## PAPER 2 : COSTING

Answer to questions are to be given only in English except in the case of candidates who have opted for Hindi Medium. If a candidate who has not opted for Hindi Medium. His/her answer in Hindi will not be valued.

Question No. 1 is compulsory.
Candidates are also required to answer any Four questions from the remaining Five Questions.
In case, any candidate answers extra question(s)/sub-question(s) over and above the required number, then only the requisite number of questions first answered in the answer book shall be valued and subsequent extra question(s) answered shall be ignored.
Wherever necessary, suitable assumptions may be made and disclosed by way of note.

## Answer 1:

(a) (i)
(i) Calculation of Inventory Turnover ratios and number of days:

|  | $\begin{gathered} \text { Material A } \\ \text { (Rs.) } \end{gathered}$ | Material B (Rs.) |
| :---: | :---: | :---: |
| Opening stock | 30,000 | 32,000 |
| Add: Purchases | 90,000 | 51,000 |
|  | 1,20,000 | 83,000 |
| Less: Closing stock | 20,000 | 14,000 |
| Materials consumed | 1,00,000 | 69,000 |
| Average inventory: (Opening Stock+Closing Stock) 2 | 25,000 | 23,000 |
| (a) Inventory Turnover ratio: (Consumption - | $\begin{aligned} & 4 \text { times } \\ & \{1 \mathrm{M}\} \end{aligned}$ | 3 times |
| (b) Number of days for which the average inventory held (Number of Days in a year/IT ratio) | 90 days $\{1 \mathrm{M}\}$ | 120 days |
| (ii) Comments: Material A is moving faster than M a less holding period. | B. Or | A has |

## Answer:

(b) (i) Flexible Budget (before promotion)

|  | Particulars | Product 'AYE' | Product 'ZYE' |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Production \& Sales (units) | 4,000 | 3,000 |  |
|  |  | Amount (Rs.) | Amount (Rs.) | Amount (Rs.) |
| A. | Sales Value | $\mathbf{8 , 0 0 , 0 0 0}$ (Rs. $200 \times 4,000$ ) | $\begin{array}{r} \mathbf{5 , 4 0 , 0 0 0} \\ \text { (Rs. } 180 \times 3,000 \text { ) } \end{array}$ | 13,40,000 |
| B. | Direct Materials | $\begin{array}{r} \mathbf{3 , 2 0 , 0 0 0} \\ \text { (Rs. } 80 \times 4,000 \text { ) } \end{array}$ | $\begin{array}{r} \mathbf{2 , 1 0 , 0 0 0} \\ (\text { Rs. } 70 \times 3,000) \end{array}$ | 5,30,000 |
| C. | Direct labour | $\begin{array}{r} \mathbf{1 , 6 0 , 0 0 0} \\ \text { (Rs. } 40 \times 4,000 \text { ) } \\ \hline \end{array}$ | $\begin{array}{r} \mathbf{1 , 0 5 , 0 0 0} \\ \text { (Rs. } 35 \times 3,000 \text { ) } \\ \hline \end{array}$ | 2,65,000 |
| D. | Variable Overheads | $\begin{array}{r} \mathbf{8 0 , 0 0 0} \\ (\text { Rs. } 20 \times 4,000) \\ \hline \end{array}$ | $\begin{array}{r} 75,000 \\ \text { (Rs. } 25 \times 3,000) \\ \hline \end{array}$ | 1,55,000 |
| E. | Total Variable Cost $(B+C+D)$ | 5,60,000 | 3,90,000 | 9,50,000 |
| F. | Contribution (A-E) | 2,40,000 | 1,50,000 | 3,90,000 |
| G. | Fixed Overhead | $\begin{array}{r} \mathbf{4 0 , 0 0 0} \\ (\text { Rs. } 10 \times 4,000) \end{array}$ | $\begin{array}{r} \mathbf{3 0 , 0 0 0} \\ (\text { Rs. } 10 \times 3,000) \end{array}$ | 70,000 |
| H. | Profit (F-G) | 2,00,000 | 1,20,000 | 3,20,000 |
|  | Profit per unit | 50 | 40 |  |

(ii) Flexible Budget (after promotion)

|  | Particulars | Product 'AYE' | Product 'ZYE' | Total |
| :--- | :--- | ---: | ---: | :--- |
|  | Production \& Sales (units) | $\mathbf{4 , 2 0 0}$ | $\mathbf{3 , 1 5 0}$ |  |


|  |  | Amount (Rs.) | Amount (Rs.) | Amount (Rs.) |
| :---: | :---: | :---: | :---: | :---: |
| A. | Sales Value | $\begin{array}{r} \mathbf{9 , 2 4 , 0 0 0} \\ \text { (Rs. } 220 \times 4,200 \text { ) } \\ \hline \end{array}$ | $\begin{array}{r} \mathbf{6 , 2 3 , 7 0 0} \\ \text { (Rs. } 198 \times 3,150 \text { ) } \\ \hline \end{array}$ | 15,47,700 |
| B. | Direct Materials | $\begin{array}{r} \mathbf{3 , 3 6 , 0 0 0} \\ \text { (Rs. } 80 \times 4,200 \text { ) } \end{array}$ | $\begin{array}{r} \mathbf{2 , 2 0 , 5 0 0} \\ \text { (Rs. } 70 \times 3,150 \text { ) } \end{array}$ | 5,56,500 |
| C. | Direct labour | $\mathbf{1 , 6 8 , 0 0 0}$ (Rs. $40 \times 4,200$ ) | $\begin{array}{r} 1,10,250 \\ \text { (Rs. } 35 \times 3,150 \text { ) } \end{array}$ | 2,78,250 |
| D. | Variable Overheads | $\begin{array}{r} \mathbf{1 , 0 0 , 8 0 0} \\ \text { (Rs. } 24 \times 4,200 \text { ) } \\ \hline \end{array}$ | $\begin{array}{r} \mathbf{9 4 , 5 0 0} \\ \text { (Rs. } 30 \times 3,150 \text { ) } \\ \hline \end{array}$ | 1,95,300 |
| E. | TotalVariable Cost $(B+C+D)$ | 6,04,800 | 4,25,250 | 10,30,050 |
| F. | Contribution (A-E) | 3,19,200 | 1,98,450 | 5,17,650 |
| G. | Fixed Overhead | $\begin{array}{r} \mathbf{4 2 , 0 0 0} \\ (\text { Rs. } 40,000 \times 105 \%) \end{array}$ | $\begin{array}{r} \mathbf{3 1 , 5 0 0} \\ (\text { Rs. } 30,000 \times 105 \%) \end{array}$ | 73,500 |
| H. | Profit (F-G) | 2,77,200 | 1,66,950 | 4,44,150 |
|  | Profit per unit | 66 | 53 |  |

## Answer:

(c) (i)

Calculation of Effective hourly rate of earnings under Rowan Incentive Plan:
Standard time allowed $=10$ hours
Time taken $=8$ hours; Time saved $=2$ hours

|  | Particulars | $\begin{array}{c}\text { Amount } \\ \text { (Rs.) }\end{array}$ |
| :--- | :--- | ---: |
| A | Basic guaranteed wages (Rs. $150 \times 8$ hours) | 1,200 |
| B | Add: Bonus for time saved $\left(\frac{2}{8} \times 8 \times\right.$ Rs. 150) | 240 |
| C | Total earnings (A+B) | $\mathbf{1 , 4 4 0}\}\{1 \mathbf{M}\}$ |
| D | Hours worked | $\mathbf{8}$ hours |
| E | Effective hourly rate (C $\div$ D) | $\mathbf{1 8 0}$ |$\}\{\mathbf{M}\}$

(ii) Let the time taken to complete the job is " T " and the time saved is $10-\mathrm{T}$ Effective hourly rate under the Halsey Incentive scheme

$$
\begin{aligned}
& \left.=\frac{(\text { Rate } \times \text { Hours Worked })+(\text { Rate } \times 50 \% \text { of Time Saved })}{\text { Hours Worked }}=\text { Rs. } 180\right\}\{1 \mathrm{M}\} \\
& =\frac{(\text { Rs. } 150 \times T)+\text { Rs. } 150 \times 50 \%(10-T)}{T}=\text { Rs. } 180 \\
& 150 \mathrm{~T}+750-75 \mathrm{~T}=180 \mathrm{~T} \\
& 180 \mathrm{~T}-75 \mathrm{~T}=750 \\
& \left.T=\frac{750}{105}=7.14 \text { hours }\right\}\{1 \mathrm{M}\}
\end{aligned}
$$

## Answer:

(d) (i) Process - I Account

| Particulars | Units | (Rs.) | Particulars | Units | (Rs.) |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| To Materials | 10,000 | 80,000 | $\begin{aligned} & \text { By Normal Ioss } \\ & \text { (5\% of } 10,000 \text { ) } \end{aligned}$ | $\begin{array}{r\|} 500 \\ \} \\ \} 1 / 2 \mathrm{M}\} \end{array}$ | 2,500 | \{1/2 M |
| To Wages | - | 60,000 | By Process-II A/c <br> (Rs.20*×9,650 units) | $\begin{array}{r} 9,650 \\ \{1 / 2 \mathrm{M}\} \end{array}$ | 1,93,000 | \{1/2 M |
| To Manufacturing OH |  | 52,500 |  |  |  |  |


| To Abnormal Gain A/c <br> (Rs. $20^{*} \times 150$ units) | 150 | 3,000 |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: |
|  | 10,150 | $1,95,500$ |  | 10,150 | $1,95,500$ |

$* \frac{(80,000+60,000+52,500)-2,500}{10,500-500}=$ Rs. 20$\}\{\mathbf{1} \mathbf{~ M}\}$
(ii) Abnormal Gain - Account

| Particulars | Units | (Rs.) | Particulars | Units | (Rs.) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| To Normal loss A/c | $\begin{array}{r} 150 \\ \} 1 / 2 \mathrm{M}\} \end{array}$ | $\begin{array}{r} 750 \\ \}\{1 / 2 \mathrm{M}\} \end{array}$ | By Process-I A/c | 150 | 3,000 |
| To Costing P\&L A/c | - | 2,250 | \} 1 M |  |  |
|  | 150 | 3,000 |  | 150 | 3,000 |

## Answer 2:

(a) No. of bags manufactured $=1,000$ units

Cost sheet for the month of September 2021

|  | Particulars | Total Cost (Rs.) | Cost per unit (Rs.) | \{9 Line x $1 / 4 \mathrm{M}=$ <br> 2.25 M |
| :---: | :---: | :---: | :---: | :---: |
| 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 |  |
|  | (i) Cost of material consumed | 3,43,500 | 343.50 |  |
| 2. | Direct wages (Rs. $80 \times 2,000$ hours) | 1,60,000 | 160.00 |  |
| 3. | Direct expenses (Rs. $10 \times 2,000$ hours) | 20,000 | 20.00 |  |
| 4. | (ii) Prime Cost | 5,23,500 | 523.50 |  |
| 5. | Factory Overheads: Depreciation on machines \{(Rs. $22,00,000 \times 90 \%) \div 120$ months $\}$ | 16,500 | 16.50 |  |
|  | Apportioned cost of factory rent | 98,000 | 98.00 |  |
| 6. | (iii) Works/ Factory Cost | 6,38,000 | 638.00 | Y $1 / 2 \mathrm{M}\}$ |
| 7. | Less: Realisable value of cuttings (Rs. $150 \times 35 \mathrm{~kg}$.) | $(5,250)$ | (5.25) | \} $1 / 2 \mathrm{M}\}$ |
| 8. | (iv) Cost of Production | 6,32,750 | 632.75 | \{1/2 M $\}$ |
| 9. | Add: Opening stock of bags | 0 |  |  |
| 10. | Less: Closing stock of bags (100 bags $\times$ Rs. 632.75 ) | $(63,275)$ |  | \}1/2 M |
| 11. | (v) Cost of Goods Sold | 5,69,475 | 632.75 | \{1/2 M |
| 12. | Add: Administrative Overheads: |  |  |  |
|  | Staff salary | 45,000 | 50.00 |  |
|  | Apportioned rent for administrative office | 12,000 | 13.33 | [5 Line x |
| 13. | Add: Selling and Distribution Overheads |  |  | 1/4 M = |
|  | - Staff salary | 72,000 | 80.00 | $1.25 \mathrm{M}\}$ |
|  | Apportioned rent for sales office | 10,000 | 11.11 |  |
|  | - Freight paid on delivery of bags | 18,000 | 20.00 |  |
| 14. | (vi) Cost of Sales $\quad\{\mathbf{1 / 2} \mathbf{M}\}$ | 7,26,475 | 807.19 | \}1/2 M |

Apportionment of Factory rent:
To factory building $\{($ Rs. $1,20,000 \div 2400$ sq. feet $) \times 1,960$ sq. feet $\}=$ Rs. $98,000 \quad$ Y1 M
To administrative office $\{$ (Rs. $1,20,000 \div 2400$ sq. feet $) \times 240$ sq. feet $\}=$ Rs. 12,000
To sale office $\{($ Rs. $1,20,000 \div 2400$ sq. feet $) \times 200$ sq. feet $\}=$ Rs. 10,000

## Answer:

(b) Variable Cost per Unit=Rs. 16

Fixed Cost per Unit =Rs. 4, Total Fixed Cost= 2,00,000 units $x$ Rs. $4=$ Rs. 8,00,000 $\}$ ( M$\}$

Total Cost per Unit =Rs. 20
Selling Price per Unit=Total Cost+ Profit =Rs. $20+$ Rs. $4=$ Rs. 24
Contribution per Unit=Rs. 24-Rs. $16=$ Rs. 8 \}\{1 M\}
(i) Present Break-even Sales (Quantity) $=\frac{\text { Fixed cost }}{\text { Contribution marginper unit }}=\frac{\text { Rs. 8,00,000 }}{\text { Rs. } 8}$

$$
=1,00,000 \text { units }
$$

Present Break-even Sales (Rs.) = 1,00,000 units $\times$ Rs. $24=$ Rs. $24,00,000$
(ii) Present $P / V$ Ratio $\left.=\frac{8}{24} \times 100=33.33 \% \quad\right\}\{\mathbf{2} \mathbf{M}\}$
(iii) Revised Selling Price per unit = Rs. $24-10 \%$ of Rs. $24=$ Rs. 21.60

Revised Contribution per unit = Rs. 21.60 - Rs. 16 = Rs. 5.60
Revised P/V Ratio $=\frac{5.60}{21.60} \times 100=25.926 \%$
Revised Break-even point (Rs.) $=\frac{\text { Fixed cost }}{\text { P/V ratio }}=\frac{8,00,000}{25.926 \%}=R s .30,85,705$

Or
Revised Break-even point (units) $=\frac{\text { Fixedcost }}{\text { Contribution marginperunit }}=\frac{8,00,000}{5.60}=1,42,857$ units
Revised Break-even point (Rs.) $=1,42,857$ units $\times$ Rs. $21.60=$ Rs. $30,85,711$ )
(iv) Present profit =Rs. 8,00,000

Desired Profit $=120 \%$ of Rs. $8,00,000=$ Rs. 9,60,000
Sales to earn a profit of Rs. 9,60,000
Total contribution required $=8.00 .000+9,60,000=$ Rs. 17,60,000
$\frac{\text { Fixed cost }}{\text { Contributòn marginperunit }}=\frac{8,00,000+9,60,000}{5.60}=3,14,286$ units
Revised sales (in Rs.) $=3,14,286$ units $\times$ Rs. $21.60=$ Rs. $67,88,578$

## Answer 3:

(a) (a) Calculation of Raw Material inputs during the month:

| Quantities Entering Process | Litres | Quantities Leaving <br> Process | Litres |
| :--- | ---: | :--- | ---: |
| Opening WIP | 800 | Transfer to Finished Goods | 4,200 |
| Raw material input (balancing <br> figure) | $\mathbf{5 , 3 6 0}$ | Process Losses | 1,800 |
|  |  | Closing WIP | 160 |
|  | 6,160 |  | 6,160 |

(1.5 M Bold)

\section*{(b) Calculation of Normal Loss and Abnormal Loss/Gain <br> |  | Litres |
| :--- | ---: |
| Total process losses for month | $\mathbf{1 , 8 0 0}$ |
| Normal Loss (10\% input) | $\mathbf{5 3 6}$ |
| Abnormal Loss (balancing figure) | $\mathbf{1 , 2 6 4}$ |}

(1/8 M each Bold)
(c) Calculation of values of Raw Material, Labour and Overheads added to the process:

|  | Material | Labour | Overheads |
| :--- | :--- | :--- | :--- |


| Cost per equivalent unit | Rs. 23.00 | Rs. 7.00 | Rs. 9.00 |
| :--- | ---: | ---: | ---: |
| Equivalent units (litre) <br> (refer the working note) | $\mathbf{4 , 8 2 4}$ | $\mathbf{4 , 9 5 2}$ | $\mathbf{5 , 0 1 6}$ |
| Cost of equivalent units | Rs. 1,10,952 | Rs. 34,664 | Rs. 45,144 |
| Add: Scrap value of normal loss <br> $(536$ units $\times$ Rs. 15$)$ | Rs. 8,040 | -- | -- |
| Total value added | Rs. 1,18,992 | Rs. 34,664 | Rs. 45,144 |

(1/8 M each Bold)

## Workings:

Statement of Equivalent Units (litre):

| InputDetails | Units | Output details | Units | Equivalent Production |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Material |  | Labour |  | Overheads |  |
|  |  |  |  | Units | (\%) | Units | (\%) | Units | (\%) |
| Opening WIP | 800 | Units completed: |  |  |  |  |  |  |  |
| Units | 5,360 | - Opening WIP | 800 | -- | -- | 240 | 30 | 320 | 40 |
|  |  | - Fresh inputs | 3,400 | 3,400 | 100 | 3,400 | 100 | 3,400 | 100 |
|  |  | - Normal loss | 536 | -- | -- | -- | -- | -- | -- |
|  |  | - Abnormal loss | 1,264 | 1,264 | 100 | 1,264 | 100 | 1,264 | 100 |
|  |  | - Closing WIP | 160 | 160 | 100 | 48 | 30 | 32 | 20 |
|  | 6,160 |  | 6,160 | 4,824 |  | 4,952 |  | 5,016 |  |

(1/8 M each Bold)
(d) Process Account for Month

|  | Litres | Amount <br> (Rs.) |  | Litres | Amount <br> (Rs.) |
| :--- | ---: | :---: | :--- | ---: | ---: |
| To Opening WIP | $\mathbf{8 0 0}$ | $\mathbf{2 6 , 6 4 0}$ | By Finished goods | $\mathbf{4 , 2 0 0}$ | $\mathbf{1 , 6 3 , 8 0 0}$ |
| To Raw Materials | $\mathbf{5 , 3 6 0}$ | $\mathbf{1 , 1 8 , 9 9 2}$ | By Normal loss | $\mathbf{5 3 6}$ | $\mathbf{8 , 0 4 0}$ |
| To Wages | -- | $\mathbf{3 4 , 6 6 4}$ | By Abnormal loss | $\mathbf{1 , 2 6 4}$ | $\mathbf{4 9 , 2 9 6}$ |
| To Overheads | -- | $\mathbf{4 5 , 1 4 4}$ | By Closing WIP | $\mathbf{1 6 0}$ | $\mathbf{4 , 3 0 4}$ |
|  | $\mathbf{6 , 1 6 0}$ | $\mathbf{2 , 2 5 , 4 4 0}$ |  | $\mathbf{6 , 1 6 0}$ | $\mathbf{2 , 2 5 , 4 4 0}$ |

## Answer:

(b)
(i) Material Cost Variance $(\mathrm{A}+\mathrm{B})$
Rs. 3,625

$$
(S Q \times S P)
$$

$$
\left(\mathrm{SQ}_{\mathrm{A}} \times \mathrm{SP}_{\mathrm{A}}\right)+\left(\mathrm{SQ}_{\mathrm{B}} \times \mathrm{SP}_{\mathrm{B}}\right)
$$

$$
\left(940 \mathrm{~kg} \times S P_{A}\right)+(705 \mathrm{~kg} \times R \mathrm{Rs} .30)
$$

$$
\left(940 \mathrm{~kg} \times \mathrm{SP}_{\mathrm{A}}\right)+\mathrm{Rs} .21,150
$$

$$
\left(940 \mathrm{~kg} \times \mathrm{SP}_{\mathrm{A}}\right)
$$

$$
\mathrm{SP}_{\mathrm{A}}
$$

$=\{(S Q \times S P)-(A Q \times A P)\}$
$=(S Q \times S P)-$ Rs. 59,825
$=$ Rs. 63,450

$$
=\text { Rs. } 63,450
$$

$$
=\text { Rs. } 63,450
$$

$$
=\text { Rs. } 63,450
$$

$$
=\text { Rs. } 42,300
$$

$$
=\text { Rs. } 42,300
$$

$$
940 \mathrm{~kg}
$$

Standard Price of Material-A = Rs. 45 \}( $2 \mathbf{M}$ Bold)

## Working Note:

SQ i.e. quantity of inputs to be used to produce actual output
$S_{A}$

$$
\begin{aligned}
& =\frac{1,480 \mathrm{~kg}}{90 \%}=1,645 \mathrm{~kg} \\
& =\frac{800 \mathrm{~kg}}{(800+600)} \times 1,645 \mathrm{~kg}=940 \mathrm{~kg} \\
& =\frac{600 \mathrm{~kg}}{(800+600)} \times 1,645 \mathrm{~kg} .=705 \mathrm{~kg}
\end{aligned}
$$

$S_{B}$
(ii) Material Price Variance $(A+B)$
Rs. 175
$(A Q \times S P)$
$\left(A Q_{A} \times S P_{A}\right)+\left(A Q_{B} \times S P_{B}\right)$
( $900 \mathrm{~kg} \times$ Rs. 45 (from (i) above))
$+\left(A Q_{B} \times\right.$ Rs. 30$)$
Rs. $40,500+\left(A Q_{B} \times\right.$ Rs. 30$)$
$\left(A Q_{B} \times\right.$ Rs. 30$)$

$$
\mathrm{SP}_{\mathrm{A}}=\text { Rs. } 19,500
$$

```
Actual Quantity of Material B
(iii) (AQ > AP)
    (A\mp@subsup{Q}{A}{}\timesA\mp@subsup{P}{A}{})+(A\mp@subsup{Q}{B}{}\timesA\mp@subsup{P}{B}{})
```



```
    above) }\times\mathrm{ Rs. 32.5)
(900 kg }\times\mp@subsup{APA}{A}{A})+\mathrm{ Rs. 21,125
(900 kg }\times\mp@subsup{APA}{A}{A}
AP
    900
Actual Price of Material-A
    = 650 kg. } (2 M Bold)
    = Rs. 59,825
    = Rs. 59,825
    = Rs. 59,825
    = Rs. 59,825
    = Rs. 38,700
    = Rs. 43 } (2 M Bold)
(iv) Total Actual Quantity of Material-A and Material-B
```

$=A Q_{A}+A Q_{B}$

$$
\begin{aligned}
& =900 \mathrm{~kg}+650 \mathrm{~kg} \text { (from (ii) above) } \\
& =1,550 \mathrm{~kg}
\end{aligned}
$$

    \(=\{(A Q \times S P)-(A Q \times A P)\}\)
    \(=(A Q \times S P)-\) Rs. 59,825
    \(=\) Rs. 60,000
    = Rs. 60,000
    \(=\) Rs. 60,000
    = Rs. 60,000
    = Rs. 19,500
    $$
650 \mathrm{~kg}
$$

## Now,

$$
\begin{array}{ll}
\text { Revised } S Q_{A} & =\frac{800 \mathrm{~kg}}{(800+600)} \times 1,550 \mathrm{~kg}=\mathbf{8 8 6} \mathrm{kg} \\
\text { Revised } S Q_{B} & =\frac{600 \mathrm{~kg}}{(800+600)} \times 1,550 \mathrm{~kg}=664 \mathrm{~kg}
\end{array}
$$

(1 M Each Bold)
(v) Material Mix Variance $(A+B)=\{(R S Q \times S P)-(A Q \times S P)\}$

$$
\begin{aligned}
& =\left\{\left(\mathrm{RSQ}_{A} \times \mathrm{SP}_{A}\right)+\left(\mathrm{RSQ} \mathrm{Q}_{\mathrm{B}} \times \mathrm{SP}_{\mathrm{B}}\right)-60,000\right\} \\
& =(886 \mathrm{~kg}(\text { from (iv) above) } \times \text { Rs. } 45(\text { from (i) above })) \\
& +(664 \mathrm{~kg}(\text { from (iv) above) } \times \text { Rs. } 30)-\text { Rs. } 60,000 \\
& =(39,870+19,920)-60,000=\text { Rs. } \mathbf{2 1 0}(\mathbf{A})\}(\mathbf{2} \mathbf{~ M} \text { Bold })
\end{aligned}
$$

## Answer 4:

(a) Journal Entries under integrated system of accounting

|  | Particulars |  | (Rs.) | (Rs.) |
| :--- | :--- | :---: | :---: | :---: |
| (i) | Work-in-Progress Ledger Control A/c | Dr. | $3,25,000$ |  |
|  | Factory Overhead Control A/c | Dr. | $1,15,000$ |  |
|  | To Stores Ledger Control A/c |  |  | $4,40,000$ |
|  | (Being issue of Direct and Indirect materials) |  |  |  |


| (ii) | Work-in-Progress Ledger Control A/c | Dr. | 4,87,500 |  | (2 M) |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Factory Overhead Control A/C | Dr. | 1,62,500 |  |  |
|  | To Wages Control A/c |  |  | 6,50,000 |  |
|  | (Being allocation of Direct and Indirect wages) |  |  |  |  |
| (iii) | Factory Overhead Control A/c | Dr. | 2,50,000 |  | (1 M) |
|  | To Costing Profit \& Loss A/c |  |  | 2,50,000 |  |
|  | (Being transfer of over absorption of Factory overhead) |  |  |  |  |
|  | Costing Profit \& Loss A/c | Dr. | 1,75,000 |  | (1 M) |
|  | To Administration Overhead Control A/c |  |  | 1,75,000 |  |
|  | (Being transfer of under absorption of Administration overhead) |  |  |  |  |
| (iv) | Sundry Creditors A/c | Dr. | 1,50,000 |  | (2 M) |
|  | To Cash/Bank A/c |  |  | 1,50,000 |  |
|  | (Being payment made to creditors) |  |  |  |  |
| (v) | Cash/Bank A/c | Dr. | 2,00,000 |  | (2 M) |
|  | To Sundry Debtors A/c |  |  | 2,00,000 |  |
|  | (Being payment received from debtors) |  |  |  |  |

## Answer:

## (b)

(i) Statement showing allocation of Joint Cost

| Particulars | B1 | $\mathbf{B 2}$ |
| :--- | ---: | ---: |
| No. of units Produced | $\mathbf{1 , 8 0 0}$ | $\mathbf{3 , 0 0 0}$ |
| Selling Price Per unit (Rs.) | $\mathbf{4 0}$ | $\mathbf{3 0}$ |
| Sales Value (Rs.) | $\mathbf{7 2 , 0 0 0}$ | $\mathbf{9 0 , 0 0 0}$ |
| Less: Estimated Profit (B1 -20\% \& B2 -30\%) | $\mathbf{( 1 4 , 4 0 0 )}$ | $\mathbf{( 2 7 , 0 0 0 )}$ |
| Cost of Sales | $\mathbf{5 7 , 6 0 0}$ | $\mathbf{6 3 , 0 0 0}$ |
| Less: Estimated Selling Expenses (B1 -15\% \& B2 -15\%) | $\mathbf{( 1 0 , 8 0 0 )}$ | $\mathbf{( 1 3 , 5 0 0 )}$ |
| Cost of Production | $\mathbf{4 6 , 8 0 0}$ | $\mathbf{4 9 , 5 0 0}$ |
| Less:Cost after separation | $\mathbf{( 3 5 , 0 0 0 )}$ | $\mathbf{( 2 4 , 0 0 0 )}$ |
| Joint Cost allocated | $\mathbf{1 1 , 8 0 0}$ | $\mathbf{2 5 , 5 0 0}$ |

(ii) Statement of Profitability

| Particulars | M1 (Rs.) | B1 (Rs.) | B2 (Rs.) |
| :---: | :---: | :---: | :---: |
| Sales Value (A) | $\begin{array}{r} 4,00,000 \\ (4,000 \times \text { Rs. 100 }) \end{array}$ | 72,000 | 90,000 |
| Less:- Joint Cost | $\begin{array}{r} 1,75,100 \\ (2,12,400-11,800- \\ 25,500) \end{array}$ | 11,800 | 25,500 |
| Cost after separation |  | 35,000 | 24,000 |
| - Selling Expenses <br> (M1-20\%, B1-15\% \& B2-15\%) | 80,000 | 10,800 | 13,500 |
| (B) | 2,55,100 | 57,600 | 63,000 |
| Profit ( ${ }^{\text {a }}$-B) | 1,44,900 | 14,400 | 27,000 |
| (1/4 M Each Bold) |  |  |  |
| $\begin{array}{r} \text { Overall Profit }=\text { Rs. } 1,44,900+\text { Rs. } 14,400+\text { Rs. } 27,000=\text { Rs. 1,86,300 } \\ (\mathbf{1 . 2 5 ~ M ~ U n d e r l i n e ~ B o l d ~}) \end{array}$ |  |  |  |

## Answer 5:

(a) (i) Calculation of total cost for 'Professionals Protection Plus' policy
$\square$ Calculation
Particulars
Amount (Rs.) Amount (Rs.)

| 1. | Marketing and Sales support: |  |  |
| :--- | :--- | ---: | ---: |
|  | $-\quad$ Policy development cost | $\mathbf{1 1 , 2 5 , 0 0 0}$ |  |
|  | $-\quad$ Cost of marketing | $\mathbf{4 5 , 2 0 , 0 0 0}$ |  |
|  | $-\quad$ Sales support expenses | $\mathbf{1 1 , 4 5 , 0 0 0}$ | $\mathbf{6 7 , 9 0 , 0 0 0}$ |
| 2. | Operations: |  |  |
|  | $-\quad$ Policy issuance cost | $\mathbf{1 0 , 0 5 , 9 0 0}$ |  |
|  | $-\quad$ Policy servicing cost | $\mathbf{3 5 , 2 0 , 7 0 0}$ |  |
|  | $-\quad$ Claims management cost | $\mathbf{1 , 2 5 , 6 0 0}$ | $\mathbf{4 6 , 5 2 , 2 0 0}$ |
| 3. | IT Cost |  | $\mathbf{7 4 , 3 2 , 0 0 0}$ |
| 4. | Support functions | $\mathbf{1 0 , 2 5 , 0 0 0}$ |  |
|  | $-\quad$ Postage and logistics | $\mathbf{1 5 , 2 4 , 0 0 0}$ |  |
|  | $-\quad$ Facilities cost | $\mathbf{5 , 6 0 , 0 0 0}$ |  |
|  | $-\quad$ Employees cost | $\mathbf{1 6 , 2 0 , 4 0 0}$ | $\mathbf{4 7 , 2 9 , 4 0 0}$ |
|  | $-\quad$ Office administration cost |  | $\mathbf{2 , 3 6 , 0 3 , 6 0 0}$ |
|  | Total Cost |  | $\mathbf{3}$ |

(Each Bold 1/3 M)
(ii) Calculation of cost per policy $=\frac{\text { Total cost }}{\text { No. of policies }}=\frac{\text { Rs. 2,36,03,600 }}{528}$
$=$ Rs. 44,703.79 $\{2.5 \mathrm{M}\}$
(iii) Cost per rupee of insured value $=\frac{\text { Totalcost }}{\text { Totalinsured value }}=\frac{\text { Rs. } 2.36 \text { crore }}{\text { Rs. 1,320 crore }}$
= Rs. . 001787 \} 2.5 M$\}$

## Answer:

## (b) (i) Calculation of Factory overhead rate.

If the single brand production was in operation, then
1 unit of Luxury $=3$ units of Herbal $=6$ units of Beauty. Therefore, the factory overhead ratio in the reverse order would be 5,000:15,000:30,000 or 1:3:6.
The overhead rate will be lowest in case of brand which will be produced in high number. Therefore, in case of Beauty soap brand, the overhead rate will be:

$$
\begin{aligned}
& =\frac{80,000}{6 \times 6,750+3 \times 14,000+1 \times 77,500} \\
& =\frac{80,000}{40,500+42,000+77,500} \\
& =\frac{80,000}{1,60,000}=0.5 \quad\{1 / 2 \mathrm{M}\}
\end{aligned}
$$

So, the overhead rate will be:
Luxury $=0.5 \times 6=$ Rs. $3 \quad\{\mathbf{1 / 2} \mathbf{~ M}\}$
Herbal $=0.5 \times 3=$ Rs. $\mathbf{1 . 5}\} \mathbf{1 / 2} \mathbf{~ M}\}$
Beauty $=0.5 \times 1=$ Rs. $\mathbf{0 . 5}\{\mathbf{1 / 2} \mathbf{~ M}\}$
(ii) Statement of Cost of Mix Soap Pvt. Ltd. for the month of June 2021:

|  | Luxury (Rs.) | Herbal (Rs.) | Beauty (Rs.) | Total (Rs.) |
| :---: | :---: | :---: | :---: | :---: |
| Raw material consumed | 20,000 | 47,000 | 2,40,000 | 3,07,000 |
| Add: Wages paid | 7,500 | 18,750 | 1,15,000 | 1,41,250 |
| Prime cost | 27,500 | 65,750 | 3,55,000 | 4,48,250 |
| Add: Factory overheads | 20,250 | 21,000 | 38,750 | 80,000 |
|  | (Rs. $3 \times 6,750$ ) | $\begin{array}{r} \text { (Rs. } 1.5 \times \\ 14,000) \\ \hline \end{array}$ | $\begin{array}{r} \text { (Rs. } 0.5 \times \\ 77,500) \\ \hline \end{array}$ |  |
| Works cost | 47,750 | 86,750 | 3,93,750 | 5,28,250 |
| Add: <br> General \& administration overheads (1:1:1) | 16,000 | 16,000 | 16,000 | 48,000 |
| Add: Selling expenses | 9,550 | 17,350 | 78,750 | 1,05,650 |
|  | $\begin{array}{r} \hline \text { (Rs. } 47,750 x \\ 0.20) \\ \hline \end{array}$ | $\begin{array}{r} (\text { Rs } .86,750 x \\ 0.20) \\ \hline \end{array}$ | $\begin{array}{r} \text { (Rs. 3,93,750x } \\ 0.20) \\ \hline \end{array}$ |  |
| Cost of sales | 73,300 | 1,20,100 | 4,88,500 | 6,81,900 |
| Profit <br> (Balancing figure) | 95,450 | 89,900 | 1,31,500 | 3,16,850 |
| Sales | 1,68,750 | 2,10,000 | 6,20,000 | 9,98,750 |
|  | $\begin{array}{r} \text { (Rs. } 25 \times \\ 6,750) \end{array}$ | $\begin{array}{r} \text { (Rs. } 15 x \\ 14,000 \text { ) } \\ \hline \end{array}$ | $\begin{aligned} & \text { (Rs. } 8 x \\ & 77,500) \end{aligned}$ |  |

(Each Bold = $1 / 2 \mathrm{M}$ )

## Answer 6:

(a) To exercise control over cost, following steps are followed:
(i) Determination of pre-determined standard or results: Standard cost or performance targets for a cost object or a cost centre is set before initiation of production or service activity. These are desired cost or result that need to be achieved.
(ii) Measurement of actual performance: Actual cost or result of the cost object or cost centre is measured. Performance should be measured in the same manner in which the targets are set i.e. if the targets are set up operation-wise, and then the actual costs should also be collected and measured operation-wise to have a common basis for comparison.
(iii) Comparison of actual performance with set standard or target: The actual performance so measured is compared against the set standard and desired target. Any deviation (variance) between the two is noted and reported to the appropriate person or authority.
(iv) Analysis of variance and action: The variance in results so noted are further analysed to know the reasons for variance and appropriate action is taken to ensure compliance in future. If necessary, the standards are further amended to take developments into account.

## Answer:

(b)

|  | Bill of Materials |  | Material Requisition Note |
| :--- | :--- | :--- | :--- |
| 1. | It is the document prepared by the <br> engineering or planning department. | 1. | It is prepared by the production <br> or other consuming department. |
| 2. | It is a complete schedule of <br> component parts and raw materials <br> required for a particular job or work <br> order. | 2. | It is a document authorizing <br> Store- keeper to issue materials <br> to the consuming department. |
| 3. | It often serves the purpose of a | 3. | It cannot replace a bill of |


|  | material requisition as it shows the <br> complete schedule of materials <br> required for a particular job i.e. it <br> can replace material requisition. |  | materials. |
| :--- | :--- | :--- | :--- |
| 4. | It can be used for the purpose of <br> quotations. | 4. | It is useful in arriving historical <br> cost only. |
| 5. | It helps in keeping a quantitative <br> control on materials drawn through <br> material requisition. | 5. | It shows the material actually <br> drawn from stores. |

## Answer:

(c) Financial expenses causing differences in Financial and Cost Accounts:
(i) Interest on loans or bank mortgages.
(ii) Expenses and discounts on issue of shares, debentures etc.
(iii) Other capital losses i.e., loss by fire not covered by insurance etc.
(iv) Losses on the sales of fixed assets and investments.
\{Any $5=5$
(v) Goodwill written off.
(vi) Preliminary expenses written off.
(vii) Income tax, donations, subscriptions.
(viii) Expenses of the company's share transfer office, if any.

## Answer:

(d) Standing Charges: These are the fixed costs that remain constant irrespective of the distance travelled. These costs include the following-

- Insurance
- License fees
- Salary to Driver, Conductor, Cleaners, etc. if paid on monthly basis
- Garage costs, including garage rent
- Depreciation (if related to efflux of time)
- Taxes
- Administration expenses, etc.

Running Charges: These costs are generally associated with the distance travelled. $\{\mathbf{1} \mathbf{~ M}\}$ These costs include the following-

- Petrol and Diesel
- Lubricant oils,
- Wages to Driver, Conductor, Cleaners, etc. if it is related to operations
- Depreciation (if related to activity)
\{1/4 M Each $\}$
- Any other variable costs identified.
$\qquad$

