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TEST SERIES
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SUGGESTED SOLUTION

INTERMEDIATE M'19 EXAM

SUBJECT- COSTING

Test Code – CIM 8039

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

(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 |

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

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)