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# SUGGESTED SOLUTION

## CA INTERMEDIATE

**SUBJECT- COSTING**

## Test Code – CIM 8442

**BRANCH - () (Date :)**

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## ANSWER - 1

**(i) Annual Cost Statement of three vehicles**

| | **(Rs.)** |
|---|---|
| Diesel {(1,34,784 km. ÷ 4 km) × Rs. 65) (Refer to working Note 1) | 21,90,240 |
| Oil & Sundries {(1,34,784 km ÷ 100 km. × Rs. 250} | 3,36,960 |
| Maintenance {(1,34,784 km. × Rs. 0.25) + Rs. 6,000} | 39,696 |
| (Refer to Working Note 2) | |
| Drivers' salary {(Rs. 24,000 × 12 months) × 3 trucks} | 8,64,000 |
| Licence and taxes (Rs. 25,000 × 3 trucks) | 75,000 |
| Insurance | 45,000 |
| Depreciation {(Rs. 29,00,000 ÷ 10 years) × 3 trucks} | 8,70,000 |
| General overhead | 1,15,600 |
| Total annual cost | 45,36,496 |

**(ii) Cost per km. run**

Cost per Kilometer run = $\frac{Total\ annual\ cost\ of\ vehicles}{Total\ kilometre\ travelled\ annually}$ (Refer to Working Note 1)

$$= \frac{Rs.45,36,496}{1,34,784\ Kms} = \text{Rs. } 33.66$$

**(iii) Freight rate per tonne km (to yield a profit of 10% on freight)**

Cost per tonne km. = $\frac{Total\ annual\ cost\ of\ three\ vehicles}{Total\ effective\ tonnes\ kms.per\ annum}$ (Refer to Working Note 1)

$$= \frac{Rs.45,36,496}{6,06,528\ kms} = \text{Rs. } 7.48$$

Freight rate per tonne km. $\left(\frac{Rs.7.48}{0.9}\right) \times 1 = \text{Rs. } 8.31$

**(3*2 = 6 MARKS)**

**Working Notes :**

1. Total Kilometer travelled and Commercial tonnes kilometer (load carried) by three trucks in one year

| **Truck** | **One way distance in kms** | **No. of trips** | **Total distance covered in km per day (with load)** | **Total distance covered in km per day (up & down)** | **Load carried per trip / day in tonnes** | **Total effective tonnes km** |
|---|---|---|---|---|---|---|
| | **a** | **b** | **c = a × b** | **d = c × 2** | **e** | **f = 27/3 × c** |
| 1 | 16 | 4 | 64 | 128 | 6 | 576 |
| 2 | 40 | 2 | 80 | 160 | 9 | 720 |
| 3 | 30 | 3 | 90 | 180 | 12 | 810 |
| **Total** | | | **234** | **468** | **27** | **2,106** |

Total kilometer travelled by three trucks in one year
(468 km. × 24 days × 12 months) = 1,34,784

Total effective tonnes kilometer of load carried by three trucks during one year

(2,106 tonnes km. × 24 days × 12 months) = 6,06,528 tonne – km

2. Fixed and variable component of maintenance cost :

Variable maintenance cost per km. = $\frac{Difference\ in\ maintenance\ cost}{Difference\ in\ distance\ travelled}$

= $\frac{Rs.46{,}050 - Rs.45{,}175}{1{,}60{,}200\ kms - 1{,}56{,}700\ kms}$ = Rs. 0.25

Fixed maintenance cost = Total maintenance cost – Variable maintenance cost

= Rs. 46,050 – 1,60,200 kms × Rs. 0.25 = Rs. 6,000

NOTE : As commercial ton kilometer is asked , ton kilometer = Average ton carried x Total kilometer

**(4 MARKS)**

## ANSWER - 2

**GVL Ltd.**
**Contract A/c**

**(April 1, 2018 to March 31, 2019)**

| Particulars | Amount (Rs.) | Particulars | Amount (Rs.) |
|---|---|---|---|
| To Materials Issued | 18,24,000 | By Plant returned to Stores (Working Note 1) | 2,40,000 |
| To Labour 12,20,000 | | By Materials at Site | 1,20,000 |
| Add: Outstanding 96,000 | 13,16,000 | By W.I.P. | |
| To Plant Purchased | 9,00,000 | Certified 51,00,000 | |
| To Expenses 4,00,000 | | Uncertified 1,60,000 | 52,60,000 |
| Less: Prepaid 90,000 | 3,10,000 | By Plant at Site (Working Note 2) | 4,80,000 |
| To Notional Profit | 17,50,000 | | |
| | 61,00,000 | | 61,00,000 |

**(4 MARKS)**

**GVL Ltd.**

**Contract A/c**

**(April 1, 2018 to September 30, 2019)**

**(For Computing estimated profit)**

| Particulars | Amount (Rs.) | Particulars | Amount (Rs.) |
|---|---|---|---|
| To Materials Issued (Rs. 18,24,000 + Rs.32,56,000) | 50,80,000 | By Material at Site | 3,00,000 |
| To Labour Cost (Rs.12,20,000 + Rs.96,000 + Rs.14,24,000* + Rs.1,50,000) | 28,90,000 | By Plant returned to Stores on 31.03.2019. | 2,40,000 |
| To Plant purchased | 9,00,000 | By Plant returned to Stores on 30.09.2019 (Working Note 3) | 4,32,000 |
| To Expenses (Rs.3,10,000 + Rs.7,90,000 + Rs.1,00,000) | 12,00,000 | By Contractee A/c | 1,08,50,000 |
| To Estimated profit | 17,52,000 | | |
| | 1,18,22,000 | | 1,18,22,000 |

* Labour paid in 2019-20: Rs.15,20,000 – Rs.96,000 = Rs.14,24,000

**Working Notes**

| | (Rs.) |
|---|---|
| 1. **Value of the Plant returned to Stores on 31.03.2019** | |
| Historical Cost of the Plant returned | 3,00,000 |
| Less: Depreciation @ 20% of WDV for one year | (60,000) |
| | 2,40,000 |
| 2. **Value of Plant at Site 31.03.2019** | |
| Historical Cost of Plant at Site (Rs.9,00,000 – Rs.3,00,000) | 6,00,000 |
| Less: Depreciation @ 20% on WDV for one year | (1,20,000) |
| | 4,80,000 |
| 3. **Value of Plant returned to Stores on 30.09.2019** | |
| Value of Plant (WDV) on 31.3.2019 | 4,80,000 |
| Less: Depreciation @ 20% of WDV for a period of 6 months | (48,000) |
| | 4,32,000 |
| 4. **Expenses Paid for the year 2018-19** | |
| Total expenses paid | 4,00,000 |
| Less: Pre-paid at the end | (90,000) |
| | 3,10,000 |

**(6 MARKS)**

## ANSWER – 3

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 | 12,000 | 12.00 |

| | | | |
|---|---|---|---|
| | office | | |
| 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 - 4

**1. Computation of Revenue earned**

| **Particulars** | **Patient Days** | **Collection at** Rs. **100** |
|---|---|---|
| At full Capacity | 50 x 120 = 6,000 | 6,000 x 100 = 6,00,000 |
| At Partial Capacity | 40 x 80 = 3,200 | 3,200 x 100 = 3,20,000 |
| Hire of beds (total Hire charge / Hire charge per bed) | Rs. 4,000 / 5 = 800 | 800 x 100 = 80,000 |
| **Total** | **10,000** | **10,00,000** |

**(2 MARKS)**

**2. Revenue Statement of ICU of Divine Public Health Hospital, for the financial year ended.....**

| **Particulars** | **Computation** | Rs. | Rs. |
|---|---|---|---|
| Income Received | WN 1 | | 10,00,000 |
| **Less : Variable Expenses** | | | |
| Hire Charges | Given | 4,000 | |
| Cost of Food | Given | 88,000 | |
| Laundry Charges | Given | 56,000 | |
| Medicines | Given | 70,000 | |
| Janitor | Given | 25,000 | |

| | | | |
|---|---|---|---|
| Cost of Oxygen | Given | 1,08,000 | |
| Doctor's Fees | 20,000 x 12 | 2,40,000 | 5,91,000 |
| **Contribution** | **(Income less variable costs)** | | **4,09,000** |
| **Less :** | **Fixed Expenses** | | |
| Rent | 10,000 x 12 | 1,20,000 | |
| Supervisors Salary | 4 x 500 x 12 | 24,000 | |
| Nurses Salary | 8 x 300 x 12 | 28,800 | |
| Ward Boy Salary | 4 x 150 x 12 | 7,200 | |
| Repairs & Maintenance | Given | 7,200 | |
| Administration Charges | Given | 99,100 | |
| | | | 2,86,300 |
| **Profit** | (Contribution **less** Fixed Expenses) | | **1,22,700** |
| **Profit per Patient Day** | Rs. 1,22,700 / 10,000 Patient days | | Rs. **12.27** |

**(6 MARKS)**

**3. Contribution per Patient Day** = $\frac{\text{Total Contribution}}{\text{Patient Days}} = \frac{₹\ 4,09,000}{10,000} =$ **40.90**

**Break Even Point** = $\frac{\text{Fixed Cost}}{\text{Contribution per Patient}} = \frac{₹\ 2,86,300}{40.90} =$ **7,000 patients.**

**Note :** Cost of Oxygen may also be regarded as Fixed. In such case, Break Even Number = 7,627 Patients.

**(2 MARKS)**

## ANSWER - 5

In case of escalation clause in a contract, a contractor is paid for the any increase in price of materials and rate of labours which are beyond the control of the contractor. Any increase in the cost due to inefficiencies in usage of the materials and labour are not admissible. Thus any increase in cost due to usage in excess of standard quantity or hours are not paid.

**(i) Statement Showing Additional claim due to Escalation clause.**

| | **Standard Qty/Hours** | **Std. Rate (Rs.)** | **Actual Rate (Rs.)** | **Variation in Rate (Rs.)** | **Escalation claim (Rs.)** |
|---|---|---|---|---|---|
| | **(a)** | **(b)** | **(c)** | **(d) = (c – b)** | **(e) = (a × d)** |
| Material : | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| A | 3,000 | 1,000 | 1,100 | + 100 | + 3,00,000 |
| B | 2,400 | 800 | 700 | – 100 | – 2,40,000 |
| C | 500 | 4,000 | 3,900 | – 100 | – 50,000 |
| D | 100 | 30,000 | 31,500 | +1500 | + 1,50,000 |
| Material escalation claim | | | | | 1,60,000 |
| Labour : | | | | | |
| $L_1$ | 60,000 | 15 | 18 | + 3 | + 1,80,000 |
| $L_2$ | 40,000 | 30 | 35 | + 5 | + 2,00,000 |
| | | | | | 3,80,000 |

**Statement Showing Final Contract Price**

| | | **(Rs.)** | **(Rs.)** |
|---|---|---|---|
| Agreed contract price | | | 1,50,00,000 |
| Add : | Agreed escalation claim : | | |
| | Material Cost | 1,60,000 | |
| | Labour Cost | 3,80,000 | 5,40,000 |
| Final Contract Price | | | **1,55,40,000** |

**(7 MARKS)**

**(ii) Contract Account**

**Dr.** **Cr.**

| **Particulars** | | **(Rs.)** | **Particulars** | **(Rs.)** |
|---|---|---|---|---|
| To Material : | | | By Contractee's A/c. | 1,55,40,000 |
| A – (3,400 × Rs. 1,100) | 37,40,000 | | | |
| B – (2,300 × Rs. 700) | 16,10,000 | | | |
| C – (600 × Rs. 3,900) | 23,40,000 | | | |
| D – (90 × Rs. 31,500) | 28,35,000 | 1,05,25,000 | | |
| To Labour : | | | | |
| $L_1$ – (56,000 × Rs. 18) | 10,08,000 | | | |
| $L_2$ – (38,000 × Rs. 35) | 13,30,000 | 23,38,000 | | |
| To Other expenses | | 13,45,000 | | |
| To Estimated Profit | | 13,32,000 | | |
| | | **1,55,40,000** | | **1,55,40,000** |

**(3 MARKS)**