



**J.K. SHAH<sup>®</sup>**  
**TEST SERIES**  
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**SUGGESTED SOLUTION**

**CA INTERMEDIATE**

**SUBJECT- COSTING**

**Test Code – CIM 8657**

**BRANCH - () (Date :)**

**Head Office : Shraddha, 3<sup>rd</sup> Floor, Near Chinai College, Andheri (E), Mumbai – 69.**

**Tel : (022) 26836666**

## ANSWER -1

Cost sheet for the year ended 31<sup>st</sup> March, 2018.

Units produced – 14,000 units

Units sold – 14,153 units

Particulars	Amt. (Rs.)
Raw materials purchased	42,25,000
Add : Freight Inward	1,00,000
Add : Opening value of raw materials	2,28,000
Less : Closing value of raw materials	(3,05,000)
	42,48,000
Less : Sale of scrap of material	8,000
Materials consumed	42,40,000
Direct Wages (12,56,000 + 1,50,000)	14,06,000
<b>Prime Cost</b>	56,46,000
Factory overheads (20% of Rs. Prime Cost)	11,29,200
Add : Opening value of W – I – P	1,92,500
Less : Closing value of W – I – P	(1,40,700)
<b>Factory Cost</b>	68,27,000
Add : Administrative overheads	1,73,000
<b>Cost of Production</b>	70,00,000
<b>Add</b> : Value of opening finished stock	6,08,500
<b>Less</b> : Value of closing finished stock	6,08,500
[Rs. 500 (70,00,000/14,000) × 1,064]	
(1,217 + 14,000 – 14,153 = 1,064 units)	(5,32,000)
Cost of Goods sold	70,76,500
Distribution expenses (Rs. 16 × 14,153 units)	2,26,448
<b>Cost of Sales</b>	73,02,948
Profit (Balancing figure)	14,43,606
Sales (Rs. 618 × 14,153 units)	87,46,554

(10 MARKS)

## ANSWER -2

Calculation of :

1. Time saved and wages :

Workmen	A	B
Standard time (hrs.)	40	40
Actual time taken (hrs.)	32	30
Time saved (hrs.)	8	10
Wages paid @ Rs. x per hr. (Rs.)	32x	30x

(2 MARKS)

2. Bonus Plan :

	Halsey	Rowan
Time saved (hrs.)	8	10
Bonus (Rs.)	4x	7.5x
	$\left[ \frac{8 \text{ hrs} \times \text{Rs. } x}{2} \right]$	$\left[ \frac{10 \text{ hrs}}{40 \text{ hrs}} \times 30 \text{ hrs} \times \text{Rs } x \right]$

(2 MARKS)

3. Total wages :

Workman A :  $32x + 4x = \text{Rs. } 36x$

Workman B :  $30x + 7.5x = \text{Rs. } 37.5x$

### Statement of factory cost of the job

Workmen	A (Rs.)	B (Rs.)
Material cost (assumed)	y	Y
Wages (shown above)	36x	37.5x
Works overhead	240	225
Factory cost (given)	2,600	2,600

The above relations can be written as follows :

$$36x + y + 240 = 2,600 \quad (i)$$

$$37.5x + y + 225 = 2,600 \quad (ii)$$

Subtracting (i) from (ii) we get

$$1.5x - 15 = 0$$

$$\text{Or, } 1.5x = 15$$

$$\text{Or, } x = \text{Rs. } 10 \text{ per hour}$$

On substituting the value of x in (i) we get  $y = \text{Rs. } 2,000$

Hence, the wage rate per hour is Rs. 10 and the cost of raw material is Rs. 2,000 on the job.

(4 MARKS)

**Statement of element of cost**

Workmen	A (Rs.)	B (Rs.)
Material cost	2,000	2,000
Wages (@ 10 per hour)	360	375
Works overhead	240	225
Factory cost	2,600	2,600

(2 MARKS)

**ANSWER -3**

**The Cost of labour under the bonus schemes are tabulated as below:**

Time Allowed	Time taken	Wages (Rs.)	Bonus (Rs.)		Total Wages (Rs.)		Earning per hour (Rs.)	
			Halsey*	Rowan**	Halsey	Rowan	Halsey	Rowan
(1)	(2)	(3) = (2) × Rs. 80	(4)	(5)	(6) = (3) + (4)	(7) = (3) + (5)	(8) = (6)/(2)	(9) = (7)/(2)
24,960	24,960 (24,960 X 100%)	19,96,800	-	-	19,96,800	19,96,800	80.00	80.00
24,960	18,720 (24,960 X 75%)	14,97,600	2,49,600	3,74,400	17,47,200	18,72,000	93.33	100.00
24,960	12,480 (24,960 X 50%)	9,98,400	4,99,200	4,99,200	14,97,600	14,97,600	120.00	120.00
24,960	6,240 (24,960 X 25%)	4,99,200	7,48,800	3,74,400	12,48,000	8,73,600	200.00	140.00

\* Bonus under Halsey Plan = 50% of (Time Allowed – Time Taken) × Rate per hour

\*\* Bonus under Rowan Plan =  $\frac{\text{Time taken}}{\text{Time allowed}} \times \text{Time saved} \times \text{Rate per hour}$

Rowan scheme of bonus keeps checks on speed of work as the rate of incentive increases only upto 50% of time taken to time allowed but the rate decreases as the time taken to time allowed comes below 50%. It provides incentives for efficient workers for saving in time but also puts check on careless speed. On implementation of Rowan scheme, the management of ADV Pvt. Ltd. would resolve issue of the slow speed work while maintaining the skill and precision required maintaining the quality of product.

(8 MARKS)

**ANSWER -4**

Input – Output Relation

1 bag = 1 metre of cotton cloth

Therefore 1000 meter cotton cloth = 1000 units of bags because here opening stock and closing stock of input are zero. Therefore total input purchased = total input consumed

No. of bags manufactured = 1,000 units

**Cost sheet for the month of September 2019**

	<b>Particulars</b>	<b>Total Cost (Rs.)</b>	<b>Cost per unit (Rs.)</b>
1.	Direct materials consumed:		
	- Leather sheets	3,20,000	320.00
	- Cotton cloths	15,000	15.00
	Add: Freight paid on purchase	8,500	8.50
2.	Direct wages (Rs.80 × 2,000 hours)	1,60,000	160.00
3.	Direct expenses (Rs.10 × 2,000 hours)	20,000	20.00
4.	<b>Prime Cost</b>	<b>5,23,500</b>	523.50
5.	Factory Overheads: Depreciation on machines {(Rs.22,00,000×90%)÷120 months}	16,500	16.50
	Apportion cost of factory rent	98,000	98.00
6.	Works/ Factory Cost	6,38,000	638.00
7.	Less: Realisable value of cuttings (Rs.150×35 kg.)	(5,250)	(5.25)
8.	Cost of Production	6,32,750	632.75
9.	Add: Opening stock of bags	0	
10.	Less: Closing stock of bags (100 bags × Rs.632.75)	(63,275)	
11.	Cost of Goods Sold	5,69,475	632.75
12.	Add: Administrative Overheads:		
	- Staff salary	45,000	45.00
	- Apportioned rent for administrative office	12,000	12.00
13.	Add: Selling and Distribution Overheads		
	- Staff salary	72,000	80.00
	- Apportioned rent for sales office	10,000	11.11
	- Freight paid on delivery of bags	18,000	20.00
14.	Cost of Sales (18+19+20)	7,26,475	800.86

**Apportionment of Factory rent:**

To factory building {(Rs.1,20,000 ÷ 2400 sq.feet) × 1,960 sq. feet} = Rs.98,000

To administrative office {(Rs.1,20,000 ÷ 2400 sq.feet) × 240 sq. feet} = Rs.12,000

To sale office {(Rs.1,20,000 ÷ 2400 sq.feet) × 200 sq. feet} = Rs.10,000

**(10 MARKS)**

**ANSWER -5****ANSWER –A****(a) Labour turnover rate :**

It comprises of computation of labour turnover by using following methods :

**(i) Replacement Method :**

$$\text{Labour turnover rate} = \frac{\text{No. of workers replaced}}{\text{Average number of workers}} \times 100$$

$$= \frac{75}{1,000} \times 100 = 7.5\%$$

$$\text{Equivalent Annual Turnover Rate} = \frac{7.5 \times 365}{31} = 88.31\%$$

**(1 MARK)****(ii) Separation Method :**

$$\text{Labour turnover rate} = \frac{\text{No. of workers left} + \text{No. of workers discharged}}{\text{Average number of workers}} \times 100$$

$$= \frac{(40+60)}{(900+1100) \div 2} \times 100 = \frac{100}{1,000} \times 100 = 10\%$$

$$\text{Equivalent Annual Turnover Rate} = \frac{10 \times 365}{31} = 117.74\%$$

**(2 MARKS)****(iii) Flux Method :**

$$\text{Labour turnover rate} = \frac{\text{No. of separations} + \text{No. of accessions}}{\text{Average number of workers}} \times 100$$

$$= \frac{(100 + 300)}{(900 + 1,100) \div 2} \times 100 = \frac{400}{1,000} \times 100 = 40\%$$

$$\text{Equivalent Annual Turnover Rate} = \frac{40 \times 365}{31} = 470.97\%$$

**(2 MARKS)****OR****(iii) Flux Method :**

$$\text{Labour turnover rate} = \frac{\text{No. of separation} + \text{No. of replaced}}{\text{Average number of workers}} \times 100$$

$$\frac{100 + 75}{1000} \times 100 = 17.5\%$$

$$\text{Equivalent Annual Turnover Rate} = \frac{17.5 \times 365}{31} = 206.05\%$$

**ANSWER –B****Statement showing Earnings of Workers A and B**

Workers	A ( Rs.)	B ( Rs.)
Basic Wages	100.00	160.00
Dearness Allowance (50% of Basic Wages)	50.00	80.00
Overtime Wages (Refer to Working Note 1)	15.00	----
Gross Wages earned	165.00	240.00
Less: Provident Fund (8% × Rs.100); (8% × Rs.160)	(8.00)	(12.80)
– ESI (2% × Rs.100); (2% × Rs.160)	(2.00)	( 3.20)
Net Wages paid	155.00	224.00

**(2 MARKS)****Statement of Labour Cost**

	A ( Rs.)	B ( Rs.)
Gross Wages (excluding overtime)	150.00	240.00
Employer's contribution to P.F. and E.S.I.	10.00	16.00
	160.00	256.00
Ordinary wages Labour Rate per hour( Rs.160 ÷ 200 hours); ( Rs.256 ÷ 200 hours)	0.80	1.28

**(2 MARKS)****Statement Showing Allocation of Wages to Jobs**

	Total Wages	Jobs		
		X	Y	Z
<b>Worker A</b>				
Ordinary Wages (4:3:3)	160.00	64.00	48.00	48.00
Overtime	15.00	--	15.00	--
<b>Worker B</b>				
Ordinary Wages(5:2:3)	256.00	128.00	51.20	76.80
	431.00	192.00	114.20	124.80

**(2 MARKS)****Working Notes**

- Normal Wages are considered as basic wages

$$\begin{aligned} \text{Over time} &= \frac{2 \times (\text{Basic wage} + \text{D.A.}) \times 10 \text{ hours}}{200 \text{ hours}} \\ &= 2 \times \frac{\text{Rs.150}}{200} \times 10 \text{ hours} \end{aligned}$$

**(1 MARK)**