

Sub: COSTING

Topics – Introduction, Cost Sheet, Standard Costing,  
Integral and Non- Integral Accounts, Activity  
Based Costing

Test Code – N14

Branch: Multiple

Date:

(50 Marks)

*Note : All Questions are compulsory*

Answer 1

**Cost Sheet of Commodity 'A' for the period ending 30-6-2002**

Raw Materials :	Rs.	Rs.
Opening stock	22,000	
Add: Purchases	<u>1,32,000</u>	
	1,54,000	
Less : Closing stock	<u>24,464</u>	
	1,29,536	
Add : Carriage inwards	<u>1,584</u>	
Material consumed (1 mark)	1,31,120	
Direct wages	1,10,000	
Prime cost (1 mark)		2,41,120
Rent, rates, insurance and works on cost	44,000	
Cost of factory supervision	<u>8,800</u>	52,800
Add : Opening Work-in-progress		<u>5,280</u>
		299,200
Less : Closing Work-in-progress		<u>17,600</u>
Factory cost (1 mark)		2,81,600
Add : Opening stock of finished goods (1600 tonnes)		17,600
		2,99,200
Less : Closing stock of finished goods (3,200 tonnes)		<u>35,200</u>
Cost of goods sold (1 mark)		2,64,000
Add : Advertising and selling cost		
Re. 0.75 per tonne on 25,600 tonnes		<u>19,200</u>
Cost of sales (1 mark)		2,83,200
Profit (1 mark)		<u>46,800</u>
Sales		<u>3,30,000</u>

**Statement showing the goods produced during the period (1 mark)**

	Tonnes
Goods sold	25,600
Add : Closing stock of finished goods	<u>3,200</u>
	28,800
Less : Opening stock of finished goods	<u>1,600</u>
Goods produced	<u>27,200</u>

**Answer 2**

Ingredient	Actual usage Litres	Standard usage Litres	Difference Litres
O	420	$(0.4/1.1) \times 1,150 = 418.18$	1.82 (A)
H	180	$(0.2/1.1) \times 1,150 = 209.09$	29.09 (F)
N	550	$(0.5/1.1) \times 1,150 = 522.73$	27.27 (A)
	1,150	1,150.00	

**(2 marks)**

Deviation as % : **(2 marks)**

$$\begin{aligned} O &= (1.82/418.18) \times 100 = 0.435\% \\ H &= (29.09/209.09) \times 100 = 13.913\% \\ N &= (27.27/522.73) \times 100 = 5.217\% \end{aligned}$$

**Answer 3**

Suppose actual material used =  $\chi$  kg.

$M_1$  — Actual quantity ( $\chi$ ) x Actual price (Not required)

$M_2$  —  $\chi$  kg x Rs. 10

$M_3$  — Mix variance not required

$M_4$  — Standard material cost of output.

We know that  $M_2 - M_4$  = Material usage variance.

We also know that  $M_2$  was more than  $M_4$ , since material usage variance is adverse.

$$\therefore M_2 - M_4 = \text{Rs. } 1,500$$

$$\text{or } 10\chi - (5,750 \times \text{Rs. } 10 \times 10 \text{ kg}) = 1,500$$

$$\text{or } 10\chi - \text{Rs. } 5,75,000 = \text{Rs. } 1,500$$

$$\text{or } \chi = \text{Rs. } 5,96,500 \div 10 = 57,650 \text{ kgs. (4 marks)}$$

**Answer 4**

Standard labour rate per hour =  $(15.30/9) \times 10 = \text{Rs. } 17$  per hour

$L_1$  — Actual payment for actual hours —

$L_2$  — Actual hours worked at standard rate -  $13,500 \times \text{Rs. } 17 = \text{Rs. } 2,29,500$

$L_3$  — Labour hours available at standard rate

$$[13,500 - 10\% \text{ of } 13,500] \times \text{Rs. } 17 = 2,06,550$$

$L_4$  — Labour hours worked -  $12,420 \text{ hours} \times \text{Rs. } 17 = 2,11,140$

$L_5$  — Labour cost for output 1,800 units x 6 hrs x Rs. 17 = 1,83,600

Labour Idle Time Variance -  $L_3 - L_4 = \text{Rs. } 2,06,550 - \text{Rs. } 2,11,140 = \text{Rs. } 4,590$  (F) **(3 marks)**

Labour Efficiency Variance -  $L_4 - L_5 = \text{Rs. } 2,11,140 - \text{Rs. } 1,83,600 = \text{Rs. } 27,540$  (A) **(3 marks)**

**Answer 5**

**The Pen Manufacturing Company Cost Sheet for the year ending 31.3.1990 (4 marks for each product)**

Particulars	Deluxe (40,000 Pens)		Popular (1,20,000 Pens)	
	Rs.	Rs.	Rs.	Rs.
Direct Materials (Note 1)	80,000	2.00	1,30,000	1.00
Direct Labour (Note 2)	40,000	1.00	72,000	0.60
Prime Cost	1,20,000	3.00	1,92,000	1.60
Production Overhead (Note 3)	12,000	0.30	36,000	0.30
Works Cost	1,32,000	3.30	2,28,000	1.90
Administration Overheads	80,000	2.00	1,44,000	1.20
(200% of Direct Wages) Cost of Production	2,12,000	5.30	3,72,000	3.10
Closing Stock (Note 4)	21,200	5.30	62,000	3.10

Cost of Goods Sold	1,90,800	5.30	3,10,000	3.10
Selling Expenses {Note 5}	9,000	0.25	25,000	0.25
Profit	99,800	5.5	3,35,000	3.35
Sales	52,200	1.45	1,65,000	1.65
	2,52,000	7.00	5,00,000	5.00

**Note 1.** Consumption of direct material in 'Deluxe' type is twice as much as that of 'Popular' type, Therefore :

$$\begin{array}{l} \text{Deluxe} \\ 40,000 \times 2 = 80,000 \end{array} \qquad \begin{array}{l} \text{Popular} \\ 1,20,000 \times 1 = 1,20,000 \end{array}$$

∴ Material cost is to be divided in ratio of 80 ; 120 or 2 : 3 between Deluxe and Popular.

$$\begin{array}{l} \text{Deluxe} \\ (2,00,000 \div 5) \times 2 = \text{Rs. } 80,000 \end{array} \qquad \begin{array}{l} \text{Popular} \\ (2,00,000 \div 5) \times 3 = \text{Rs. } 1,20,000 \end{array}$$

**Note 2.** It is given that direct wages for 'Popular' type were 60% of those for 'Deluxe' type. Suppose, wage for Deluxe type = x

$$\begin{array}{l} \text{Deluxe} \\ \therefore \text{Wages} \quad 40,000 x \end{array} \qquad \begin{array}{l} \text{Popular} \\ 1,20,000 \times 0.60 x \end{array}$$

$$\text{or } 40,000 x + 1,20,000 \times 0.60 x = \text{Rs. } 1,12,000 \text{ or } x = \text{Rs. } 1$$

$$\therefore \text{Wage cost for Deluxe} = \text{Rs. } 40,000 \text{ for Popular} = \text{Rs. } 72,000$$

**Note 3.** Production Overhead

$$\text{Deluxe } 40,000 \times \text{Rs. } 0.30 = \text{Rs. } 12,000$$

$$\text{Popular } 1,20,000 \times \text{Rs. } 0.30 = \text{Rs. } 36,000$$

**Note 4.** Deluxe = 4,000 in stock @ Rs. 5.30 = Rs. 21,200

$$\text{Popular} = 20,000 \text{ in stock @ Rs. } 3.10 = 62,000$$

**Note 5.** Deluxe = 36,000 x Re. 0.25 = Rs. 9,000

$$\text{Popular} = 1,00,000 \times \text{Re. } 0.25 = 25,000$$

**Answer 6 (1 mark for each account)**

Dr.	Integral Ledger Store Control A/c.		Cr.
	Rs.		Rs.
To Balance b/d	1,00,000	By Work in progress A/c	2,00,000
To Creditors A/c	1,60,000	By Inventory Adj. A/c	8,000
		By Balance c/d	52,000
	<b>2,60,000</b>		<b>2,60,000</b>
<b>To Balance b/d</b>	<b>52,000</b>		

Dr.	Work in Progress A/c/		Cr.
	Rs.		Rs.
To stores Control A/c	2,00,000	By Finished Stock A/c	3,82,000
To Wages Control A/c	1,86,000	By Balance c/d	1,90,00
To Production Overhead A/c	1,86,000		
	<b>5,72,000</b>		<b>5,72,000</b>
<b>To Balance b/d</b>	<b>1,90,000</b>		

Dr.	Finished Goods A/c		Cr.
	Rs.		Rs.
To Work in progress A/c	3,82,000	By Cost of Sales A/c	3,82,000
	<b>3,82,000</b>		<b>3,82,000</b>

Dr.	Wages Control A/c		Cr.
	Rs.		Rs.
To Bank	1,90,000	By W.I.P.A/c.	1,86,000
		By Balance c/d	4,000
	<b>1,90,000</b>		<b>1,90,000</b>

<b>To Balance b/d</b>	<b>4,000</b>		
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<b>Dr.</b>	<b>Production Overhead A/c.</b>		<b>Cr.</b>
	<b>Rs.</b>		<b>Rs.</b>
To Bank	1,75,000	By work in progress A/c	1,86,000
To Balance c/d	11,000		
	<b>1,86,000</b>		<b>1,86,000</b>

<b>Dr.</b>	<b>Selling and Distribution Expenses A/c.</b>		<b>Cr.</b>
	<b>Rs.</b>		<b>Rs.</b>
To Bank	20,000	By Cost of Sales A/c	20,000
	<b>20,000</b>		<b>20,000</b>

<b>Dr.</b>	<b>Cost of Sales A/c.</b>		<b>Cr.</b>
	<b>Rs.</b>		<b>Rs.</b>
To Finished Stock A/c.	3,82,000	By Balance c/d	4,02,000
To Selling & Distribution Overhead A/c			
To Balance b/d	20,000		
	<b>4,02,000</b>		<b>4,02,000</b>

<b>Dr.</b>	<b>Sales A/c.</b>		<b>Cr.</b>
	<b>Rs.</b>		<b>Rs.</b>
To Balance c/d	5,72,000	By Debtors A/c	5,72,000
	<b>5,72,000</b>		<b>5,72,000</b>
		By Balance b/d	5,72,000

<b>Dr.</b>	<b>Share Capital A/c.</b>		<b>Cr.</b>
	<b>Rs.</b>		<b>Rs.</b>
		By Balance b/d	2,00,000
			<b>2,00,000</b>

<b>Dr.</b>	<b>Reserve A/c.</b>		<b>Cr.</b>
	<b>Rs.</b>		<b>Rs.</b>
		By Balance b/d	50,000
			<b>50,000</b>

<b>Dr.</b>	<b>Plant and Machinery A/c.</b>		<b>Cr.</b>
	<b>Rs.</b>		<b>Rs.</b>
To Balance b/d	2,50,000		
	<b>2,50,000</b>		

<b>Dr.</b>	<b>Sundry Debtors A/c.</b>		<b>Cr.</b>
	<b>Rs.</b>		<b>Rs.</b>
To Balance b/d	40,000	By Bank A/c	6,00,000
To Sales	5,72,000	By Balance c/d	12,000
	<b>6,12,000</b>		<b>6,12,000</b>

<b>Dr.</b>	<b>Sundry Creditors A/c.</b>		<b>Cr.</b>
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	Rs.		Rs.
To Bank	1,70,000	By Balance b/d	60,000
To Balance c/d	50,000	By Stores Control A/c	1,60,000
	<b>2,20,000</b>		<b>2,20,000</b>
		<b>By Balance b/d</b>	<b>50,000</b>

Dr.		Bank Account		Cr.	
	Rs.		Rs.		Rs.
To Sundry Debtor's A/c	6,00,000	By Balance b/d	80,000		
To Balance c/d	35,000	By Wages Control A/c	1,90,000		
		By Production Control A/c	1,75,000		
		By Selling & Dist.Exp. Control A/c	20,000		
		By Sundry Creditor's A/c	1,70,000		
	<b>6,35,000</b>				<b>6,35,000</b>
		<b>By Balance b/d</b>	<b>35,000</b>		

Dr.		Inventory Adjustment A/c		Cr.	
	Rs.		Rs.		Rs.
To Store Ledger Control A/c	8,000	By Balance c/d	8,000		
	<b>8,000</b>				<b>8,000</b>
<b>To Balance b/d</b>	<b>8,000</b>				

Dr.		Trial Balance as on 31 <sup>st</sup> December, 2002		Cr.	
		Dr. Rs.		Cr. Rs.	
1. Share Capital				2,00,000	
2. Reserve Account				50,000	
3. Sundry Debtors		12,000		-	
4. Sundry Creditors				50,000	
5. Plant and Machinery Account		2,50,000		-	
6. Bank Account				35,000	
7. Stores Ledger Control Account		52,000		-	
8. Work in progress Account		1,90,000			
9. Wages Control Account		4,000			
10. Production Overhead Account				11,000	
11. Inventory Adjustment Account		8,000			
12. Cost of Sales Account		4,02,000			
13. Sales Account				5,72,000	
		<b>9,18,000</b>		<b>9,18,000</b>	

Dr.		Profit and Loss Account for the year ended 31.12.2002		Cr.	
	Rs.		Rs.		Rs.
To Cost of Sales A/c	4,02,000	By Sales A/c	5,72,000		
To Inventory Adjustment A/c	8,000	By Production Overhead A/c	11,000		
To Wages Control A/c	4,000				
To Net Profit	1,69,000				
	<b>5,83,000</b>				<b>5,83,000</b>

Dr.		Balance Sheet as at 31 <sup>st</sup> December, 2002		Cr.	
Liabilities		Rs.	Assets		Rs.
Share Capital	2,00,000		Plant and Machinery		2,50,000
Reserve	50,000		Stock of :		
Profit	<u>1,69,000</u>	4,19,000	Finished goods	52,000	
Sundry Creditors		50,000	W.I.P.	<u>1,90,000</u>	2,42,000

Bank Overdraft	35,000	Sundry Debtors	12,000
	<b>5,04,000</b>		<b>5,04,000</b>

**Answer 7**

The total production overheads are `26,00,000:

Product A:  $10,000 \times `30 = `3,00,000$

Product B:  $20,000 \times `40 = `8,00,000$

Product C:  $30,000 \times `50 = `15,00,000$

On the basis of ABC analysis this amount will be apportioned as follows:

**Statement Showing "Activity Based Production Cost" (1 mark for each step)**

Activity Cost Pool	Cost Driver	Ratio	Total Amount (₹)	A (₹)	B (₹)	C (₹)
Stores Receiving	Purchase Requisition	6:9:10	2,96,000	71,040	1,06,560	1,18,400
Inspection	Production Runs	5:7:8	8,94,000	2,23,500	3,12,900	3,57,600
Dispatch	Orders Executed	6:9:10	2,10,000	50,400	75,600	84,000
Machine Setups	Setups	12:13:15	12,00,000	3,60,000	3,90,000	4,50,000
Total Activity Cost				7,04,940	8,85,060	10,10,000
Quantity Produces				10,000	20,000	30,000
Unit Cost (Overheads)				70.49	44.25	33.67
Add: Conversion Cost (Material + Labour)				80	80	90
Total				150.49	124.25	123.67

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