

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)

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%

Answer 3 (2 marks for each step)

Deccan Manufacturing Ltd.

Schedule showing the distribution of overhead costs of the four service departments.

	Service				Production		
	P	Q	R	S	X	Y	Z
	Rs.	Rs,	Rs.	Rs.	Rs.	Rs.	Rs.
Overhead	45,000	75,000	1,05,000	30,000	1,93,000	64,000	83,000
Distribution of Overhead of:							
Deptt. P	(45,000)	5,000	4,000	5,000	10,000	12,500	8,500
Deptt. Q		(80,000)	24,000	12,000	16,000	12,000	16,000
Deptt. R			(1,33,000)	19,000	57,000	28,500	28,500
Deptt. S				(66,000)	24,000	18,000	24,000
Total (i)					3,00,000	1,35,000	1,60,000
Direct Labour Hours (ii)					4,000	3,000	4,000
(b) Overhead recovery rate (i) ÷ (ii)					Rs, 75	Rs. 45	Rs. 40

Answer 4

Statement showing the distribution of overheads (primary distribution) (3 ½ marks)

Items of costs	Basis of apportionment	Total	Production Departments			Service Departments	
			A	B	C	X	Y
		Rs.	Rs,	Rs.	Rs,	Rs,	Rs.
Direct wages	Only service depts.	10,000	-	-	-	7,500	2,500
Rent and fates	Floor space @ Rs. 2.50 per sq. mtr. (Rs. 25,000 ÷ 60)	25,000	5,000	6,250	7,500	5,000	1,250
General lighting	Lighting points (nos.) @ Rs. 50 per point (Rs. 3,000 ÷ 60)	3,000	500	750	1,000	500	250
Indirect wages	Direct wages (15%)	7,500	2,250	1,500	2,250	1,125	375
Power	H.P. @ Rs. 50 (Rs. 7,500 ÷ 150)	7,500	3,000	1,500	2,500	500	-
Depreciation	Cost of m/c @ 4%*	50,000	12,000	16,000	20,000	1,000	1,000
Sundries	Direct wages @ Rs 1	50,000	15,000	10,000	15,000	7,500	2,500
	Total (i)	1,53,000	37,750	36,000	48,250	23,125.	7,875

* $(50,000/12,50,000) \times 100 = 4\%$

Redistribution of Service Departments Expenses to Production Departments (3 marks)

Departments	Total	A	B	C	X	Y
X (given ratios)		4,625	6,937	9,250	(23,125)	2,313
Y		4,075	2,038	3,056	1,019	(10,188)
X		204	306	407	(1,019)	102
Y		41	20	31	10	(102)
X		2	3	5	(10)	-
Total (ii)		8,947	9,304	12,749	(23,125)	(7,875)
Grand Total (i) + (ii)	1,53,000	46,697	45,304	60,999	-	-
Production hours worked		6,226	4,028	4,066		
Overhead rate		7.50	11.25	15.00		

(b)

Direct material cost (given)	Rs.250.00
Direct labour cost	<u>150.00</u>
Prime cost	<u>400.00</u>

Production overheads:

Departments	Hours	Rate	Amount	
A	4	Rs. 7.50	Rs. 30.00	
B	5	11.25	56.25	
C	3	15.00	45.00	131.25
Total cost of production				531.25
(1 ½ 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
	99,800	5.5	3,35,000	3.35
Profit	52,200	1.45	1,65,000	1.65
Sales	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

$$\begin{array}{l} \text{Deluxe} \\ \therefore \text{Wages} \\ \text{or } 40,000 x + 1,20,000 \times 0.60 x = \text{Rs. } 1,12,000 \text{ or } x = \text{Re. } 1 \end{array} \qquad \begin{array}{l} \text{Popular} \\ 1,20,000 \times 0.60 x \end{array}$$

∴ Wage cost for Deluxe = Rs. 40,000 for Popular = Rs. 72,000

Note 3. Production Overhead

Deluxe 40,000 X Re. 0.30 = Rs. 12,000

Popular 1,20,000 x Re. 0.30 = Rs. 36,000

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

Popular = 20,000 in stock @ Rs. 3.10 = 62,000

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

Popular = 1,00,000 x Re. 0.25 = 25,000

Answer 6

Before computing the comprehensive machine hour rate, it is necessary to find out the total machine hours utilized and total wages paid to the operators.

Computation of total machine hours utilized :

Normal available hours p.m. per operator	208 hours	
Less: Unutilised hours due to:		
Absenteeism	18 hours	
Leave	20	
Idle time	10	48
Total hours utilized p.m. per operator		160
Total hours utilized for 6 months for 6 operators = 160 x 6 x 6 or		5,760 hrs.

It is given in the question that the machines cannot work without an operator wholly engaged on it. Therefore, hours utilized for 6 operators, i.e., 5,760 hrs. represents the total machine hours.

Total wages to 6 operators for 6 months :

Average rate of wages per hour = Rs. 20 ÷ 8 hrs. = Rs. 2.50

Normal hours for which wages are to be paid = 208 - 18 or 190 hrs.

Wages for 6 months for 6 operators @ Rs. 2.50/hr = 190 x 6 x 6 x 2.50 or Rs. 17,100. **(3 marks)**

Computation of Comprehensive Machine Hour Rate for the Machine Shop

Operators' wages (as above)	Rs. 17,100
Production Bonus	2,565
Power consumed	8,050
Supervision and indirect labour	3,300
Lighting and electricity	1,200
Repairs and maintenance (3% of Rs. 8 lakhs) ÷ 2	12,000
Insurance (given for 12 months: reduced to 50% for 6 months)	20,000
Depreciation for 6 months	40,000
Other sundry works expenses for 6 months	6,000
General management expenses for 6 months	27,265
Total overheads for 6 months	1,37,480

(4 marks)

Comprehensive Machine Hour Rate = 1,37,480 ÷ 5760 hrs = Rs.23.87 per hour. **(1 mark)**

Answer 7

Suppose actual material used = χ kg.

M_1 — Actual quantity (x) x Actual price (Not required)

M_2 — χ 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.

∴ $M_2 - M_4$ = Rs. 1,500

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

or $10x - Rs. 5,75,000 = Rs. 1,500$

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