

### Cost Sheet Home Work Question 1

Materials Cost		36,00,000
Rolling Charges		6,20,000
		42,20,000
Less: Scrap		(60,000)
Total Cost	100	41,60,000
Profit	12.5	5,20,000
Sales	112.5	46,80,000

**Working**

1 Sales	100	41,60,000		46,80,000
	112.5	???		

2 Profit =  $46,80,000 - 41,60,000 = 5,20,000$

Let the Selling Price Per Unit (S.P.P.U) for good production be  $x/M.T.$

Thus, S.P.P.U. for defective production be  $0.90x/M.T.$  ( $1-10\% = 0.90$ ).

400 M.T.

Good Production

400 M.T. X 90%

360 M.T.

Defective Production

400 M.T. X 10%

36 M.T.

<b>Total Sales</b>	Good Production :	360 M.T. X $x/M.T.$ =	360x	
	Defective Production :	40 M.T. X $0.90x/M.T.$ =	36x	
			396x	

However, Total Sales = 46,80,000

$396x = 46,80,000$

$x = \frac{46,80,000}{396} = 11,818.18$

S.P.P.U.	Good Production :	x =	11,818.18/M.T.	
	Defective Production :	$0.90x = 0.90 \times 11,818.18 =$	10.636.36/M.T.	

**Material Home Work Question 1**  
**Statement showing the computation of rate per KG**

Particulars	Chemical A	Chemical B
Purchase Price	1,00,000	1,04,000
Add: Basic Customs Duty @ 10% on Purchase Price	10,000	10,400
Add: Railway Freight [3,840 in 10,000 : 8,000]	2,133	1,707
Total Cost	1,12,133	1,16,107
/Quantity	9,310	7,526
Rate Per KG	12.04	15.43

**Calculation of Quantity**

Particulars	Chemical A	Chemical B
Purchased Quantity	10,000	8,000
Less: Shortage due to normal breakages	[500]	[320]
	9,500	7,680
Less: Provision for further deterioration @ 2%	[190]	[154]
	[9,500 X 2%]	[7,680 X 2%]
Available Quantity	9,310	7,526

**Material Home Work Question 2**

Particulars	Material A	Material B
Opening Stock Quantity	10,000	9,000
Add: Purchase Quantity	52,000	27,000
Less: Closing Stock Quantity	[6,000]	[11,000]
Raw Materials Consumed	56,000	25,000
Average Stock	$\frac{\text{Opening Stock} + \text{Closing Stock}}{2}$	
A	$\frac{10,000 + 6,000}{2}$	B
	8,000	10,000
	$\frac{9,000 + 11,000}{2}$	

**Inventory Turn Over Ratio**

In Number of Times	7 Times	2.50 Times
In Number of Days	52 Days	146 Days

**W.N. 1**      **Inventory Turnover Ratio in Number of Times**

A	Units	Times	B	Units	Times
	8,000	1		10,000	1
	56,000	?		25,000	?
	7 Times			2.50 Times	

**W.N. 2**      **Inventory Turnover Ratio in Number of Days**

A	Times	Days	B	Times	Days
	7	365		2.50	365
	1	???		1	?
	52 Days			146 Days	

A remains in stock for 52 days whereas B remains in stock for 146 days. Hence, Material A is moving faster than Material B.

Stock holding period must be compared with industry norms and any deviations must be investigated.

### Material Home Work Question 3

A = 8,000 Units; Ca = 200/Order; C.P.U. = 400 p.u.; i = 20% p.a.

Ci = C.P.U. X i

Ci = 400 p.u. X 20% p.a.

Ci = 80 p.u. p.a.

#### i. E.O.Q

$$E.O.Q. = \sqrt{\frac{2ACa}{Ci}}$$

$$E.O.Q. = \sqrt{\frac{2 \times 8,000 \times 200}{80}}$$

$$E.O.Q. = 200 \text{ Units}$$

#### T.A.C if we order E.O.Q. i.e. 200 Units at a time

$$T.A.C = TCa + TCi + P.C.$$

$$T.A.C = \frac{A}{Q} \times Ca + \frac{Q}{2} \times Ci + A \times C.P.U.$$

$$T.A.C = \frac{8,000}{200} \times 200 + \frac{200}{2} \times 80 + 8,000 \times 400$$

$$T.A.C = 8,000 + 8,000 + 32,00,000$$

$$T.A.C = 32,16,000$$

#### T.A.C if we accept quantity discount offer i.e. 4,000 Units at a time

New Ci = C.P.U. X i

New Ci = 384 p.u. X 20% p.a.

New Ci = 76.80 p.u. p.a.

$$T.A.C = TCa + TCi + P.C.$$

$$T.A.C = \frac{A}{Q} \times Ca + \frac{Q}{2} \times Ci + A \times C.P.U.$$

$$T.A.C = \frac{8,000}{4,000} \times 200 + \frac{4,000}{2} \times 76.80 + 8,000 \times 384$$

$$T.A.C = 400 + 1,53,600 + 30,72,000$$

$$T.A.C = 32,26,000$$

Acceptance of Quantity Discount Offer is not acceptable as it would result in additional T.A.C. of 10,000.

[32,16,000 & 32,26,000]

**Material Home Work Question 4**

Stores Ledger of AT Limited for the month of September 20X1

Date	Receipts			Issues			Balance		
	Quantity	Rate	Amount	Quantity	Rate	Amount	Quantity	Rate	Amount
20X1 September 1							25	6.50*	162.50
4				8	6.50	52	17	6.50	110.50
6	50	5.75	287.5				17	6.50	110.50
							50	5.75	287.50
7				12	6.50	78	5	6.50	32.50
							50	5.75	287.50
10				10	5.75	57.50	5	6.50	32.50
							40	5.75	230
12				5	6.50	32.50			
				10	5.75	57.50	30	5.75	172.50
13				20	5.75	115	10	5.75	57.50
15	25	6.10	152.5				10	5.75	57.50
							25	6.10	152.50
17				10	5.75	57.50	25	6.10	152.50
19	10	5.75	57.50				25	6.10	152.50
							10	5.75	57.50
20	5	5.75	28.75				5	5.75	28.75
							25	6.10	152.50
							10	5.75	57.50
26				5	5.75	28.75	20	6.10	122.00
				5	6.10	30.50	10	5.75	57.50
30				2	6.10	12.20	18	6.10	109.80
							10	5.75	57.50

Notes:

1. Replacement received on 19/9/X1 is considered as a fresh supplies.

2. Transactions on 22/9/X1 and 29/9/X1 are internal transactions between Jobs/Departments. Goods are not coming in the stores and hence stores ledger will not get affected. In other words, there will be no entry in stores ledger for these transactions.

**3. Transaction on 20/9/X1**

a. Since the goods are returned from department, stores will receive it and hence we will consider this as Receipts.

b. We are told that Material of M & Co. is returned. The question arises that at what rate this receipt should be recorded. Material from M & Co. is not issued after being purchased as it is very evident from stores ledger. Hence, we have no choice but to record this receipt at the rate of previous issue i.e. issues as on 17/9/X1 assuming that those goods must have been returned.

This is because, there is rarely a connection between Physical Flow of Goods and records of Stores Ledger. Stores Ledger are maintained to find out the value of stock as on specific date whereas physical flow of goods happens in the factory as per the requirement. So it is very much possible that in the issue dated 17/9/X1, workers may have issued 5 units of M & Co. but due to company specifically following FIFO, this issue would have been recorded at 5.75 and not at 6.10, which is purchase price of Material from M & Co. Hence, even when the returns happen, despite knowing the fact that these are goods which were purchased from M & Co., we will have to record it at 5.75 and not at 6.10, because the issues were recorded at 5.75.

c. Since these goods were there already with us, we will have to record it first while recording stock and follow FIFO method accordingly.

**4. Transaction on 26/9/X1**

While recording this issue, first we will issue materials having value of 5.75 as they were first in priority. This is as per FIFO. Remaining 5 units will be from material costing 6.10 as these are next in priority as per FIFO.