an increase in Debtors
- (b). When value of opening stock increases
- (c). When there is an increase in value of purchases

Note: _____

PROBLEM 2: Treatment of sales at normal prices and actual prices while ascertainment of cost of sales:

X Limited has three departments A, B and C. From the particulars given below compute:

- (a) The values of stock as on 31st December, 2012 and
- (b) The departmental results.

(i)

Particulars	A	B	C
Stock as on 1 st Jan 2012	24,000	36,000	12,000
Purchases	1,46,000	1,24,000	48,000
Actual sales	1,72,500	1,59,400	74,600
G.P on normal selling prices	20%	25%	33.33%

(ii) During the year certain items were sold at discount and these discounts were reflected in the values of sales shown above. The items sold at discount were:

Particulars	Dept A (Rs.)	Dept B (Rs.)	Dept C (Rs.)
Sales at normal prices	10,000	3,000	1,000
Sales at actual prices	7,500	2,400	600

(A) (OLD PM, MTP-M17)

(ANS.: CLOSING STOCK – A: 30,000; B: 40,000; C: 10,000; GROSS PROFIT – A: 32,500; B: 39,400; C: 24,600)

(SOLVE PROBLEM NO 3 OF ASSIGNMENT PROBLEMS AS REWORK)

CONCEPT QUESTION:

- (1) If GP% on Actual sale price is given then what could be the amount of gross profit and value of closing stock?
- (2) If GP% is on cost is given, What could be the amount of gross profit and value of closing stock?

Note: _____

PROBLEM 3: (PRINTED SOLUTION AVAILABLE) Calculation of Rate of Gross Profit in case of profit on sales is informing all departments: Z ltd has three departments and submits the following information for the year ending on 31st march, 2011.

Particulars	A	B	C	TOTAL
Purchases (Units)	6,000	12,000	14,400	
Purchases (Rs.)				6,00,000
Sales (Units)	6,120	11,520	14,976	
Selling price (Per unit - Rs.)	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. (A) (NEW SM) (ANS.: GROSS PROFIT TO DEPT A 1,46,880, B 3,11,040, C 4,49,280)

(SOLVE PROBLEM NO 4 OF ASSIGNMENT PROBLEMS AS REWORK)

CONCEPT QUESTION:

What will be the impact on the question.

If Purchase price per unit is Rs.15, Rs.18 & Rs.21 in the last year for Department A, B & C respectively.

Note: _____

PROBLEM 4: (PRINTED SOLUTION AVAILABLE) Calculation of Departmental Managers

Commission: Departmental X sells goods to Department Y at a profit of 25% on cost and 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 unrealized profit on departmental sales being eliminated. Departmental profits after charging manager's commission, but before adjustment of unrealized profit are as under:

Department	X	Rs.36,000
Department	Y	Rs.27,000
Department	Z	Rs.18,000

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

Particulars	Dept. X (Rs.)	Dept. Y (Rs.)	Dept. Z (Rs.)
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 charging manager's commission

(A) (NEW SM, SIMILAR: N18 (N) - 5M, MTP1 N18 (O)) (ANS: PROFIT TO DEPT X 4,000, DEPT Y 4,500 DEPT Z 2,000)

(SOLVE PROBLEM NO 5 AND 6 OF ASSIGNMENT PROBLEMS AS REWORK)

CONCEPT QUESTIONS:

- If Departmental profit before changing Manager's Commission, but after adjustment of Unrealised profit, find Departmental Manager's Commission?
- When there is no stock lying at Department X and Department Y transfer from Z? find Departmental Manager's Commission?

Note: _____

PROBLEM 5: Inter-Departmental Transfers: M/S X has two departments, A and B, From the following particulars prepare the consolidated Trading A/c & Departmental Trading A/c for the year ending 31st Dec. 2012:

Particulars	A	B
Opening stock (at Cost)	20,000	12,000
Purchases	92,000	68,000
Sales	1,40,000	1,12,000
Wages	12,000	8,000
Carriage	2,000	2,000
Closing stock:		
Purchased goods	4,500	6,000
Finished goods	24,000	14,000
Purchased goods transferred:		
By B to A	10,000	-
By A to B	-	8,000
Finished goods transferred:		
By A to B	-	35,000
By B to A	40,000	-
Return of finished goods:		
By A to B	-	10,000
By B to A	7,000	-

You are informed that purchased goods have been transferred mutually at their respective departmental purchase cost and finished goods at dept. market price and that 20% of the finished stock (closing) at each dept. represented finished goods received from the other department.

(A) (NEW SM, SIMILAR M - 10) (ANS.: GROSS PROFIT – A: 38,500, B: 46,000, TOTAL: 84,500)

(SOLVE PROBLEM NO.7 OF ASSIGNMENT PROBLEMS AS REWORK)

CONCEPT QUESTIONS:

- a). When return of finished goods is not given in the question what will be impact on answer?
- b) 1. If finished goods have been transferred at their respective departmental manufacturing cost, and purchased goods transferred at market price what will be impact on answer?
2. When return of purchased goods is not given what will be impact?

Note: _____

PROBLEM 6: (PRINTED SOLUTION AVAILABLE) Ram, Sham and Mahaan sons of Prabhu Dyal are running Punya Hotel in Chennai. Ram is heading Room division (A), Sham is heading banquet division (B) and Mahaan is heading Restaurant division (C). Each of the three brothers would receive 60% of the profits, if any, of the department of which he was incharge and remaining combined profits would be shared in 2:2:1 ratio. The following is the Trading and Profit and Loss Account of the firm for the year ended March 31, 2018:

	Rs.	Rs.		Rs.	Rs.
To Opening Stock:			By Sales:		
Room (A)	25,650		Room (A)	2,70,000	
Banquet (B)	18,000		Banquet (B)	1,65,000	
Restaurant (C)	19,500	63,150	Restaurant (C)	86,700	5,21,700
To Purchases:			By Discount received		1,650
Room (A)	2,35,000		By Closing Stock:		

Banquet (B)	1,56,000		Room (A)	55,300	
Restaurant (C)	84,200	4,75,200	Banquet (B)	31,800	
To Salaries	34,400		Restaurant (C)	42,500	1,29,600
To Royalties	8,000				
To Parking fee & car washing charges	9,600				
To Discount allowed	2,500				
To Misc. Exp.	7,000				
To Depreciation	1,160	62,660			
To Net Profit		51,940			
Total		6,52,950	Total		6,52,950

Prepare: (I) Departmental Trading and Profit and Loss Account and (II) Profit and Loss Appropriation Account after incorporating the following information:

- (i) Closing stock of Dept. B includes goods amounting Rs. 3,500 being transferred from Dept. A
- (ii) Stock value Rs. 9,300 and other goods of the value of Rs. 1,500 were transferred at selling price by Departments A and C respectively to Department B.
- (iii) The details of salaries were as follows:
 - (1) Admin Office 60%, Pantry 40%
 - (2) Allocate Admin Office in the proportion of 3: 2:1 among the Departments A, B, C
 - (3) Distribute Pantry expenses equally among the Department A and B.
- (iv) The parking fee is Rs. 500 per month which is to be divided equally between Departments A, B & C.
- (v) All other expenses are to be allocated in ratio of 2:2:1.
- (vi) Discounts received are to be credited to the three Departments as follows:
A: Rs. 650; B: Rs. 600; C: Rs. 400.
- (vii) The opening stock of Department B does not include any goods transferred from other departments and closing stock of Department B does not include any stock transferred from Department C.

(N18(O)-12M)

(ANS: NET PROFIT A – RS.46,496; B – RS.(12,064), C – RS.17,508)

CONCEPT QUESTION:

What will be the impact on the question.

If Opening stock of Department B include goods amounting Rs.5,000 being transferred from Department A

(SOLVE PROBLEM NO. 8 OF ASSIGNMENT PROBLEMS AS REWORK)

Note: _____

PROBLEM 7: Preparation of Departmental Trading and Profit and Loss Account: M/s. Suman Enterprises has two Departments, Finished Leather and Shoes. Shoes are made by the Firm itself out of leather supplied by Leather Department at its usual selling price. From the following figures, prepare Departmental Trading and Profit & Loss Account for the year ended 31st March, 2012:

Particulars	Finished Leather Department (Rs.)	Shoes Department (Rs.)
Opening stock on 1 st april,2011	30,20,000	4,30,000
Purchases	1,50,00,000	2,60,000
Sales	1,80,00,000	45,20,000
Transfer to Shoes department	30,00,000	---
Manufacturing expenses	---	5,00,000

Selling expenses	1,50,000	60,000
Rent & warehousing	5,00,000	3,00,000
Stock on 31 st march,2012	12,20,000	5,00,000

The following further information is available for necessary consideration:

- (i) The stock in Shoes Department may be considered as consisting of 75% of Leather and 25% of other expenses.
- (ii) The Finished Leather Department earned a Gross Profit @ 15% in 2010-11.
- (iii) General expenses of the business as a whole amount to Rs 8,50,000.

(A) (NEW SM) (ANS.: NET PROFIT TO DEPT LEATHER 35,50,000, DEPT SHOES 4,70,000)
(SOLVE PROBLEM NO 9 OF ASSIGNMENT PROBLEMS AS REWORK)

CONCEPT QUESTIONS:

1. If stock in shoes department may be considered as consisting of 60% of leather and 40% of other expenses?

Note: _____

PROBLEM 8: Computation of stock reserve on difference in stock: The following balances were extracted from the books of Beta. You are required to prepare Departmental Trading Account and General Profit and Loss account for the year ended 31st December, 2016:

Particulars	Dept. A (Rs.)	Dept. B (Rs.)
Opening Stock	3,00,000	2,40,000
Purchases	39,00,000	54,60,000
Sales	60,00,000	90,00,000

General expenses incurred for both the departments were Rs. 7,50,000 and you are also supplied with the following information:

- i) Closing stock of Department A Rs. 6,00,000 including goods from Department B for Rs. 1,20,000 at cost to Department A.
- ii) Closing stock of Department B Rs. 12,00,000 including goods from Department A for Rs. 1,80,000 at cost to Department B.
- iii) Opening stock of Department A and Department B include goods of the value of Rs. 60,000 and Rs. 90,000 taken from Department B and Department A respectively at cost to transferee departments.
- iv) The rate of gross profit is uniform from year to year.

(A) (M17-8M, SIMILAR: RTP N18 (N&O), MTP1 N18 (N)) (ANS.: GENERAL P&L PROFIT: RS. 60,84,000)
(SOLVE PROBLEM NO 10 OF ASSIGNMENT PROBLEMS AS REWORK)

CONCEPT QUESTIONS:

1. What will be the impact if the rate of Gross Profit for the year 2015: For Department A- 20% and For Department B- 10%?

Note: _____

PROBLEM 9: Preparation of Trading A/c, Memorandum Stock A/c and Memorandum Mark-up Account: Gram Udyog, a retail store, has two departments, Khadi and Silks for each of which stock account and memorandum mark-up accounts are kept. All the goods supplied to each department are debited to the stock account at cost plus a 'mark-up' which together makeup the selling-price of the goods and in the account the sale proceeds of the goods are credited. The amount of 'mark-up' is credited to the Departmental mark-up account. If the selling price of any goods is reduced below its normal selling price, the reduction 'mark down' is adjusted both in the stock account and the Departmental 'mark-up' account. The rate of mark-up for Khadi Department is 33.33% of the cost and for Silks Department it is 50% of the cost. The following figures have been taken from the books for the year ended 31-12-2002. (N 16 8M)

Particulars	Khadi Dept.	Silks Dept.
Stock as on Jan. 1st at cost	10,500	18,600
Purchases	75,900	93,400
Sales	95,600	1,25,000

- a. The stock of Khadi on 1-1-2002 included goods the selling price of which had been marked down by Rs.1,260. These goods were sold during the year at the reduced prices.
- b. Certain stock of the value of Rs.6,900 purchased for the Khadi Dept. were later in the year transferred to the Silks Dept. and sold for Rs.10,350. As a result though cost of the goods is included in the Khadi Dept. the sale proceeds have been credited to the Silks Dept.
- c. During the year 2002 to promote sales the goods are marked down as follows:

Dept.	Cost	Mark Down
Khadi	5,600	360
Silk	10,000	2,000

All the goods marked down, were sold except silks of the value of Rs.5,000 marked down by 1,000.

- d. At the time of stock-taking on 31-12-2002 it was discovered that Khadi Cloth at the cost of Rs.390 was missing and it was decided that the amount be written off.

You are required to prepare in a columnar form for both departments: The Memorandum stock A/c, Memorandum mark-up A/c.

(B) (NEW SM) (ANS.: SILK MARK-UP ACCOUNT – P & L ACCOUNT BALANCE – RS.41,000)(KHADI MARK-UP ACCOUNT – P & L ACCOUNT BALANCE – RS.22,685) (SOLVE PROBLEM NO 11 OF ASSIGNMENT PROBLEMS AS REWORK)

Note: _____

PRINTED SOLUTIONS TO SOME SELECTIVE PROBLEMS

PROBLEM NUMBERS TO WHICH SOLUTIONS ARE PROVIDED: 3,4,6

PROBLEM NO: 3

In the books of Z Ltd

Dr.				Cr.			
Departmental Trading A/c							
Particulars	A (Rs.)	B (Rs.)	C (Rs.)	Particulars	A (Rs.)	B (Rs.)	C (Rs.)
To opening stock [W.N:2]	11,520	8,640	12,240	By Sales	2,44,800	5,18,400	7,48,800
To Purchases [W.N:1]	96000	2,16,000	2,88,000	By closing stock	9,600	17,280	720
To Gross profit [Bal. fig]	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 Notes:

- i. If entire purchase units sold
- Dept – A (6,000 x 40) – 2,40,000
- Dept – B (12,000 x 45) – 5,40,000
- Dept – C (14,400 x 50) – 7,20,000
- Total Sales = 15,00,000

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Less: cost of Sales (6,00,000)

Total profit 9,00,000

Gross profit Margin = $\frac{9\text{lacs}}{15\text{lacs}} \times 100 = 60\%$

WORKING NOTE: 1 Purchase cost of unit:-

Particulars	A (Rs.)	B (Rs.)	C (Rs.)
Selling Price	40	45	50
(-) GP @ 60%	(24)	(27)	(30)
Cost per unit	16	18	20

WORKING NOTE: 2 Calculation of opening stock

Opening stock = sales + closing stock – purchases

Dept A = 6120 + 600 - 6,000 = 720 units = 720 x Rs. 16 = Rs. 11,520

Dept B = 11,520 + 960 - 12,000 = 480 units
= 480 x Rs. 18 = Rs. 8,640

Dept C = 14,476 + 36 - 14,400 = 612 units
= 612 x Rs. 20 = Rs. 12,240

Notes:

⇒ It is assumed that there is no change in cost per unit in current year and previous year

⇒ Cost is taken same for opening stock, purchases and closing stock.

PROBLEM NO: 4

Calculation of Correct departmental Profits:

	Dept – X (Rs.)	Dept – Y (Rs.)	Dept – Z (Rs.)
Profits after charging manager’s commission	36,000	27,000	18,000
Add: Managers commission: Net profit (10%)	4,000	3000	2000
	40,000	30000	20,000
Less: Unrealised profit on stock (W.N - 1)	(4000)	(4500)	(2,000)
Profits before managers commission	36000	25,500	18,000
Less: Managers commission @ 10%	(3600)	(2550)	(1800)
Correct profit after manager’s commission	32400	22950	16200

WORKING NOTES:

	Dept – X (Rs.)	Dept – Y (Rs.)	Dept – Z (Rs.)	Total
Unrealized 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	$1/6 \times 6,000 = 1,000$	$1/5 \times 5000 = 1,000$		2,000

PROBLEM NO: 6

**Ram, Sham and Mahaan
Departmental Trading and Profit & Loss Account for the year ended 31-3-2018**

	A	B	C		A	B	C
To Opening Stock	25,650	18,000	19,500	By Sales	2,70,000	1,65,000	86,700
To Purchases	2,35,000	1,56,000	84,200	By Transfer	9,300		1,500
To Transfer		10,800		By Closing Stock	55,300	31,800	42,500

To Gross profit c/d	73,950	12,000	27,000				
	3,34,600	1,96,800	1,30,700		3,34,600	1,96,800	1,30,700
To Salaries:				By Gross profit b/d	73,950	12,000	27,000
Admin	10,320	6,880	3,440	By Discount Received	650	600	400
To Royalty	3,200	3,200	1,600	By Net loss	-	12,064	
To Parking	2,000	2,000	2,000				
To Salaries: Pantry	6,880	6,880					
To Car wash	1,440	1,440	720				
To Discount Allowed	1,000	1,000	500				
To Misc Expenses	2,800	2,800	1,400				
To Depreciation	464	464	232				
To Net Profit c/d	46,496	-	17,508				
	74,600	24,664	27,400		74,600	24,664	27,400

Note: Gross profit of Department A is 26.48% (approx.) of Sales price (including transfer to Department C) 73,950/(2,70,000+9,300). There is some unrealized profit only on inter departmental stock 26.48% of Rs. 3,500 is as stock reserve i.e. Rs 927. This will be debited to Profit and Loss Appropriation Account.

Profit and Loss Appropriation Account

	Rs.		Rs.
To Stock Reserve (See Note)	927	By Net Profit transferred from Profit & Loss A/c	64,004
To Net loss transferred from profit & loss A/c	12,064		
To Ram: 60% of Profit of Deptt. A	27,898		
To Mahaan: 60% of Profit of Deptt. C	10,505		
To Share in Combined profits			
Ram	5,044		
Sham	5,044		
Mahaan	2,522	12,610	
	64,004		64,004

Working Note:

Calculation of combined profit	Rs.
Ram	46,496
Mahaan	17,508
Sham	(12,064)
Total	51,940
Less: Ram share	(27,898)
Less: Mahaan share	(10,505)
Less: stock reserve	(927)
Remaining profit	12,610

ASSIGNMENT PROBLEMS

PROBLEM 1: M/s. Delta is a Departmental Store having three departments X, Y and Z. The information regarding three departments for the year ended 31st March, 2018 are given below:

Particulars	Dept. X	Dept. Y	Dept. Z
Opening Stock	18,000	12,000	10,000
Purchases	66,000	44,000	22,000
Debtors at end	7,500	5,000	5,000
Sales	90,000	67,500	45,000
Closing Stock	22,500	8,750	10,500
Value of furniture in each Department	10,000	10,000	5,000
Floor space occupied by each Dept. (in sq. ft.)	1,500	1,250	1,000
Number of employees in each Department	25	20	15
Electricity consumed by each Department (in units)	300	200	100

Additional Information:

Particulars	Amount
Carriage inwards	1,500
Carriage outwards	2,700
Salaries	24,000
Advertisement	2,700
Discount allowed	2,250
Discount received	1,800
Rent, Rates and Taxes	7,500
Depreciation on furniture	1,000
Electricity Expenses	3,000
Labour welfare expenses	2,400

Prepare Departmental Trading and Profit & Loss Account for the year ended 31st March, 2018 after providing provision for Bad Debts at 5%. (M18(N)-10M))

(ANS.: NET PROFIT – X: 8,975, Y: 4,850, Z: 12,300, TOTAL: 26,125)

PROBLEM 2: Allocation of common expenses and preparation of Balance sheet: Following is the Trial Balance of Mr. Mohan as on 31.03.2015:

	Particulars	Debit (Rs.)	Credit (Rs.)
Capital Account			40,000
Drawing Account		1500	
Opening stock	Department A Department B Department C	8,500 5,700 1,200	
Purchases	Department A Department B Department C	22,000 17,000 8,000	
Sales	Department A Department B Department C		54,000 33,000 21,000
Sales returns	Department A Department B	4,000 3,000	

	Department C	1,000	
Freight and Carriage	Department A	1,400	
	Department B	800	
	Department C	200	
Furniture and fixtures		4,600	
Plant and Machinery		20,000	
Motor Vehicles		40,000	
Sundry Debtors		12,200	
Sundry Creditors			15,000
Salaries		4,500	
Power and water		1,200	
Telephone charges		2,100	
Bad Debts		750	
Rent and taxes		6,000	
Insurance		1,500	
Wages	Department A	800	
	Department B	550	
	Department C	150	
Printing and Stationeries		2,000	
Advertising		3,500	
Bank Overdraft			12,000
Cash in hand		850	
Total		1,75,000	1,75,000

You are required to prepare Department Trading, Profit and Loss Account and the Balance Sheet taking into account the following adjustments:

- Outstanding Wages: Department B - Rs. 450, Department C - Rs. 50.
- Depreciate Plant and Machinery and Motor Vehicles at the rate of 10%.
- Each Department shall share all expenses in proportion to their sales.
- Closing Stock: Department A - Rs. 3,500, Department B - Rs. 2,000, Department C - Rs. 1,500.

(C) (RTP M16, SIMILAR: RTP M18(N)) (ANS.: NET PROFIT A: 7,025, C: 6,390; NET LOSS B: 465; BALANCE SHEET TOTAL: 78,650)

PROBLEM 3: Treatment of Sales at Normal prices and Actual prices while ascertainment of cost of sales: Sona Ltd has three departments P, Q & R. From the particulars given below, compute:

- The departmental results;
- The values of stock as on 31st Dec.2014;

Particulars	P (Rs.)	Q (Rs.)	R (Rs.)
Stock (on 1.1. 2014)	30,000	45,000	15,000
Purchases	1,60,000	1,30,000	60,000
Actual sales	1,88,000	1,66,000	93,000
Gross Profit on normal selling price	25%	33.33%	40%

- During the year 2014 some items were sold at discount and these discounts were reflected in the above sales value. The details are given below:

Particulars	P (Rs.)	Q (Rs.)	R (Rs.)
Sales at normal price	15,000	8,000	6,000
Sales at actual price	11,000	6,000	4,000

(A) (N15) (ANS.: CLOSING STOCK P: 46,000; Q: 63,000; R: 18,000; GROSS PROFIT P: 44,000; Q: 54,000; R: 36,000)

PROBLEM 4: Calculation of rate of gross profit and cost of production: The following purchases were made by a business house having three departments.

Dept.	Purchase
Department A	1000 Units
Department B	2000 Units
Department C	2400 Units

At a total cost of Rs.1,00,000. Stocks on 1st January were: Dept. A: 120 units; Dept. B: 80 units; & Dept. C: 152 units. The sales were:

Dept.	Sales
A	1020 units at Rs.20.00 each
B	1920 units at Rs.22.50 each.
C	2496 units at Rs.25.00 each.

The rate of gross profits is the same in each case. Prepare Departmental Trading Accounts.

(A) (M11) (ANS.: GROSS PROFIT A: 4,080, B: 8,640, C: 12,480)

PROBLEM 5: Calculation of Departmental Managers Commission: Department P sells goods to Department S at a profit of 25% on cost and to Department Q at a profit of 15% on cost. Department S sells goods to P and Q at a profit of 20% and 30% on sales respectively. Department Q sells goods to P and S at 20% and 10% profit on cost respectively.

Departmental 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 profits are as below:

Department	Rs.
Department P	90,000
Department S	60,000
Department Q	45,000

Stock lying at different Departments at the end of the year are as below:

Figures in Rs.			
	DEPARTMENTS		
	P	S	Q
Transfer from P	-	18,000	14,000
Transfer from S	48,000	-	38,000
Transfer from Q	12,000	8,000	-

Find out correct Departmental Profits after charging Managers' Commission.

(A) (NEW SM) (ANS.: PROFITS AS PER=85,117; S=41,100; Q=42,546)

PROBLEM 6: Calculation of Departmental Managers Commission subject to Minimum

M/s P and Co., had four departments A,B,C and D. Each department being managed by manager whose commission was 10% of the respective departmental profit, subject to a minimum of Rs. 6,000 in each case. Interdepartmental transfers took place at a 'loaded' price as follows:

- From Department A to Department B 10% above cost
- From Department A to Department D 20% above cost
- From Department C to Department D 20% above cost
- From Department C to Department B 20% above cost

For the year ending on 31st March, 2014 the firm had already prepared and closed the departmental Trading and Profit and Loss Account. Subsequently, it was discovered that the closing stocks of departments had included interdepartmentally transferred goods at loaded price instead of cost price. From the following information prepare a statement re-computing the departmental profit or loss:

	Dept. A (Rs.)	Dept. B (Rs.)	Dept. C (Rs.)	Dept D (Rs.)
Final Profit (Loss)	(38,000)	50,400	72,000	1,08,000
Inter departmental transfers included at loaded price in the departmental stock		70,000 (Rs. 22,000 from Dept. A and Rs. 48,000 from Dept. C)	-	4,800 (Rs.3,600 from Dept. C and Rs. 1,200 from Dept. A)

(B) (RTP M14, MTP1 N15, MTP2 M15) (ANS: PROFITS:B=50400; C=64260;D=1,08,000; LOSS A=40,200)

PROBLEM 7: Inter-Departmental Transfers: Mega Ltd. has two departments, A and B. From the following particulars, prepare departmental Trading A/c and General Profit & Loss Account for the year ended 31st March, 2014.

Particulars	Amount (Rs.)	
	Department A	Department B
Opening stock as on 01.04.2013 (at cost)	70,000	54,000
Purchases	3,92,000	2,98,000
Carriage Inward	6,000	9,000
Wages	54,000	36,000
Sales	5,72,000	4,60,000
Purchased Goods Transferred:		
By Department B to A	50,000	
By Department A to B		36,000
Finished Goods Transferred:		
By Department B to A	1,50,000	
By Department A to B		1,75,000
Return of Finished Goods:		
By Department B to A	45,000	
By Department A to B		32,000
Closing Stock:		
Purchased Goods	24,000	30,000
Finished Goods	1,02,000	62,000

Purchased goods have been transferred mutually at their respective departmental purchase cost and finished goods at departmental market price and that 30% of the closing finished stock with each department represents finished goods received from the other department.

(A) (OLD PM) (ANS: GROSS PROFIT OF DEPARTMENT A&B IS RS.1,74,000 & RS.1,57,000 AND NET PROFIT RS.3,18,078)

PROBLEM 8: Preparation of Departmental Trading and Profit and Loss Account, Profit and Loss Appropriation Account: Messrs D, B and R carried on a business of Drapers and Tailors in Delhi; D was in-charge of Department "A" dealing in cloth, B of department "B" for selling garments and R of Department "C" the tailoring section. It had been agreed that each of the three partners would receive 75% of the profits disclosed by the accounts of the department of which he was in-charge and the balance of the combined profits would be shared in the proportion: D 1/2, B 1/4, and R 1/4. The following is the Trading and Profit and Loss Account of the firm for the six months ended March 31, 2013.

Particulars	Rs.	Rs.	Particulars	Rs.	Rs.
To Opening Stock:			By Sales :		
Cloth (A)	37,890		Cloth (A)	1,80,000	
Ready-made Garments (B)	24,000		Ready-made Garments (B)	1,30,000	
Tailoring Jobs (C)	20,000	81,890	Tailoring Jobs (C)	90,000	4,00,000
To Purchases :			By Discount received		800
Cloth (A)	1,40,700		By Closing Stock:		
Ready-made Garments (B)	80,600		Cloth (A)	45,100	
Tailoring Goods (C)	44,400	2,65,700	Ready-made Garments (B)	22,300	
To Salaries & Wages		48,000	Tailoring Jobs (C) [including Rs. 5,700 for Goods transferred from department (A)]	21,600	89,000
To Advertising		2,400			
To Rent		10,800			
To Discount allowed		1,200			
To Sundry Exp.		12,000			
To Depreciation on Furniture & Fittings		750			
To Net Profit		67,060			
		4,89,800			4,89,800

After consideration of the following, prepare (i) Departmental Trading and Profit and Loss Account and (ii) Profit and Loss Appropriation Account.

- Cloth of the value of Rs. 10,700 and other goods of the value of Rs. 600 were transferred at selling price by Departments A and B respectively to Department C.
- Cloth and garments are sold in the show-room. Tailoring work is carried out in the workshop.
- The details of salaries and wages were as follows:
 - General Office 50%, show-room 25% and 25% for workshop, which is for tailoring.
 - Allocate General Office Expenses, in the proportion of 3:2:1 among the Departments A,B,C.
 - Distribute show-room expenses in the proportion of 1:2 between Departments A & B.
- The workshop rent is Rs. 1,000 per month. The rent of the General Office and Show room is to be divided equally between Departments A and B.
- Depreciation charges are to be allocated equally amongst the three Departments.
- All other expenses are to be allocated on the basis of turnover.
- Discounts received are to be credited to the three Departments as follows: A: Rs. 400; B: Rs. 250; C: Rs. 150.
- The opening stock of Department C does not include any goods transferred from Dept. A.

(C) (OLD SM, SIMILAR: N18 (O) - 12M) (ANS.: TOTAL GROSS PROFIT RS.1,29,410, TOTAL NET PROFIT RS.67,060)

Note: _____

PROBLEM 9: Preparation of Departmental Trading and Profit and Loss Account: M/S AM enterprises had two departments, cloth and readymade clothes. The readymade clothes were made by the firm itself out of the cloth supplied by the cloth departments at its usual selling price. From the following figures, prepare departmental trading and profit & loss account for the year ended 31st march 2012.

Particulars	Cloth department (Rs.)	Readymade clothes department (Rs.)
Opening stock on 1 st april,2011	31,50,000	5,32,000
Purchases	2,10,00,000	1,68,000
Sales	2,31,00,000	47,25,000
Transfer to readymade clothes department	31,50,000	----
Manufacturing expenses	----	6,30,000
Selling expenses	2,10,000	73,500
Rent & warehousing	8,40,000	5,60,000
Stock on 31 st march,2012	21,00,000	6,72,000

In addition to above, the following information is made available for necessary consideration:

The stock in the readymade clothes department may be considered as consisting of 75% cloth and 25% other expenses. The cloth department earned a gross profit at rate of 15% in 2010-2011. General expenses of the business as a whole amount to Rs.10,85,000.

(A) (OLD PM, N11, M15) (ANS.: NET PROFIT TO DEPT CLOTH 31,50,000, DEPT READYMADE 2,83,500)

PROBLEM 10: Computation of stock reserve on difference in stock: The following balances were extracted from the books of M/s Division. You are required to prepare Departmental Trading Account and Profit and Loss account for the year ended 31st December, 2014 after adjusting the unrealized department profits if any.

	Dept. A (Rs.)	Dept. B (Rs.)
Opening Stock	50,000	40,000
Purchases	6,50,000	9,10,000
Sales	10,00,000	15,00,000

General expenses incurred for both the departments were Rs. 1,25,000 and you are also supplied with the following information: (a) Closing stock of Department A Rs. 1,00,000 including goods from Department B for Rs. 20,000 at cost to Department A. (b) Closing stock of Department B Rs. 2,00,000 including goods from Department A for Rs. 30,000 at cost to Department B. (c) Opening stock of Department A and Department B include goods of the value of Rs. 10,000 and Rs. 15,000 taken from Department B and Department A respectively at cost to transferee departments. (d) The rate of gross profit is uniform from year to year.

(A) (RTP N11, RTP M15)

(ANS.: NET PROFIT TO DEPT A=3,50,000, DEPT B=6,75,000 GENERAL P&L PROFIT:10,14,000)

PROBLEM 11: Preparation of Trading A/c, Memorandum Stock A/c and Memorandum Mark-up Account: Martis Ltd. has several departments. Goods supplied to each department are debited to a Memorandum Departmental Stock Account at cost, plus a fixed percentage (mark-up) to give the normal selling price. The mark-up is credited to a memorandum departmental 'Mark-up account', any reduction in selling prices (mark-down) will require adjustment in the stock account and in mark-up account. The mark-up for Department A for the last three years has been 25%. Figures relevant to Department A for the year ended 31st March, 2013 were as follows:

Opening stock as on 1st April, 2012, at cost Rs.65,000

Purchase at cost Rs.2,00,000

Sales Rs.3,00,000

It is further ascertained that:

- Shortage of stock found in the year ending 31.03.2013, costing Rs.1,000 were written off.
- Opening stock on 01.04.12 including goods costing Rs.6,000 had been sold during the year and had been marked down in the selling price by 600. The remaining stock had been sold during the year.
- Goods purchased during the year were marked down by Rs.1,200 from a cost of Rs.15,000. Marked-down stock costing Rs. 5,000 remained unsold on 31.03.13.

4. The departmental closing stock is to be valued at cost subject to adjustment for mark-up and mark-down.

You are required to prepare:

1. A Departmental Trading Account for Department A for the year ended 31st March, 2013 in the books of Head Office.
2. A Memorandum Stock Account for the year.
3. A Memorandum Mark-up Account for the year.

(B) (NEW SM)

(ANS: (I) GROSS PROFIT RS.58,880, (II) BALANCE IN MEMORANDUM STOCK ACCOUNT RS.28,200, (III) BALANCE IN MEMORANDUM MARKUP ACCOUNT RS.5,320)

ADDITIONAL PROBLEMS FOR SELF PRACTICE

PROBLEM 1: Allocation of common expenses while preparing departmental accounts: The Trading and Profit & Loss A/c of Radio and Gramophone Equipment Co., for the six months ended 31st March, 2013 is presented to you in the following form:

Particulars	Rs.	Particulars	Rs.
Purchases:		Sales:	
Radios (A)	1,40,700	Radios (A)	1,50,000
Gramophones (B)	90,600	Gramophones (B)	1,00,000
Spare parts for servicing (C)	64,400	Receipts from servicing & Repair jobs (C)	25,000
Salaries & Wages	48,000	Stocks on 31.3.2013:	
Rent	10,800	Radios (A)	60,100
Sundry exp.	11,600	Gramophones (B)	20,300
Profit	34,500	Spare parts for servicing (C)	44,600
	4,00,000		4,00,000

Prepare Departmental Accounts for each of the three departments A, B and C mentioned above after taking into consideration the following information:

- a) Radios and Gramophones are sold at the showroom; servicing and repairs are carried out at the workshop.
- b) Salaries & wages comprise that Showroom $\frac{3}{4}$; Workshop $\frac{1}{4}$;

It was decided to allocate the show room salaries and wages in the ratio 1:2 between the departments A and B. The workshop rent is Rs.500 per month. The rent of the Showroom is to be divided equally between Departments A & B. Sundry exp. are to be allocated on the basis of the turnover of each department.

(A) (ANS.: NET PROFIT – A: 47,500, B: (2,200), C: (10,800)

PROBLEM 2: M/s. Bombay Cotton has 2 Departments Y and Z. The following information is provided for the year ended 31st March, 2019:

Particulars	Department Y (Rs.)	Department Z (Rs.)
Opening Stock	60,000	40,000
Purchases	1,20,000	3,05,400
Wages	70,000	32,000
Sales	3,10,300	3,72,700
Closing Stock	23,700	40,700

Other Expenses are:

Particulars	Amount in (Rs.)
Salaries	30,000
Rent	9,000
Advertisement	24,000
General Expenses	3,000
Depreciation	18,000

Expenses are to be allocated between the Departments in the ratio of their Gross Profit.

Department Y sells goods to Department Z at a profit of 25% on sales. Department Z sells goods to Department Y at a profit of 28% on cost.

Each Department Manager is entitled to 10% Commission on Net Profit subject to unrealized profit on departmental sales being eliminated.

Stock Transfer during the year from Department Y to Department Z was Rs. 40,000 and from Department Z to Department Y was Rs. 50,000.

Closing Stock includes transfer from Department Y to Department Z Rs. 12,000 and from Department Z to Department Y Rs. 21,200. Opening stocks do not include any inter department transfer.

Prepare Departmental Trading and Profit & Loss Account for the year ended 31st March, 2019.

(M19(O)-8M) (ANS.: NET PROFIT Y-RS.17,280, Z-8,246)

PROBLEM 3: Comprehensive of Inter departmental transfers and allocation of expenses:

FGH Ltd has three departments I.J.K. The following information is provided for the year ended 31.03.2012.

Particulars	I (Rs.)	J (Rs.)	K (Rs.)
Opening stock	5,000	8,000	19,000
Opening reserve for unrealized profit	-	2,000	3,000
Material 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 Rs.18,000 rent Rs.6,000.

Prepare departmental trading, profit and loss account for the year ending 31.03.2012.

(A) (OLD PM, N04) (ANS.: NET PROFIT TO DEPT J 4,200 K 1,800, NET LOSS TO DEPT I 7,000)

THE END

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