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SUGGESTED SOLUTION

INTERMEDIATE M'19 EXAM

SUBJECT- COSTING

Test Code – CIM 8037

Date: 25.08.2018

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ANSWER-1

(a) Statement of Equivalent Production

Input		Output		Equivalent Production			
Details	Units	Details .	Units	Materials		Labour & overheads	
				units	%	units	%
Opening WIP	1,000	Units completed	17,500	17,500	100	17,500	100
Introduced	19,000	Normal Loss (5%)	1,000	-	-	-	-
		Abnormal Loss	500	500	100	400	80
		Closing WIP	1,000	1,000	100	800	80
	20,000		20,000	19,000		18,700	

(b) Statement of cost for each element

Cost Elements	Cost of Opening WIP Rs.	Cost in process Rs.	Total cost RS.	Equivalent Production units	Cost per Unit (Rs.)
Material (-) Value of normal scrap	40,000	7,40,000	7,80,000	19,000	40
			20,000		
Labour	7,500	1,79,500	1,87,000	18,700	10
Overheads	22,500	5,38,500	5,61,000	18,700	30
					80

(c) Statement of apportionment of cost

Details	Element	Equivalent production (units)	Cost per unit Rs.	Cost Rs.	Total Cost Rs.
Units completed	Material	17,500	40	7,00,000	14,00,000
	Labour	17,500	10	1,75,000	
	Overheads	17,500	30	5,25,000	
Abnormal loss	Material	500	40	20,000	36,000
	Labour	400	10	4,000	
	Overheads	400	30	12,000	
Closing WIP	Materials'	1,000	40	40,000	72,000
	Labour	800	10	8,000	
	Overheads	800	30	24,000	

(d) Process A Account

Particulars	Units	Amount (Rs.)	Particulars	Units	Amount (Rs.)
To Balance (O/WIP)	1,000	70,000	By Normal loss @ Rs. 20 p.u.	1,000	20,000
“ New units introduced	19,000		“ Abnormal loss	500	36,000
Material		7,40,000	“ Process B A/c	17,500	14,00,000
Labour Overheads		1,79,500	“ Balance c/d (clo-ing WIP)	1,000	72,000
		5,38,500			
	20,000	15,28,000		20,000	15,28,000

(2*4 = 8 MARKS)

Dr.

Normal Loss Account

Cr.

Particulars	Units	Amount (Rs.)	Particulars	Units	Amount (Rs.)
To Process A A/c	1,000	20,000	By Cost Ledger Control A/c	1,000	20,000

Dr.

Abnormal Loss Account

Cr.

Particulars	Units	Amount (Rs.)	Particulars	Units	Amount (Rs.)
To Process A A/c	500	36,000	By Cost Ledger Control A/c	500	10,000
			“ Costing' P & L A/c		26,000
	500	36,000		500	36,000

(1*2=2 MARKS)**ANSWER-2****(i) Computation of the value of materials purchased**

	Amt.(Rs.)
Cost of goods sold	56,000
Add : Closing stock of finished goods	19,000
Less : Opening stock of finished goods	(17,600)
Cost of goods manufactured	57,400
Add : Closing stock of work – in – progress	14,500
Less : Opening stock of work – in – progress	(10,500)
Works cost	61,400
Less : Factory overheads : $\left[\frac{100}{175} \text{ of direct labour cost}\right]$	(10,000)
Prime cost	51,400
Less : Direct labour	(17,500)
Raw material consumed	33,900

Add : Closing stock of raw materials	10,600
Raw materials available	44,500
Less : Opening stock of raw materials	(8,000)
Value of materials purchased	36,500

(5 MARKS)

(ii) Cost statement

	(Rs.)
Raw material consumed [Refer to statement (i) above]	33,900
Add: Direct labour cost	17,500
Prime cost	51,400
Add: Factory overheads	10,000
Works cost	61,400
Add: Opening work-in-progress	10,500
Less: Closing work-in-progress	(14,500)
Cost of goods manufactured	57,400
Add: Opening stock of finished goods	17,600
Less: Closing stock of finished goods	(19,000)
Cost of goods sold	56,000
Add: General and administration expenses	2,500
Add: Selling expenses	3,500
Cost of sales	62,000
Profit (Balance figure Rs. 75,000 – Rs. 62,000)	13,000
Sales	75,000

(5 MARKS)

ANSWER-3

Process X Account

Particulars	Units	Amount Rs.	Particulars	Units Rs.	Amount
To Units introduced	40,000	3,20,000	By Normal loss	2,000	1,400
“ Materials used		1,20,000	(5% @ 70 paise)		
“ Direct labour cost		80,000	“ Transfer to Process II@		
“ Production expenses		40,000	Rs. 14.70 p.m.*	38,000	5,58,600
	40,000	5,60,000		40,000	5,60,000

* (Rs. 5,60,000 - Rs. 1,400)/38,000 units = Rs. 14.70 per unit.

(3 MARKS)

Process II Account

Particulars	Units	Amount Rs.	Particulars	Units	Amount Rs.
To Transfer from Process I	38,000	5,58,600	By Normal Loss (7% @ 80 paise)	2,660	2,128
To Materials used		40,000	By Abnormal loss @ Rs.19.7078**	740	14,584
To Direct Labour cost		60,000	By Transfer to Process III@ Rs.19.7078 p.u.	34,600	6,81,888
To Production expenses		40,000			
	38,000	6,98,600		38,000	6,98,600

** (Rs. 6,98,600 - 2,128)/(38,000 - 2,660) = Rs. 19.7078 per unit

(4 MARKS)

Process III Account

Particulars	Units	Amount Rs.	Particulars	Units	Amount Rs.
To Transfer from Process II	34,600	6,81,888	By Normal Loss (10% @ Re.1)	3,460	3,460
To Materials used		40,000	By Transfer to stock @ Rs.25.8968#	32,000	8,28,700
To Direct labour cost		60,000			
To Production expenses		28,000			
To Abnormal gain @ Rs.25.8968#	800	22,272			
	35,460	8,32,160		35,460	8,32,160

(Rs. 8,09,888 - 3,460)/(34,600 - 3,460) = Rs. 25.8968 per unit

(3 MARKS)

ANSWER-4

Statement of Cost and Profit (for the month of June 20X8)

	Amount (Rs.)
Opening stock of raw materials	60,000
Add: Purchase of raw materials during June' 20X8	4,80,000
Less: Closing stock of raw materials	(50,000)
(a) Raw materials consumed	4,90,000
Add: Direct wages	2,40,000

(b) Prime cost	7,30,000
Add: Factory overheads	1,00,000
Works cost	8,30,000
Add: Opening work-in-process	12,000
Less: Closing work-in-process	(15,000)
(c) Factory cost	8,27,000
Add: Administration overheads	50,000
Cost of production	8,77,000
Add: Opening stock of finished goods	90,000
Less: Closing stock of finished goods	(1,10,000)
(d) Cost of goods sold	8,57,000
Add: Selling & distribution overheads	25,000
Cost of sales	8,82,000
(e) Net Profit	1,18,000
Sales	10,00,000

(10 MARKS)

ANSWER-5

Particulars	Rs.	Particulars	Rs.
To Materials issued	90,000	By Material sold	18,125
To wages paid	75,000	By plant sold	2,875
Add : Outstanding	6,250	By plant at site c/d	7,750
To plant	25,000	By Material at site c/d	4,250
To sundry expenses	7,250	By work – in – Progress c/d	
Less : Prepaid	625	Work certified	2,18,750
To Establishment charges	14,625	(Rs. 1,75,000 ÷ 80%)	
To costing P & L A/c.	3,125	Work uncertified	27,375
(Rs. 18,125 – Rs. 15,000)			2,46,125

To Notional Profit (Profit for the year)	58,500		
	2,79,125		2,79,125

(5 MARKS)

Calculation of Estimated Profit

			Rs.	Rs.
1)	Material consumed	(90,000 + 3,125 – 18,125)	75,000	
	Add: Further consumption		85,750	1,60,750
2)	Wages:		81,250	
	Add : Further cost	(87,325 – 6,250)	81,075	
	Add : Outstanding		8,300	1,70,625
3)	Plant used	(25,000 – 2,875)	22,125	
	Add: Further plant introduced		31,250	
	Less : Closing balance of plant		(3,750)	49,625
4)	Establishment charges		14,625	
	Add : Further charges for nine months	(14,625× 9/12)	10,969	25,594
5)	Sundry expenses		7,250	
	Add : Further expenses		6,875	14,125
6)	Reserve for contingencies			10,800
	Estimated profit	(balancing figure)		68,481
	Contract price			5,00,000

(5 MARKS)

ANSWER-6

(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 = $\frac{\text{Total joint cost}}{\text{Total Sale Value}} \times \text{Sale revenue of each product}$

Joint cost apportioned to Caustic Soda

$$= \frac{\text{Rs.1,00,000}}{\text{Rs.1,20,000}} \times \text{Rs. 60,000} = \text{Rs. 50,000}$$

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

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

Joint cost apportioned to Caustic Soda

$$= \frac{\text{Rs.1,00,000}}{\text{Rs.1,20,000}} \times 1,200 \text{ ton} = \text{Rs. 60,000}$$

Joint cost apportioned to chlorine

$$= \frac{\text{Rs.1,00,000}}{2,000 \text{ ton}} \times 800 \text{ ton} = \text{Rs. 40,000}$$

(3 MARKS)

(c) Estimated net realizable value method :

	Caustic Soda	Chlorine
	Amount (Rs.)	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. 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.

(4 MARKS)