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SUGGESTED SOLUTION

CA INTERMEDIATE

SUBJECT- COSTING

Test Code – CIM 8457

BRANCH - () (Date :)

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ANSWER – 1

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

	Particulars	**Total Cost (Rs.)**	**Cost per unit (Rs.)**
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.	**Prime Cost**	**5,23,500**	523.50
5.	Factory Overheads: Depreciation on machines	16,500	16.50
	{(Rs.22,00,000×90%)÷120 months}		
	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 – 2

(i) Statement of Equivalent Production

Particulars	Input Units	Particulars	Output Units	Equivalent Production			
				Material		Conversion cost	
				%	Units	%	Units
Opening WIP	1,000	Completed and transferred to Process-2	35,000	100	35,000	100	35,000
Units introduced	40,000	Normal Loss (10% of 40,000)	4,000	--	--	--	--
		Abnormal loss (Balancing figure)	500	100	500	60	300
		Closing WIP	1,500	100	1,500	60	900
	41,000		41,000		37,000		36,200

(5 MARKS)

(ii) Calculation of value of output transferred to Process-2 & Closing WIP

	Amount (Rs.)	Amount (Rs.)
1. Value of units completed and transferred (35,000 units × Rs. 320.25) (Refer working note)		1,12,08,750
3. Value of Closing W-I-P:		
- Materials (1,500 units × Rs. 268.51)	4,02,765	
- Conversion cost (900 units × Rs. 51.74)	46,566	4,49,331

(2 MARKS)

Workings:

Cost for each element

Particulars	Materials (Rs.)	Conversion (Rs.)	Total (Rs.)
Cost of opening work-in-process	2,55,000	31,020	2,86,020
Cost incurred during the month	96,80,000	18,42,000	1,15,22,000
Total cost: (A)	99,35,000	18,73,020	1,18,08,020
Equivalent units: (B)	37,000	36,200	
Cost per equivalent unit: (C) = (A ÷ B)	268.51	51.74	320.25

(3 MARKS)

ANSWER – 3

(i) Statement showing the apportionment of joint costs to A, B and X

Products	A	B	X	Total
Output (kg)	18,000	10,000	54,000	-
Sales value at the point of split off (Rs.)	9,00,000 (Rs. 50 × 18,000)	4,00,000 (Rs. 40 × 10,000)	5,40,000 (Rs. 10 × 54,000)	18,40,000
Joint cost apportionment on the basis of sales value at the point of split off (Rs.)	6,30,000 $\left(\frac{Rs.12,88,000}{Rs.18,40,000} \times Rs.9,00,000\right)$	2,80,000 $\left(\frac{Rs.12,88,000}{Rs.18,40,000} \times Rs.4,00,000\right)$	3,78,000 $\left(\frac{Rs.12,88,000}{Rs.18,40,000} \times 5,40,000\right)$	12,88,000

(3 MARKS)

(ii) Statement showing the cost per kg. of each product
(indicating joint cost; further processing cost and total cost separately)

Products	A	B	X
Joint costs apportioned (Rs.) : (I)	6,30,000	2,80,000	3,78,000
Production (kg) : (II)	18,000	10,000	54,000
Joint cost per kg (Rs.) : (I ÷ II)	35	28	7
Further processing Cost per kg. (Rs.)	10 $\left(\frac{Rs.1,80,000}{18,000\ kg}\right)$	15 $\left(\frac{Rs.1,50,000}{10,000\ kg}\right)$	2 $\left(\frac{Rs.1,08,000}{54,000\ kg}\right)$
Total cost per kg (Rs.)	45	43	9

(2 MARKS)

(iii) Statement showing the product wise and total profit for the period

Products	A	B	X	Total
Sales Value (Rs.)	12,24,000	2,50,000	7,92,000	
Add : Closing stock value (Rs.)				
(Refer to Working note (2)	45,000	2,15,000	90,000	
Value of production (Rs.)	12,69,000	4,65,000	8,82,000	26,16,000
Apportionment of joint cost(Rs.)	6,30,000	2,80,000	3,78,000	
Add : Further processing cost (Rs.)	1,80,000	1,50,000	1,08,000	
Total Cost (Rs.)	8,10,000	4,30,000	4,86,000	17,26,000
Profit (Rs.)	4,59,000	35,000	3,96,000	8,90,000

(3 MARKS)

Working Notes

1.

Products	A	B	X
Sales value (Rs.)	12,24,000	2,50,000	7,92,000
Quantity sold (Kgs.)	17,000	5,000	44,000
Selling price Rs. / Kg	72 $\left(\frac{Rs.12,24,000}{17,000\ kg}\right)$	50 $\left(\frac{Rs.2,50,000}{5,000\ kg}\right)$	18 $\left(\frac{Rs.7,92,000}{44,000\ kg}\right)$

2. Valuation of closing stock :

Since the selling price per kg of products A, B and x is more than their total costs, therefore closing stock will be valued at cost.

Products	A	B	X	Total
Closing stock (Kgs.)	1,000	5,000	10,000	
Cost per kg (Rs.)	45	43	9	
Closing stock value (Rs.)	45,000	2,15,000	90,000	3,50,000
	(Rs. 45 × 1,000 kg)	(Rs. 43 × 5,000 kg)	(Rs. 9 × 10,000 kg)	

(2*1 = 2 MARKS)

(iv) Calculations for processing decision

Products	A	B	X
Selling price per kg at the point of split off (Rs.)	50	40	10
Selling price per kg after further processing (Rs.) (Refer to working Note 1)	72	50	18
Incremental selling price per kg (Rs.)	22	10	8
Less : Further processing cost per kg (Rs.)	(10)	(15)	(2)
Incremental profit (loss) per kg. (Rs.)	12	(5)	6

Product A and X has an incremental profit per unit after further processing, hence, these two products may be further processed. However, further processing of product B is not profitable hence, product B shall be sold at split off point.

(2 MARKS)

ANSWER – 4

Process – I A/c.

Particulars	Qty. (kgs)	Amount (Rs.)	Particulars	Qty. (Kgs.)	Amount (Rs.)
To Material A	6,000	3,00,000	By Normal loss	500	8,000
To Material B	4,000	4,00,000	By Process – II A/c.	9,200	7,38,857
To Labour	-	21,500	By Abnormal loss A/c.	300	24,093
To Overhead $\left(\frac{Rs.92,000 \times 430\ hrs}{800\ hrs}\right)$	-	49,450			
	10,000	**7,70,950**		**10,000**	**7,70,950**

$* \frac{\{(Rs.3,00,000+Rs.4,00,000+Rs.21,500+Rs.49,450)-Rs.8,000\}}{(10,000-500)units} = \frac{Rs.7,70,950-Rs.8,000}{9,500\ units}$ = Rs. 80.3105

(2 MARKS)

Process – II A/c.

Particulars	Qty. (Kgs.)	Amount (Rs.)	Particulars	Qty. (kgs)	Amount (Rs.)
		Rs.			**Rs.**
To Process – I A/c.	9,200	7,38,857	By Normal loss	1,000	-
To Material C	6,600	8,25,000	By packing Dept. A/c.	18,000	18,42,496
To Material D	4,200	3,15,000	By WIP A/c.	1,000	1,00,711
To Flavouring essence	-	3,300			
To Labour	-	18,500			
To Overhead $\left(\frac{Rs.92,000 \times 370\ hrs}{800\ hrs}\right)$	-	42,550			
	20,000	**19,43,207**		**20,000**	**19,43,207**

(3 MARKS)

Abnormal loss A/c.

Particulars	Qty. (Kgs.)	Amount (Rs.)	Particulars	Qty. (kgs)	Amount (Rs.)
To Process – I A/c.	300	24,093	By Bank	300	4,800
			By Costing Profit & Loss A/c.	-	19,293
	300	**24,093**		**300**	**24,093**

(1 MARK)

Working Notes :

Calculation of Equivalent Production units

Input	Units	Output	Units	Process – I		Mat – C & D		Labour & OH	
				(%)	Units	(%)	Units	(%)	Units
	9,200	Transferred to Packing	18,000	100	18,000	100	18,000	100	18,000
Mat – C	6,600	Closing WIP	1,000	100	1,000	100	1,000	50	500
Mat – D	4,200	Normal loss	1,000	-	-	-	-	-	-
	20,000		20,000		19,000		19,000		18,500

(2 MARKS)

Calculation of Unit Cost

Cost component	Amount (Rs.)	Equivalent units	Cost per unit (Rs.)
Transferred in	7,38,857	19,000	38.8872
Material – C	8,25,000	19,000	43.4211
Material – D	3,15,000	19,000	16.5789
Flavouring essence	3,300	19,000	0.1737
Total Material cost	18,82,157	19,000	99.0609
Labour	18,500	18,500	1.0000
Overheads	42,550	18,500	2.3000
Total Cost	19,43,207		102.3609

Value of Materials transferred to Packing Department

= 18,000 unit × Rs. 102.3609 = 18,42,496

Value of WIP : For Materials – 1,000 units × Rs. 99.0609 = Rs. 99,061
For Labour & Overheads 500 units × Rs. 3.30 = Rs. 1,650
= Rs. 1,00,711

(2 MARKS)

ANSWER – 5

Calculation of Cost of Production of Arnav Metalic for the period …..

Particulars	Amount	Amount
Opening stock of Raw material		2,88,000
Add : Raw materials purchased		64,00,000
Less : Closing stock		(4,46,000)
Raw Material consumed		**62,42,000**
Add : Wages paid		23,20,000
Prime cost		**85,62,000**
Add : Factory Overhead		
Repair and maintenance cost of plant & machinery	9,80,500	
Insurance premium paid for inventories	26,000	
Insurance premium paid for plant & machinery	96,000	1102500
Factory Cost (Gross)		**9664500**

Add : Opening value of W – I – P		4,06,000
Less : Closing value of W – I – P		(6,02,100)
Factory Cost (Net)		**9468400**
Add : Quality control cost for the products in manufacturing process		86,000
Add : Research & development cost		92,600
Add : Administrative overheads related with factory and production		9,00,000
Add : Primary packing cost		10,200
Less : Amount realised by selling scrap		(9,200)
Cost of Production		**1,05,48,000**

Notes :

(i) Other administrative overhead does not form part of cost of production.

(ii) Salary paid to Director (Technical) is an administrative cost.

(8 MARKS)