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SUGGESTED SOLUTION

INTERMEDIATE M'19 EXAM

SUBJECT- COSTING

Test Code – CIM 8139

BRANCH - () (Date :)

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ANSWER-1

Working Note: Is Let x be the cost of material and y be the normal rate of wage per hour.

Factory Cost of workman Vishnu:

Material cost Rs. x

Wages 60 y

Bonus under Rowan System = $\frac{\text{Time saved}}{\text{Time allowed}}$ x Hrs. worked x Rate per hr.

= (40 / 100) x 60 y = 24 y

Overhead, i.e., 60 x 10 = 600

Factory cost = x + 60 y + 24 y + Rs. 600 = Rs. 7280 or x + 84 y = Rs. 6680 ...(1)

Factory cost of workman Shiva:

Material Rs. x

Wages 80 y

Bonus under Halsey Premium Plan = Hrs. Saved * 50 % * Rate per hr.

= 20* 50% * y = 10 y

Overhead (80 x 10) = 800

Factory cost = x + 80y + 10y + Rs. 800 = 7,600 or x + 90y = Rs. 6,800 ...(2)

From (i) and (ii) value of y = 20

∴ Rate per hour Rs, 20

Bonus paid to Vishnu = 24 x Rs. 20 = Rs. 480

Bonus paid to Shiva = 10 x Rs. 20 = Rs. 200

(a) Normal Wages = Rs. 20 per hour as per Working Note above.

(b) The cost of material:

We know that x + 90y = Rs. 6,800

or x + (90 x 20) = Rs. 6,800 or x = Rs. 5,000

(c) Comparative statement of the factory cost of the product made by the two workmen

	Vishnu	**Shiva**
Material Cost	Rs. 5,000	Rs. 5,000
Direct Wages 60 x 20	1,200	-
80 x 20	-	1,600
Bonus (See Working Note above)	480	200
Factory Overhead	600	800
Factory Cost	7,280	7,600

(10 MARKS)

ANSWER-2

As per Financial Books Profit and Loss Account

(for the year ended 31st March, 1995)

To Direct Material	Rs.5,00,000	By Sales (50,000 units)	Rs. 10,00,000
" Direct Wages	2,50,000	" Interest and dividend	15,000
" Factory Expenses (actual)	1,50,000		
" Admn. Expenses	45,000		
" Selling & Distribution Expenses	30,000		
" Profit	40,000		
	10,15,000		**10,15,000**

As per above account, profit is Rs. 40,000 for the year ended 31st March, 1995.

(3 MARKS)

(b) Cost Sheet (for the year ended 31st March, 1995)

Normal production capacity (units)		60,000
Sales/Production (units)		50,000
Direct materials		Rs.5,00,000
Direct wages		2,50,000
Prime cost		7,50,000
Factory overhead – Variable	Rs.60,000	
- Fixed Rs. 90,000 x 5/6	75,000	1,35,000
Works cost		8,85,000

Administrative expenses Rs. 45,000 x 5/6		37,500
Total cost of production		9,22,500
Selling and distribution expenses		
-Variable	Rs. 18,000	
- Fixed Rs. 12,000 X 5/6	10,000	28,000
Cost of Sales		9,50,500
Profit (balance)		49,500
Sales		10,00,000

(4 MARKS)

(c) Reconciliation Statement

Profit as per Cost Accounts	Rs. 49,500	
Add: Income from dividend (not considered in Cost Accounts)	15,000	64,500
Less: Expenses undercharged in Cost Accounts:		
(i) Factory expenses (1,50,000 - 1,35,000)	15,000	
(ii) Adm. expenses (45,000 - 37,500)	7,500	
(iii) Selling & Distribution (30,000 - 28,000)	2,000	24,500
Profit as per financial accounts		40,000

(3 MARKS)

ANSWER-3

Variable Overhead per unit = change in factory overheads / change in activity level

= 2370000 - 2200000 / 18000 – 16000

Or

= 2540000 – 2370000 / 20000 - 18000

= 17000/ 2000 = Rs. 85 per unit

Fixed Overhead

Activity level = 16,000 units

Particulars	**Amount (Rs.)**
Total factory overheads	22,00,000
Less : Variable overheads 16,000 units @ Rs.85 per unit Fixed Overhead	13,60,000
	8,40,000

(4 MARKS)

Computation of Costs at Activity Level 24,000 units

	Per Unit (Rs.)	Amount (Rs.)
Direct Material	80.00	19,20,000
(12,80,000/16,000) Direct Labour (17,60,000/16,000)	110.00	26,40,000
Variable Overhead (As calculated above) Fixed Overhead	85.00	20,40,000
Total Cost		8,40,000
		74,40,000

Computation of Selling Price at activity level 24,000 units

Profit required is 25% on selling price, hence cost will be 75%.

Therefore desired profit = $\frac{25 \times 7440000}{75} = Rs.2480000$

Cost of 24,000 units	74,40,000
Desired Profit	24,80,000
Total Sales	99,20,000

Selling Price Per Unit = $\frac{total\ sales}{no\ of\ units} = \frac{9920000}{24000} = Rs.413.33\ or\ Rs.413$ **(6 MARKS)**

ANSWER-4

Stores Ledger Control A/c

Particulars	(Rs.)	Particulars	(Rs.)
To Balance b/d	90,000	By Work in Process Control A/c	4,80,000
To General Ledger Adjustment A/c	4,80,000	By Overhead Control A/c	60,000
To Work in Process Control A/c	2,40,000	By Overhead Control A/c (Deficiency)	18,000*
		By Balance c/d	2,52,000
	8,10,000		8,10,000

*Deficiency assumed as normal (alternatively can be treated as abnormal loss)

(2 MARKS)

Work in Process Control A/c

Particulars	(Rs.)	Particulars	(Rs.)
To Balance b/d	1,80,000	By Stores Ledger Control A/c	2,40,000
To Stores Ledger Control A/c	4,80,000	By Costing P/L A/c (Balancing figures being Cost of finished goods)	12,00,000
To Wages Control A/c	1,80,000	By Balance c/d	1,20,000
To Overheads Control A/c	7,20,000		
	15,60,000		15,60,000

(3 MARKS)

Overheads Control A/c

Particulars	(Rs.)	Particulars	(Rs.)
To Stores Ledger Control A/c	60,000	By Work in Process Control A/c	7,20,000
To Stores Ledger Control A/c	18,000	By Balance c/d* (Under absorption)	1,38,000
To Wages Control A/c (Rs. 2,10,000- Rs.1,80,000)	30,000		
To Gen. Ledger Adjust. A/c	7,50,000		
	8,58,000		8,58,000

*Alternatively may be transferred to Costing P& L A/c

(2 MARKS)

Costing Profit & Loss A/c

Particulars	(Rs.)	Particulars	(Rs.)
To Work in Process Control A/c	12,00,000	By Gen. Ledger Adjust. A/c (Sales) (12,00,000+1,20,000)	13,20,000
To Gen. Ledger Adjust. A/c (Profit)	1,20,000		
	13,20,000		13,20,000

General Ledger Adjustment A/c may also be written as Cost Ledger Control A/c

(3 MARKS)

ANSWER-5

ANSWER-A (5 MARKS)

(i) Contribution = Rs. 37.50 - Rs. 17.50 = Rs. 20 per unit.

Break even Sales Quantity = $\frac{Fixed\ cost}{contribution\ margin\ per\ unit} = \frac{3500000}{20} = 175000\ units$

Cash Break even Sales Qty = $\frac{cash\ Fixed\ cost}{contribution\ margin\ per\ unit} = \frac{2000000}{20} = 1{,}00{,}000\ units$

(ii) P/V ratio $= \frac{contribution\ per\ unit}{selling\ price\ per\ unit} \times 100 = \frac{Rs.20}{Rs.37.50} \times 100 = 53.33\%$

(iii) No. of units that must be sold to earn an Income (EBIT) of Rs. 2, 50,000

$$\frac{fixed\ cost + desired\ EBIT\ level}{contribution\ margin\ per\ unit} = \frac{3500000 + 250000}{20} = 187500\ units$$

(iv) After Tax Income (PAT) = Rs.2, 50,000

Tax rate = 40%

Desired level of Profit before tax $= \frac{250000}{60} \times 100 = 416667$

Estimate Sales Level = $\frac{fixed\ cost + desired\ profit}{Profit\ volume\ ratio}$

Or, $\left(\frac{fixed\ cost + desired\ profit}{contribution\ per\ unit} \times selling\ price\ per\ unit\right)$

$= \frac{35{,}00{,}000 + 4{,}16{,}667}{53.337\%} = 73{,}43{,}750$

ANSWER-B (5 MARKS)

(a) P/V ratio = $\frac{change\ in\ profit}{change\ in\ sales} \times 100$

$= \frac{700000-(-300000)}{(5700000-3200000)} \times \frac{1000000}{2500000} \times 100 = 40\%$

(b) Total Fixed cost = Total Contribution - Profit

= (Sales × P/V Ratio) – Profit

$= \left(57{,}00{,}000 \times \frac{40}{100}\right) = 7{,}00{,}000$

= Rs. 22, 80,000 – Rs. 7, 00,000 = Rs.15, 80,000

(c) Contribution required to earn a profit of Rs.12, 00,000

= Total fixed cost + Profit required

= Rs.15, 80,000 + Rs.12, 00,000 = Rs.27, 80,000

Required Sales = 2780000/ Profit volume ratio

= 2780000 / 40% = Rs. 69,50,000