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SUGGESTED SOLUTION

CA INTERMEDIATE

SUBJECT- COSTING

Test Code – CIM 8507

BRANCH - () (Date :)

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ANSWER : 1
(A)

Process- I Account

Particulars	Total (Rs.)	Cost (Rs.)	Profit (Rs.)	Particulars	Total (Rs.)	Cost (Rs.)	Profit (Rs.)
Opening stock	7,500	7,500	--	Process- II A/c	54,000	40,500	13,500
Direct materials	15,000	15,000	--				
Direct wages	11,200	11,200	--				
	33,700	33,700	--				
Less: Closing stock	(3,700)	(3,700)					
Prime cost	30,000	30,000	--				
Overheads	10,500	10,500	--				
Process cost	40,500	40,500	--				
Profit (331/3 of total cost)	13,500	--	13,500				
	54,000	40,500	13,500		54,000	40,500	13,500

(3 MARKS)

Process II Account

Particulars	Total (Rs.)	Cost (Rs.)	Profit (Rs.)	Particulars	Total (Rs.)	Cost (Rs.)	Profit (Rs.)
Opening stock	9,000	7,500	1,500	Finished Stock A/c	1,12,500	75,750	36,750
Transferred from Process- I	54,000	40,500	13,500				
Direct materials	15,750	15,750	--				
Direct wages	11,250	11,250	--				
	90,000	75,000	15,000				
Less Closing stock*	(4,500)	(3,750)	(750)				
Prime cost	85,500	71,250	14,250				
Overheads	4,500	4,500	--				
Process cost	90,000	75,750	14,250				
Profit (25% on total cost)	22,500	--	22,500				
	1,12,500	75,750	36,750		1,12,500	75,750	36,750

$$\text{Cost of Closing stock} = \frac{Rs.75{,}000}{Rs.90{,}000} \times Rs.4{,}500 = \text{Rs. } 3{,}750$$

(3 MARKS)

Finished Stock Account

Particulars	Total (Rs.)	Cost (Rs.)	Profit (Rs.)	Particulars	Total (Rs.)	Cost (Rs.)	Profit (Rs.)
Opening stock	22,500	14,250	8,250	Costing P&L A/c	1,40,000	82,425	57,575
Process- II	1,12,500	75,750	36,750				
	1,35,000	90,000	45,000				
Less: Closing stock*	(11,250)	(7,575)	(3,675)				
Finished stock	1,23,750	82,425	41,325				
Profit	16,250	--	16,250				
	1,40,000	**82,425**	**57,575**		**1,40,000**	**82,425**	**57,575**

Cost of closing Stock = $\frac{Rs.75,750}{Rs.1,12,500} \times Rs.11,250$ = Rs. 7,575

Working Notes:

Let the transfer price be 100 then profit is 25; i.e. cost price is Rs.75.

1. If cost is Rs. 75 then profit is Rs. 25
   If cost is Rs. 40,500 then profits is $\frac{25}{75} \times 40,500$ = Rs. 13,500
2. If cost is Rs. 80 then profit is Rs. 20
   If cost is Rs. 90,000 then profits is $\frac{20}{80} \times 90,000$ = Rs. 22,500.

(2 MARKS)

(B)

(a) Statement showing computation of profit after further processing:

	Particulars	A	B	C	D	Total
		₹	₹	₹	₹	₹
(i)	Sales after further processing	9,20,000	80,000	32,000	2,40,030	12,72,030
(ii)	Separate / further costs	2,40,000	48,000	--	8,030	2,96,030
(iii)	Sales at split off (being NRV) (I-II)	6,80,000	32,000	32,000	2,32,000	9,76,000
(iv)	Joint costs (NRV basis)	5,78,000	27,200	27,200	1,97,200	8,29,600
(v)	Profit	1,02,000	4,800	4,800	34,800	1,46,400

Statement Showing computation of Profit Before Further Processing :

	Particulars	A	B	C	D	Total
		₹	₹	₹	₹	₹
(I)	Sales at split off	6,00,000	40,000	32,000	2,16,000	8,88,000
(II)	Joint costs as apportioned above	5,78,000	27,200	27,200	1,97,200	8,29,600
(III)	Profit (I – II)	22,000	12,800	4,800	18,800	58,400

(b) **Statement showing Computation of Incremental or Additional Profit by Further Process :**

	Particulars	A	B	C	D	Total
		₹	₹	₹	₹	₹
(I)	Sales after further processing	9,20,000	80,000	32,000	2,40,030	12,72,030
(II)	Sales before further processing	6,00,000	40,000	32,000	2,16,000	8,88,000
(III)	Incremental or additional sales (I-II)	3,20,000	40,000	-	24,030	3,84,030
(IV)	Incremental cost	2,40,000	48,000	-	8,030	2,96,030
(III)	Additional Profit or Loss (III-IV)	80,000	(8,000)	-	16,000	88,000

Products A & B should be Further Process, Because There is Incremental Profit and Where As Product B And C Need Not be Further Process.

Alternative Method :

Statement Showing Computation of Profit Before Further Processing (on the basis of sales) :

	Particulars	A	B	C	D	Total
		₹	₹	₹	₹	₹
(I)	Sales before further processing / split off	6,00,000	40,000	32,000	2,16,000	8,88,000
(II)	Joint costs 8,29,000 x (6,00,000/8,88,000)	5,60,540	37,369	29,895	2,01,796	8,29,600
(III)	Profit	39,460	2,631	2,105	14,204	58,400

Statement Showing Computation of profit After Further Processing (on basis of sales)

	Particulars	A	B	C	D	Total
		₹	₹	₹	₹	₹
(I)	Sales at split off	6,80,000	32,000	32,000	2,32,000	9,76,000
(II)	Joint costs as apportioned above.	5,60,540	37,369	29,895	2,01,796	8,29,600
(III)	Profit or Loss	1,19,460	(5,369)	2,105	30,204	1,46,400

(6 MARKS)

(C)

(i) Statement of Equivalent Production (Average Cost method)

Input (Units)	Particulars	Output Units	Equivalent Production					
			Materials		Labour		Overheads	
			(%*)	Units**	(%)*	Units**	(%)*	Units **
20,000	Completed	14,000	100	14,000	100	14,000	100	14,000
	WIP	6,000	100	6,000	33 - 1/3	2,000	33 – 1/3	2,000
20,000		20,000		20,000		16,000		16,000

*Percentage of completion **Equivalent units

(1.5 MARKS)

(ii) Statement showing Cost for each element

Particulars	Materials	Labour	Overhead	Total
Cost of opening work – in – progress (Rs.)	6,00,000	1,00,000	1,00,000	8,00,000
Cost incurred during the month (Rs.)	25,60,000	15,00,000	15,00,000	55,60,000
Total cost (Rs.) : (A)	31,60,000	16,00,000	16,00,000	63,60,000

Equivalent units : (B)	20,000	16,000	16,000	
Cost per equivalent unit (Rs.) : C = (A ÷ B)	158	100	100	358

(1.5 MARKS)

(iii) Statement of Apportionment of Cost

	Rs.	Rs.
Value of output transferred : (A) (14,000 units × Rs. 358)		50,12,000
Value of closing work – in – progress : (B)		
Material (6,000 units × Rs. 158)	9,48,000	
Labour (2,000 units × Rs. 100)	2,00,000	
Overhead (2,000 units × Rs. 100)	2,00,000	13,48,000
		63,60,000

(1.5 MARKS)

(iv) Process – A Account

Particulars	Units	(Rs.)	Particulars	Units	(Rs.)
To Opening WIP	4,000	8,00,000	By Completed units	14,000	50,12,000
To Materials	16,000	25,60,000	By closing WIP	6,000	13,48,000
To Labour		15,00,000			
To Overhead		15,00,000			
	20,000	**63,60,000**		**20,000**	**63,60,000**

(1.5 MARKS)

ANSWER : 2

(A) Apportionment of Joint expenses for the products

Particulars	B (₹)	C (₹)
Sales	16,000	24,000
(-) Profit	3,200	7,200
Total Cost	12,800	16,800
(-) Selling expenses	3,200	4,800
Manufacturing cost	9,600	12,000
(-) Separate expenses	4,800	7,200
Joint Expenses	4,800	4,800

Joint expenses of A = 68,000 – (4,800 + 4,800) = 58,400.

Profit and Loss Statement:

	Particulars	A ₹	B ₹	C ₹	Total ₹
(i)	Joint cost	58,400	4,800	4,800	68,000
(ii)	Separate cost	--	4,800	7,200	12,000
(iii)	Manufacturing cost (I + II)	58,400	9,600	12,000	80,000
(iv)	Selling expenses	32,800	3,200	4,800	40,800
(v)	Total cost (III + IV)	91,200	12,800	16,800	1,20,800
(vi)	Profit *	72,800	3,200	7,200	83,200
(vii)	Sales	1,64,000	16,000	24,000	2,04,000

(2*3 = 6 MARKS)

(B)

Dr. **PROCESS-II- Account** Cr.

Particulars	Units	₹	Particulars	Units	₹
To, Transfer from Process	4000	9,000	By Normal Loss A/c	800	4000
To, Direct Wages A/c		2,000	(4000 x 20%) x 5		
To, Direct Material A/c		3,000	By Transfer to Finished Stock A/c	3,420	22,275
To, Factory Overheads 3000x 400%		12,000	@ 6.875 per unit		
To, Abnormal Gain A/c $\frac{(26000-4000)}{(4000-800)} \times 40$	40	275			
	4,040	26,275		4,040	26,275

Dr. **Abnormal Gain Account** Cr.

Particulars	Units	₹	Particulars	Units	₹
To, Costing Process II A/c	40	200	By, Process II A/c	40	275
To, Costing Profit & Loss A/c	-	75			
	40	275		40	275

(4 MARKS)

ANSWER : 3

1. (a) Sales value at split- off point method

Products	**Sales (in Ton)**	**Selling Price per Ton (Rs.)**	**Sales Revenue (Rs.)**	**Joint Cost Apportioned (Rs.)**
Caustic Soda	1,200	50	60,000	50,000
Chlorine	800	75	60,000	50,000
			1,20,000	1,00,000

Apportionment of joint cost $\frac{Total\ Joint\ Cost}{Total\ Sales\ value} \times$ Sale revenue of each product

Joint cost apportioned to Caustic Soda = $\frac{Rs.1,00,000}{Rs.1,20,000} \times Rs.\ 60,000$ = Rs. 50,000

Joint cost apportioned to Chlorine = $\frac{Rs.1,00,000}{Rs.1,20,000} \times Rs.\ 60,000$ = Rs. 50,000

(3 MARKS)

(b) Physical measure method

Products	**Sales (in Ton)**	**Joint Cost Apportioned (Rs.)**
Caustic Soda	1,200	60,000
Chlorine	800	40,000
		1,00,000

Apportioned joint cost = $\frac{Total\ joint\ cost}{Total\ physical\ value} \times$ Physical units of each product

Joint cost apportioned to Caustic Soda = $\frac{Rs.1,00,000}{2000\ tonnes} \times 1,200$ tonnes = Rs. 60,000

Joint cost apportioned to chlorine = $\frac{Rs.1,00,000}{2,000\ tonnes} \times$ 800 tonnes = Rs. 40,000

(3 MARKS)

(c) Estimated net reliasable value method:

	Caustic Soda Amount (Rs.)	**Chlorine Amount (Rs.)**
Sales Value	60,000 (Rs.50 × 1,200 tons)	1,00,000 (Rs.200 × 500 tons)
Less: Post split-off cost (Further processing cost)	-	(20,000)
Net Realisable Value	60,000	80,000
Apportionment of Joint Cost of Rs. 1,00,000 in ratio of 3:4	42,857	57,143

(2 MARKS)

2. Incremental revenue from further processing of Chlorine into PVC

(500 tons × Rs. 200 – 800 tons × Rs. 75)	Rs. 40,000
Less : Incremental cost of further processing of Chlorine into PVC	Rs. 20,000
Incremental operating income from further processing	Rs. 20,000

The operating income of Inorganic Chemicals will be reduced by Rs.20,000 in August if it sells 800 tons of Chlorine to Lifetime Swimming Pool Products, instead of further processing of Chlorine into PVC for sale. **(2 MARKS)**

ANSWER : 4

Process – P Account

Particulars	**Kg.**	**Amt. (Rs.)**	**Particulars**	**Kg.**	**Amt. (Rs.)**
To Input	10,000	50,000	By Normal wastage	1,000	1,000
			(1,000 kg. × Rs. 1)		
To Direct Material	----	38,000	By Process – Q (9,000 kg. × Rs. 15.50)	9,000	1,39,500
To Direct Labour	----	30,000			
To Production OH (Rs. 90,000 × 3/12)	----	22,500			
	10,000	1,40,500		10,000	1,40,500

Cost per unit = $\frac{Rs.1,40,500 - Rs.1,000}{10,000\ kg. - 1,000\ kg.}$ = Rs. 15.50

(3 MARKS)

Process – Q Account

Particulars	**Kg.**	**Amt. (Rs.)**	**Particulars**	**Kg.**	**Amt.(Rs.)**
To Process – P A/c.	9,000	1,39,500	By Normal wastage	900	900
			(900 kg. × Rs. 1)		
To Direct Material	----	42,500	By Process R A/c	8,200	2,54,200
To Direct Labour	----	40,000	(8,200 kg. Rs. 31)		
To Production OH					
(Rs. 90,000 × 4 /12)	---	30,000			

To Abnormal Gain	100	3,100			
(100 kg. × Rs. 31)					
	9,100	2,55,100		9,100	2,55,100

Cost per unit = $\frac{Rs.2,52,000 - Rs.900}{9,000\ kg. - 900\ kg.}$ = Rs. 31

(3 MARKS)

Process – R Account

Particulars	Kg.	Amount	Particulars	Kg.	Amount
To Process – Q A/c.	8,200	2,54,200	By Normal wastage	820	820
To Direct Material	---	42,880	By Abnormal loss	80	4,160
To Direct Labour	---	50,000	By Finished Goods	7,300	3,79,600
To Production OH			(7,300 kg. × Rs. 52)		
(Rs. 90,000 × 5/12)	----	37,500			
	8,200	**3,84,580**		**8,200**	**3,84,580**

Cost per unit = $\frac{Rs.3,84,580 - Rs.820}{8,200\ kg. - 820\ Kg.}$ = Rs. 52

Calculation of Selling price per unit of end product :	
Cost per unit	Rs. 52.00
Add : Profit 25% on selling price i.e. 1/3rd of cost	Rs. 17.33
Selling price per unit	Rs. 69.33

(4 MARKS)