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(GI-10, GI-11, VI-2(A) & AI-2(A), DI-1+2 & Drive)
DATE: 18.03.2023
MAXIMUM MARKS: 100
TIMING: 3¼ Hours
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## COST AND MANAGEMENT ACCOUNTING

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.

1. The question paper comprises two parts, Part I and Part II.
2. Part I comprises Multiple Choice Questions (MCQs).
3. Part II comprises questions which require descriptive type answers.

In case, any candidate answers extra question(s)/sub-question(s) over and above the required number, then all answers shall be valued and best four will be considered.
Wherever necessary, suitable assumptions may be made and disclosed by way of note.

## SECTION - A <br> PART - I - MULTIPLE CHOICE QUESTIONS

TOTAL MARKS: 30 MARKS
Write the most appropriate answer to each of the following multiple choice questions by choosing one of the four options given, All questions are compulsory.

1. Ans. b
2. Ans. d
3. Ans. a
4. Ans. a
5. Ans. c
6. Ans. c
7. Ans. d
8. Ans. b
9. Ans. b
10. Ans. b
11. Ans. c
12. Ans. d
13. Ans. a
14. Ans. d
15. Ans. c
16. Ans. c
17. Ans. b
18. Ans. d
19. Ans. d
20. Ans. c
21. Ans. d
22. Ans. C
23. Ans. b
24. Ans. d
25. Ans. d
26. Ans. d
27. Ans. c
28. Ans. a
29. Ans. b
30. Ans. c

## SECTION - B

## PART - II - DESCRIPTIVE QUESTIONS <br> QUESTIONS NO. 1 IS COMPULSORY <br> ATTEMPT ANY FOUR QUESTIONS THE REMAINING FIVE QUESTIONS <br> TOTAL MARKS: 70 MARKS

## Answer 1:

(a) (i) Calculation of Economic Order Quantity

Annual requirement $(A)=7500 \times 12=90,000$ Valves
Cost per order (O) = Rs. 15
Inventory carrying cost (i) $=20 \%$
Cost per unit of spare (c) = Rs. 1.5
Carrying cost per unit ( $\mathrm{i} \times \mathrm{c}$ ) = Rs. $1.5 \times 20 \%=$ Rs. 0.30
Economic Order Quantity (EOQ) $=\sqrt{\frac{2 \times A \times O}{i \times c}}$

$$
\left.\left.=\sqrt{\frac{2 \times 90,000 \times 15}{0.3}}=3,000 \text { Valves }\right\} \mathbf{1} \mathbf{~ M}\right\}
$$

Frequency of order or Number of Orders $=90,000 / 3,000=30$ orders.
So Order can be placed in every 12 ( 360 days/30) days
Carrying cost is $20 \%$ of Rs. $4.50=$ Rs. 0.90$\}\{1 / 2 \mathrm{M}\}$
(ii) Re-order Quantity $=$ \{Maximum Consumption $X$ Maximum lead time $\}+$ safety Stock

$$
=\{7500 \times 1.5\}+3200=14,450 \text { Valves }\}\{1 / 2 \mathbf{M}\}
$$

(iii) Calculation of Economic Order Quantity if valve costs Rs. 4.50

Carrying cost is $20 \%$ of Rs. $4.50=$ Rs. 0.90
$\begin{aligned} \text { Economic Order Quantity (EOQ) } & =\sqrt{\frac{2 \times A \times O}{i \times c}} \\ & =\sqrt{\frac{2 \times 90,000 \times 15}{0.9}} \\ & =1732.0508 \text { units or } 1733 \text { Valves }\}\{1 \mathbf{M}\}\end{aligned}$

## Answer:

(b) (i) \& (ii) Calculation of Sales value and Selling price per unit of Monkey Pox vaccine

| Particulars | Amount (Rs.) per Batch | Amount (Rs.) for 1600 units or 20 batches | Amount (Rs.) per unit |
| :---: | :---: | :---: | :---: |
| Direct materials | 4,250 | 85,000 | 53.125 $\}\{1 / 2 \mathrm{M}\}$ |
| Direct wages | 500 | 10,000 | $6.250\}\{1 / 2 \mathrm{M}\}$ |
| Lab set-up cost | 1,400 | 28,000 | 17.500 $\}$ 1/2 M $\}$ |
| Production overheads (20\% of direct wages) | 100 | 2,000 | 1.250 \{1/2 M |
| Production Cost | 6,250 | 1,25,000 | 78.125 $\}$ (1/2 M |
| Selling, distribution and administration cost (20\% of Production cost) | 1,250 | 25,000 | $15.625\}\{1 / 2 \mathrm{M}\}$ |
| Total Cost | 7,500 | 1,50,000 | 93.75 |
| Add: Profit <br> ( $1 / 3$ rd of Total cost or $25 \%$ of Sales value) | 2,500 | 50,000 | 31.25 |
| Sales value | 10,000 | \{1/2 M\}\{ 2,00,000 | 125.00 \} $1 / \mathbf{2} \mathbf{~ M ~}$ |

## Answer:

## (c) (i) Calculation of BEP in value

$P / V$ ratio $=\frac{\text { Sales price }- \text { Variable Cost }}{\text { Sales }}=\frac{300-180}{300}=40 \% \quad\{1 / 2 \mathbf{~ M ~}$
Break Even Point in Value (₹) $\left.=\frac{\text { Fixed Cost }}{\text { P/V ratio }}=\frac{16,80,000}{40 \%}=₹ 42,00,000\right\}\{\mathbf{1 / 2 ~ M}\}$
Break EvenPoint in Units $=\frac{\text { Fixed Cost }}{\text { Contribution }}=\frac{16,80,000}{120}=14,000$ Units $\{\mathbf{1 / 2} \mathbf{~ M}$
(Alternatively, $\frac{₹ 42,00,000}{300}=14000$ units)
(ii) Margin of safety (In Amount) $=\frac{\text { Profit }}{P / V \text { ratio }}=\frac{7,20,000}{40 \%}=₹ 18,00,000 \quad\{1 / 4 \mathrm{M}\}$

Margin of safety may also be calculated by deducting BEP sales from present sale.
Present sale is ₹ $60,00,000$ i.e. $(16,80,000+7,20,000) / 40 \%$.
Margin of safety (In units) $=\frac{\text { Profit }}{\text { Contribution per unit }}=\frac{7,20,000}{120}=6,000$ units $\} \mathbf{1 / 4} \mathbf{~ M ~}$
(iii) Profit when sales are 24,000 units

| Particular | (Rs.) |
| :--- | :---: |
| Contribution $(24,000 \times 120)$ | $28,80,000$ |
| Less: Fixed cost | $\underline{16,80,000}$ |
| Profit | $12,00,000$ |$\}\{\mathbf{1 / 2 ~ M}\}$

(iv) Sales in value to earn a net profit of Rs. $\mathbf{1 0 , 0 0 , 0 0 0}$
$\left.\left.\frac{\text { Fixed Cost + Desired profit }}{\text { P/V Ratio }}=\frac{16,80,000+10,00,000}{40 \%}=₹ 67,00,000 \quad\right\} \mathbf{1 / 2 ~ M ~}\right\}$

## Answer:

(d)

| Particulars | Vehicle Ioan <br> Applications <br> (Rs.) | Education Ioan <br> Application <br> (Rs.) | Total |
| :--- | ---: | ---: | ---: |
| (Rs.) |  |  |  |

(i) Computation of cost of processing a vehicle loan application:

Total Cost $\div$ No. of applications
Rs. $2,48,000 \div 496=$ Rs. 500$\} 1 \mathrm{M}\}$
(ii) Computation of no. of Education loan Processed

Total Cost $=$ No. of applications $\times$ Processing cost per application $\{1 \mathbf{M}\}$ Rs. $1,88,000=$ No. of applications $\times$ Rs. 500

No. of education loan applications $=$ Rs. $1,88,000 \div$ Rs. $500=376\}\{\mathbf{M}\}$ applications

Answer 2:
(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 |
|  | $\mathbf{6 , 1 6 0}$ |  | $\mathbf{6 , 1 6 0}$ |

(1/2 M Bold)
(b) Calculation of Normal Loss and Abnormal Loss/Gain

|  | Litres |
| :--- | ---: |
| Total process losses for month | $\mathbf{1 , 8 0 0}$ |
| Normal Loss (10\% input) | $\mathbf{5 3 6}$ |
| Abnormal Loss (balancing figure) | $\mathbf{1 , 2 6 4}$ |

(1/4 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) | 4,824 | 4,952 | 5,016 |
| 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 |

(1/4 M each Bold)

## Workings:

Statement of Equivalent Units (litre):

| Input Details | Units | Output details | Units | Equivalent Production |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Material |  | Labour |  | Overheads |  |
|  |  |  |  | Units | (\%) | Units | (\%) | Units | (\%) |
| Opening WIP | 800 | Units completed: |  |  |  |  |  |  |  |
| Units introduced | 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 |  |

(1/4 M each Bold)
(d) Process Account for Month

|  | Litres | Amount <br> (Rs.) |  | Litres | Amount <br> (Rs.) |
| :--- | ---: | :---: | :--- | ---: | ---: |
| To Opening WIP | 800 | 26,640 | By Finished goods | 4,200 | $1,63,800$ |
| To Raw Materials | 5,360 | $1,18,992$ | By Normal loss | 536 | 8,040 |
| To Wages | -- | 34,664 | By Abnormal loss | 1,264 | 49,296 |
| To Overheads | -- | 45,144 | By Closing WIP | 160 | 4,304 |
|  | $\mathbf{6 , 1 6 0}$ | $\mathbf{2 , 2 5 , 4 4 0}$ |  | $\mathbf{6 , 1 6 0}$ | $\mathbf{2 , 2 5 , 4 4 0}$ |

## Answer:

(b)
(i) Material Cost Variance $(\mathrm{A}+\mathrm{B})$

> Rs. 3,625
$(S Q \times S P)$
$\left(\mathrm{SQ}_{\mathrm{A}} \times \mathrm{SP}_{\mathrm{A}}\right)+\left(\mathrm{SQ}_{\mathrm{B}} \times \mathrm{SP}_{\mathrm{B}}\right)$
$\left(940 \mathrm{~kg} \times \mathrm{SP}_{\mathrm{A}}\right)+(705 \mathrm{~kg} \times \mathrm{Rs} .30)$
$\left(940 \mathrm{~kg} \times \mathrm{SP}_{\mathrm{A}}\right)+\mathrm{Rs} .21,150$
$\left(940 \mathrm{~kg} \times \mathrm{SP}_{\mathrm{A}}\right)$ $S P_{A}$
$=\{(S Q \times S P)-(A Q \times A P)\}$
$=(S Q \times S P)-$ Rs. 59,825
= Rs. 63,450
=Rs. 63,450
$=$ Rs. 63,450
$=$ Rs. 63,450
$=$ Rs. 42,300
$=\frac{\text { Rs. } 42,300}{940 \mathrm{~kg}}$

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

## Working Note:

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

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

$S Q B_{B}$
(ii) Material Price Variance $(A+B)$

$$
\text { Rs. } 175
$$

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

$$
\begin{aligned}
& =\{(A Q \times S P)-(A Q \times A P)\} \\
& =(A Q \times S P)-\text { Rs. } 59,825 \\
& =\text { Rs. } 60,000
\end{aligned}
$$

$$
\left(A Q_{A} \times S P_{A}\right)+\left(A Q_{B} \times S P_{B}\right) \quad=\text { Rs. } 60,000
$$

$$
\text { (900 kg } \times \text { Rs. } 45 \text { (from (i) above)) }
$$

$$
+\left(\mathrm{AQ}_{\mathrm{B}} \times \text { Rs. } 30\right) \quad=\text { Rs. } 60,000
$$

$$
\text { Rs. } 40,500+\left(A Q_{B} \times \text { Rs. } 30\right)
$$

$$
\left(\mathrm{AQ}_{\mathrm{B}} \times \text { Rs. } 30\right)
$$

$$
\mathrm{SP}_{\mathrm{A}}=\frac{\text { Rs. } 19,500}{650 \mathrm{tan}}
$$

$$
650 \mathrm{~kg}
$$

## Actual Quantity of Material B

$=650 \mathrm{~kg}\}.(\mathbf{1} \mathrm{M} \mathrm{Bold})$
(iii) $(A Q \times A P)$
= Rs. 59,825
$\left(A Q_{A} \times A P_{A}\right)+\left(A Q_{B} \times A P_{B}\right)$
= Rs. 59,825
$\left(900 \mathrm{~kg} \times A P_{\mathrm{A}}\right)+(650 \mathrm{~kg}$ (from (ii)
above) $\times$ Rs. 32.5 )
$=$ Rs. 59,825
$\left(900 \mathrm{~kg} \times \mathrm{AP}_{\mathrm{A}}\right)+$ Rs. $21,125=$ Rs. 59,825
$\left(900 \mathrm{~kg} \times A P_{A}\right)=$ Rs. 38,700
$A P_{A}=\frac{38,7000}{900}=43$
Actual Price of Material-A
$=$ Rs. 43 \} ( 1 M Bold)
(iv) Total Actual Quantity of Material-A and Material-B

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


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

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

## Answer 3:

(a) (i)

| (i) | Calculation of total cost for 'Professionals Protection Plus' policy |  |  |
| :---: | :---: | :---: | :---: |
|  | Particulars | Amount (Rs.) | Amount (Rs.) |
| 1. | Marketing and Sales support: |  |  |
|  | - Policy development cost | 11,25,000 |  |
|  | - Cost of marketing | 45,20,000 |  |
|  | - Sales support expenses | 11,45,000 | 67,90,000 |
| 2. | Operations: |  |  |
|  | - Policy issuance cost | 10,05,900 |  |
|  | - Policy servicing cost | 35,20,700 |  |
|  | - Claims management cost | 1,25,600 | 46,52,200 |
| 3. | IT Cost |  | 74,32,000 |
| 4. | Support functions |  |  |
|  | - Postage and logistics | 10,25,000 |  |
|  | - Facilities cost | 15,24,000 |  |
|  | - Employees cost | 5,60,000 |  |
|  | - Office administration cost | 16,20,400 | 47,29,400 |
|  | Total Cost |  | 2,36,03,600 |

(Each Bold 1/4 M)
(ii) Calculation of cost per policy $=\frac{\text { Total cost }}{\text { No. of policies }}=\frac{\text { Rs. 2,36,03,60 } 0}{528}$
$=$ Rs. 44,703.79 $\}\{1.5 \mathrm{M}\}$
(iii) Cost per rupee of insured value $=\frac{\text { Total cost }}{\text { Total insured value }}=\frac{\text { Rs. } 2.36 \text { crore }}{\text { Rs. } 1,320 \text { crore }}$
= Rs. . 001787 \}\{2 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:

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

So, the overhead rate will be:
Luxury $=0.5 \times 6=$ Rs. $3 \quad\}\{1 / 2 \mathrm{M}\}$
Herbal $=0.5 \times 3=$ Rs. $\mathbf{1 . 5}\}\{1 / 2 \mathrm{M}\}$
Beauty $=0.5 \times 1=$ Rs. 0.5$\}\{1 / 2 \mathrm{M}\}$
(ii) Statement of Cost of Vine 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. $3 \times 6,750$ ) | $\begin{array}{r} \text { (Rs. } 1.5 \times \\ 14,000) \\ \hline \end{array}$ | $\begin{array}{r} \hline \text { Rs. } 0.5 x \\ 77,500) \\ \hline \end{array}$ |  |
| 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 |
|  | $\begin{array}{r} \hline \text { (Rs. } 47,750 x \\ 0.20) \\ \hline \end{array}$ | $\begin{array}{r} \hline \text { Rs } .86,750 x \\ 0.20) \\ \hline \end{array}$ | $\begin{array}{r} \hline \text { Rs. 3,93,750x } \\ 0.20) \\ \hline \end{array}$ |  |
| 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 |
|  | $\begin{array}{r} \text { (Rs. } 25 x \\ 6,750) \end{array}$ | $\begin{array}{r} \text { (Rs. } 15 \times \\ 14,000 \text { ) } \end{array}$ | $\begin{aligned} & \text { (Rs. } 8 x \\ & 77.500) \end{aligned}$ |  |

(Each Bold = 1/4 M)

## Answer 4:

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

Cost sheet for the month of September 2021

|  | Particulars | Total Cost (Rs.) | Cost per unit (Rs.) | $\begin{aligned} & \left\{\begin{array}{l} \{9 \text { Line } x \\ 1 / 4 \mathrm{M}= \\ 2.25 \mathrm{M}\} \end{array}\right. \\ & \}\{1 / 2 \mathrm{M}\} \\ & \}\{1 / 2 \mathrm{M}\} \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| 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 |  |
| 7. | Less: Realisable value of cuttings | $(5,250)$ | (5.25) |  |

$\left.\begin{array}{|c|l|r|r|}\hline & \text { (Rs. } 150 \times 35 \text { kg.) } & & \\ \hline 8 . & \text { (iv) Cost of Production } & \mathbf{6 , 3 2 , 7 5 0} & \mathbf{6 3 2 . 7 5}\end{array}\right\}\{1 / 4 \mathrm{M}\}$

Apportionment of Factory rent:
To factory building \{(Rs. 1,20,000 $\div 2400$ sq. feet $) \times 1,960$ sq. feet $\}=$ Rs. 98,000
\}\{1/2 M\}
To administrative office $\{($ Rs. $1,20,000 \div 2400$ sq. feet $) \times 240$ sq. feet $\}=$ Rs. 12,000
\}\{1/2 M $\}$
To sale office $\{($ Rs. $1,20,000 \div 2400$ sq. feet $) \times 200$ sq. feet $\}=$ Rs. 10,000
\}1/2 M \}

## 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 $\} 1 \mathrm{M}\}$
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$\} \mathbf{1} \mathbf{~ M}\}$
$\begin{aligned} & \text { (i) Present Break-even Sales (Quantity) }=\frac{C}{\text { Contrib }} \\ &=1,00,000 \\ & \text { (ii) Present Break-even Sales (Rs.) }=1,00,000 \text { un }\end{aligned}$
(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.) $=\frac{\text { Fixed cost }}{\text { P/V ratio }}=\frac{8,00,000}{25.926 \%}=$ Rs. $30,85,705$
Or
Revised Break-even point (units) $=\frac{\text { Fixed cost }}{\text { Contribution margin per unit }}=\frac{8,00,000}{5.60}=1,42,857$ 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
$\frac{\text { Fixed cost }}{\text { Contribution margin per unit }}=\frac{8,00,000+9,60,000}{5.60}=3,14,286$ units
Revised sales (in Rs.) = 3,14,286 units x Rs. $21.60=$ Rs. $67,88,578$

## Answer 5:

## (a) Journal Entries under integrated system of accounting

|  | Particulars |  | (Rs.) | (Rs.) | (2 M) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (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 |  | (1 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 |  | (1 M) |
|  | To Cash/Bank A/c |  |  | 1,50,000 |  |
|  | (Being payment made to creditors) |  |  |  |  |
| (v) | Cash/Bank A/c | Dr. | 2,00,000 |  | (1 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 | B2 |
| :--- | ---: | ---: |
| 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\%) | $(14,400)$ | $(27,000)$ |
| Cost of Sales | $\mathbf{5 7 , 6 0 0}$ | $\mathbf{6 3 , 0 0 0}$ |
| Less: Estimated Selling Expenses (B1 $-15 \% ~ \& ~ B 2-15 \%) ~$ | $(10,800)$ | $(13,500)$ |
| Cost of Production | $\mathbf{4 6 , 8 0 0}$ | $\mathbf{4 9 , 5 0 0}$ |
| Less: Cost after separation | $(35,000)$ | $(24,000)$ |
| Joint Cost allocated | $\mathbf{1 1 , 8 0 0}$ | $\mathbf{2 5 , 5 0 0}$ |
| $\mathbf{( 1 / 4 ~ M ~ E a c h ~ B o l d ) ~}$ |  |  |

(ii) Statement of Profitability
$\left.\begin{array}{|l|r|r|r|}\hline \text { Particulars } & \text { M1 (Rs.) } & \text { B1 (Rs.) } & \text { B2 (Rs.) } \\ \hline \text { Sales Value } & 4,00,000 & \mathbf{7 2 , 0 0 0} & \mathbf{9 0 , 0 0 0} \\ \hline \text { Less:- Joint Cost } & (4,000 \times \text { Rs.100 }\end{array}\right)$

Overall Profit $=$ Rs. $1,44,900+$ Rs. $14,400+$ Rs. $27,000=$ Rs. 1,86,300
(1 M Underline Bold)

## Answer 6:

(a)

| Business functions | Cost Driver |
| :---: | :---: |
| Research and Development | - Number of research projects <br> - Personnel hours on a project <br> - Technical complexities of the project |
| Design of products, services and procedures | - Number of products in design <br> - Number of parts per product <br> - Number of engineering hours |
| Customer Service | - Number of service calls <br> - Number of products serviced <br> - Hours spent on servicing products |
| Marketing | - Number of advertisements <br> - Number of sales personnel <br> - Sales revenue |
| Distribution | - Number of units distributed <br> - Number of customers <br> - Weight of items distributed |

## Answer:

(b) Just in Time (JIT) Inventory Management is also known as 'Demand pull' or 'Pull through' system of production. In this system, production process actually starts after the order for the products is received. Based on the demand, production process starts and the requirement for raw materials is sent to the purchase department for purchase.
It is a system of inventory management with an approach to have a zero inventories in stores. According to this approach material should only be purchased when it is actually required for production.

## JIT is based on two principles

(i) Produce goods only when it is required and
(ii) the products should be delivered to customers at the time only when they want.

## Answer:

(c)

| S. No. | Items | Accounts |
| :---: | :--- | :--- |
| (i) | Preliminary expenses written off during the year | Financial Accounts |
| (ii) | Interest received on bank deposits | Financial Accounts |
| (iii) | Dividend, interest received on investments | Financial Accounts |
| (iv) | Salary for the proprietor at notional figure though <br> not incurred | Cost Accounts |
| (v) | Charges in lieu of rent where premises are owned | Cost Accounts |
| (vi) | Rent receivables | Financial Accounts |
| (vii) | Loss on the sales of Fixed Assets | Financial Accounts |
| (viii) | Interest on capital at notional figure though not <br> incurred | Cost Accounts |
| (ix) | Goodwill written off | Point $\}$ |
| (x) | Notional Depreciation on the assets fully <br> depreciated for which book value is nil | Financial Accounts |

