## MOCK TEST PAPER 1

INTERMEDIATE(NEW): GROUP-I

## PAPER - 3: COST AND MANAGEMENT ACCOUNTING

## Suggested Answers/Hints

1. (a) (i) Contribution per unit
$=$ Selling price - Variable cost
$=$ Rs. 100 - Rs. 60
$=$ Rs. 40
Break-even Point
$=\frac{\text { Rs. } 24,00,000}{\text { Rs. } 40}$
$=60,000$ units
Percentage Margin of Safety $\quad=\quad \frac{\text { Actual Sales }- \text { Break -even Sales }}{\text { Actual Sales }}$
Or, 60\% $\quad=\quad \frac{\text { Actual Sales }-60,000 \text { units }}{\text { Actual Sales }}$
$\therefore$ Actual Sales
$=\quad 1,50,000$ units

| (Rs.) |  |
| :--- | ---: |
| Sales Value (1,50,000 units $\times$ Rs. 100$)$ | $1,50,00,000$ |
| Less: Variable Cost $(1,50,000$ units $\times$ Rs. 60$)$ | $90,00,000$ |
| Contribution | $60,00,000$ |
| Less: Fixed Cost | $24,00,000$ |
| Profit | $36,00,000$ |
| Less: Income Tax @40\% | $14,40,000$ |
| Net Return | $21,60,000$ |
| Rate of Net Return on Sales $=14.40 \%\left(\frac{\text { Rs. } 21,60,000}{\text { Rs. } 1,50,00,000} \times 100\right)$ |  |

(ii) Products

|  | $X$ (Rs.) |  |
| :--- | ---: | ---: |
| Selling Price per unit | 100 | 150 |
| Variable Cost per unit | 60 | 100 |
| Contribution per unit | 40 | 50 |

Composite contribution will be as follows:
Contribution per unit $=\left(\frac{40}{8} \times 5\right)+\left(\frac{50}{8} \times 3\right)$

$$
=25+18.75=\text { Rs. } 43.75
$$

Break-even Sale $=64,000$ units $\left(\frac{\text { Rs. } 28,00,000}{\text { Rs. } 43.75}\right)$

Break-even Sales Mix:
$X(64,000$ units $\times 5 / 8)=40,000$ units
$Y(64,000$ units $\times 3 / 8)=24,000$ units
(b) (i) Efficiency Ratio $=\frac{\text { Standard Hours (for actual production) }}{\text { Actual Hours (worked) }} \times 100$

$$
=\quad \frac{75,000 \text { units } \times 10 \text { hrs. }}{6,00,000 \text { hrs }} \times 100
$$

$=125 \%$
(ii) Activity Ratio $=\frac{\text { Standard Hours (for actual production) }}{\text { Budgeted Hours }} \times 100$

$$
\begin{aligned}
& =\quad \frac{75,000 \text { units } \times 10 \text { hrs. }}{88,000 \text { units } \times 10 \text { hrs. }} \times 100 \\
& =85.23 \%
\end{aligned}
$$

(iii) Capacity Ratio $=\frac{\text { Actual Hours (worked) }}{\text { Budgeted Hours }} \times 100$

$$
=\frac{6,00,000 \text { hrs. }}{88,000 \text { units } \times 10 \text { hrs. }} \times 100
$$

$$
=68.18 \%
$$

(c) Workings:

Annual production ofProduct $\mathrm{X}=$ Annual demand - Opening stock
$=5,00,000-12,000=4,88,000$ units
Annual requirementfor raw materials $=$ Annual production $\times$ Material per unit - Opening stock of material
Material $A=4,88,000 \times 4$ units $-24,000$ units $=19,28,000$ units
Material $B=4,88,000 \times 16$ units $-52,000$ units $=77,56,000$ units
(i) Computation of $E O Q$ when purchase order for the both materials is placed separately

$$
\begin{aligned}
& \text { EOQ }=\sqrt{\frac{2 \times \text { Annual Requirement for material } \times \text { Ordering cost }}{\text { Carrying cost perunit per annum }}} \\
& \begin{array}{r}
\text { Material } A=\sqrt{\frac{2 \times 19,28,000 \text { units } \times \text { Rs. } 15,000}{13 \% \text { of Rs. } 150}}=\sqrt{\frac{38,56,000 \times \text { Rs. } 15,000}{\text { Rs. } 19.5}} \\
=54,462 \text { units }
\end{array} \\
& \begin{array}{r}
\text { Material } B=\sqrt{\frac{2 \times 77,56,000 \text { units } \times \text { Rs. } 15,000}{13 \% \text { of Rs. } 200}}=\sqrt{\frac{1,55,12,000 \times \text { Rs. } 15,000}{\text { Rs. } 26}} \\
=94,600 \text { units }
\end{array}
\end{aligned}
$$

(ii) Computation of EOQ when purchase order for the both materials is not placed separately
Material A \& B $=\sqrt{\frac{2 \times(19,28,000+77,56,000) \text { units } \times \text { Rs. } 15,000}{13 \% \text { ofRs. } 190^{*}}}$

$$
\begin{aligned}
& \quad=\sqrt{\frac{1,93,68,000 \times \text { Rs. } 15,000}{\text { Rs. } 24.7}}=1,08,452 \text { units } \\
& \text { Material A }=\frac{1,08,452 \times 19,28,000}{96,84,000}=21,592 \text { units } \\
& \text { Material A }=\frac{1,08,452 \times 77,56,000}{96,84,000}=86,860 \text { units } \\
& * \frac{(\text { Rs. } 150 \times 19,28,000)+(\text { Rs. } 200 \times 77,56,000)}{(19,28,000+77,56,000)}=\text { Rs. } 190
\end{aligned}
$$

(d) Memorandum Reconciliation Account

| Particulars | (Rs.) | Particulars | (Rs.) |
| :---: | :---: | :---: | :---: |
| To Net loss as per Costing books | 2,25,000 | By Administrative overhead over absorbed in costs | 3,000 |
| To Factory overheads underabsorbed | 5,000 | By Depreciation over charged in Costbooks <br> (Rs. 80,000 - Rs.70,000) | 10,000 |
| To Incometaxnotprovided in Costbooks | 65,000 | By Interest on investments not included in Costbooks | 20,000 |
| To Preliminary expenses written off in Financial books | 3,000 | By Transfer fees not considered in Cost books | 2,000 |
| To Over-valuation of Closing Stock of finished goods in Cost books | 7,000 | By Net loss as per Financial books | 2,70,000 |
|  | 3,05,000 |  | 3,05,000 |

2. (a) (i) Absorption Costing System

Operating Income-

| Particulars | Lemon | Grapes | Papaya | Total |
| :--- | :---: | :---: | :---: | :---: |
| Revenue | 79,350 | $2,10,060$ | $1,20,990$ | $4,10,400$ |
| Less: Cost of Goods Sold | 60,000 | $1,50,000$ | 90,000 | $3,00,000$ |
| Less: Store Support Cost | 18,000 | 45,000 | 27,000 | 90,000 |
| Operating Income | 1,350 | 15,060 | 3,990 | 20,400 |
| Operating Income (\%) | 1.70 | 7.17 | 3.30 | 4.97 |

(ii) ABC System

## Overhead Allocation Rate-

| Activity | Total Costs <br> (Rs.) | Quantity of Cost <br> Allocation Base | Overhead <br> Allocation Rate <br> (Rs.) |
| :--- | :---: | :--- | :---: |
| Ordering | 15,600 | 156 Purchase Orders | 100.00 |
| Delivery | 25,200 | 315 Delivering Orders | 80.00 |
| Shelf Stocking | 17,280 | 864 Self Stocking Hours | 20.00 |
| Customer Support | 30,720 | $1,53,600$ Items Sold | 0.20 |

Store SupportCost-

| Particulars | Cost Driver | Lemon | Grapes | Papaya | Total |
| :--- | :--- | ---: | ---: | ---: | ---: |
| Bottle Returns | Direct | 1,200 | 0 | 0 | 1,200 |
| Ordering | Purchase Orders | 3,600 | 8,400 | 3,600 | 15,600 |
| Delivery | Deliveries | 2,400 | 17,520 | 5,280 | 25,200 |
| Self -Stocking | Hours of time | 1,080 | 10,800 | 5,400 | 17,280 |
| Customer Support | ltems Sold | 2,520 | 22,080 | 6,120 | 30,720 |
| Grand Total |  | 10,800 | 58,800 | 20,400 | 90,000 |

Operating Income-

| Particulars | Lemon | Grapes | Papaya | Total |
| :--- | ---: | ---: | ---: | :---: |
| Revenue | 79,350 | $2,10,060$ | $1,20,990$ | 410,400 |
| Less: Cost of Goods Sold | 60,000 | $1,50,000$ | 90,000 | 300,000 |
| Less: Store Support Cost | 10,800 | 58,800 | 20,400 | 90,000 |
| Operating Income | 8,550 | 1,260 | 10,590 | 20,400 |
| Operating Income (\%) | 10.78 | 0.60 | 8.75 | 4.97 |

(iii) Comparison

| Particulars | Lemon | Grapes | Papaya | Total |
| :--- | :---: | :---: | :---: | :---: |
| Under Traditional Costing System | $1.70 \%$ | $7.17 \%$ | $3.30 \%$ | $4.97 \%$ |
| Under ABC System | $10.78 \%$ | $0.60 \%$ | $8.75 \%$ | $4.97 \%$ |

(b) (a) Calculation of Total Cost for the Hostel Job

| Particulars | Amount(Rs.) | Amount (Rs.) |
| :---: | :---: | :---: |
| DirectMaterial Cost: |  |  |
| 15 mm GIPipe (Working Note-1) | 11,051.28 |  |
| 20 mm GIPipe (Working Note-2) | 2,588.28 |  |
| Otherfiting materials (Working Note-3) | 3,866.07 |  |
| Stainless steel faucet |  |  |
| $15 \text { units } \times\left(\frac{6 \times ₹ 204+15 \times ₹ 209}{21 \text { units }}\right)$ | 3,113.57 |  |
| Valve |  |  |
| $6 \text { units } \times\left(\frac{8 \times ₹ 404+10 \times ₹ 402+14 \times ₹ 424}{32 \text { units }}\right)$ | $\underline{2,472.75}$ | 23,091.95 |
| DirectLabour: |  |  |
| Plumber[(180 hours $\times$ Rs. 50) + (12 hours $\times$ Rs. 25)] | 9,300.00 |  |
| Helper [(192 hours $\times$ Rs. 35$)+(24$ hours $\times$ Rs. 17.5)] | 7,140.00 | 16,440.00 |
| - Overheads [Rs. $13 \times(180+192)$ hours] |  | 4,836.00 |
| Total Cost |  | 44,367.95 |

(b) Price to be charged for the job work:

|  | Amount (Rs.) |
| :--- | ---: |
| Total Costincurred on the job | $44,367.95$ |
| Add: $25 \%$ Profit on Job Price $\left(\frac{44,367.95}{75 \%} \times 25 \%\right)$ |  |
|  | $59,1489.32$ |

## Working Note:

1. Cost of 15 mm GIPipe

| Date |  | Amount(Rs.) |
| :--- | :--- | ---: |
| $17-08-2019$ | 8 units $\times$ Rs. 600 | $4,800.00$ |
| $28-08-2019$ | 10 units $\times\left(\frac{4 \times \text { Rs. } 600+35 \times \text { Rs. } 628}{39 \text { units }}\right)$ | $6,251.28$ |
|  |  |  |
|  |  | $11,051.28$ |

2. Cost of 20 mm GIPipe

| Date |  | Amount (Rs.) |
| :--- | :--- | ---: |
| $12-08-2019$ | 2 units $\times$ Rs. 660 | $1,320.00$ |
| $28-08-2019$ | 2 units $\times\left(\frac{8 \times \text { Rs. } 660+30 \times \text { Rs. } 610+20 \times \text { Rs. } 660}{58 \text { units }}\right)$ | $1,268.28$ |
|  |  | $2,588.28$ |

3. Cost of Other fitting materials

| Date |  | Amount (Rs.) |
| :--- | :--- | ---: |
| $12-08-2019$ | 18 units $\times$ Rs. 26 | 468.00 |
| $17-08-2019$ |  |  |
| $28-08-2019$ | 30 units $\times$ Rs. 26 | 780.00 |
|  | 34 units $\times\left(\frac{12 \times \text { Rs. } 26+150 \times \text { Rs. } 28}{162 \text { units }}\right)$ | 946.96 |
| $30-08-2019$ | 60 units $\times\left(\frac{12 \times \text { Rs. } 26+150 \times \text { Rs. } 28}{162 \text { units }}\right)$ |  |
|  |  | $1,671.11$ |
|  |  | $3,866.07$ |

3. (a) (i) Production Budget of ' $X$ ' for the Second Quarter

| Particulars | Bags (Nos.) |
| :--- | ---: |
| Budgeted Sales | 50,000 |
| Add: Desired Closing stock | 11,000 |
| Total Requirements | 61,000 |
| Less: Opening stock | 15,000 |
| Required Production | 46,000 |

(ii) Raw-Materials Purchase Budgetin Quantity as well as in Rs. for 46,000 Bags of ' $X$ '

| Particulars | ' $\mathbf{Y}$ ' <br> Kgs. | 'Z' <br> Kgs. | Empty Bags <br> Nos. |  |
| :--- | :--- | :--- | :--- | :--- |
| Production Requirements |  | 2.5 |  | 7.5 |
| 1.0 |  |  |  |  |

5

| Per bag of ' $X$ ' |  |  |  |
| :--- | ---: | ---: | ---: |
| Requirement for Production | $1,15,000$ |  |  |
| $(46,000 \times 2.5)$ | $3,45,000$ | 46,000 |  |
| $(46,000 \times 7.5)$ | $(46,000 \times 1)$ |  |  |
| Add: Desired Closing Stock | 26,000 | 47,000 | 28,000 |
| Total Requirements | $1,41,000$ | $3,92,000$ | 74,000 |
| Less: Opening Stock | 32,000 | 57,000 | 37,000 |
| Quantity to be purchased | $1,09,000$ | $3,35,000$ | 37,000 |
| Cost per Kg./Bag | Rs.120 | Rs.20 | Rs.80 |
| Cost of Purchase (Rs.) | $1,30,80,000$ | $67,00,000$ | $29,60,000$ |

(iii) Computation of Budgeted Variable Cost of Production of 1 Bag of ' $X$ '

| Particulars | (Rs.) |
| :--- | ---: |
| Raw - Material |  |
| Y 2.5 Kg @120 | 300.00 |
| Z 7.5 Kg. @20 | 150.00 |
| Empty Bag | 80.00 |
| Direct Labour(Rs.50× 9 minutes /60 minutes) | 7.50 |
| Variable Manufacturing Overheads | 45.00 |
| Variable Cost of Production per bag | 582.50 |

(iv) Budgeted Net Income for the Second Quarter

| Particulars | Per Bag <br> (Rs.) | Total <br> (Rs.) |
| :--- | ---: | ---: |
| Sales Value (50,000 Bags) | 900.00 | $4,50,00,000$ |
| Less: Variable Cost: |  |  |
| Production Cost | 582.50 | $2,91,25,000$ |
| Admn. \& Selling Expenses (5\% of Sales Price) | 45.00 | $22,50,000$ |
| Budgeted Contribution | 272.50 | $1,36,25,000$ |
| Less: Fixed Expenses: |  |  |
| Manufacturing |  | $30,00,000$ |
| Admn. \& Selling |  | $20,50,000$ |
| Budgeted Net Income |  | $85,75,000$ |

(b) (i)

Table of Primary Distribution of Overheads

| Particulars | Basis of Apportionment | Total Amount | Production Department |  | Service Departments |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Fabrication | Assembly | Stores | Maintenance |
| Overheads Allocated |  | 27,28,000 | 15,52,000 | 7,44,000 | 2,36,000 | 1,96,000 |
| Direct Costs | Actual | 86,36,000 | 71,88,000 | 14,48,000 | --- | --- |



Re-distribution of Service Departments' Expenses:

| Particulars | Basis of Apportionment | Production Department |  | Service <br> Departments |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Fabrication | Assembly | Stores | Maintenance |
| Overheads as per Primary distribution <br> Maintenance Department Cost | As per Primary <br> distribution Maintenance Hours <br> (28:23:4:-)  | 1,02,62,078 | 28,90,832 | 4,23,393 | 3,96,697 |
|  |  | 2,01,955 | 1,65,891 | 28,851 | $(3,96,697)$ |
|  |  | 1,04,64,033 | 30,56,723 | 4,52,244 | --- |
| Stores Department | No. of Stores Requisition(18:7:-:-) | 3,25,616 | 1,26,628 | $(4,52,244)$ |  |
|  |  | 1,07,89,649 | 31,83,351 | --- | --- |

(ii) Overhead Recovery Rate

| Department | Apportioned <br> Overhead (Rs.) <br> (I) | Basis of Overhead <br> Recovery Rate <br> (II) | Overhead Recovery Rate (Rs.) <br> $[$ (I) $\div($ III $]$ |
| ---: | ---: | :--- | :--- |
| Fabrication | $1,07,89,649$ | $30,00,000$ Machine Hours | 3.60 per Machine Hour |
| Assembly | $31,83,351$ | $26,00,000$ LabourHours | $1.22 \quad$ per LabourHour |

(iii) Calculation of full production costs of Job no. IGI2019.

| Particulars | Amount(Rs.) |
| :--- | ---: |
| DirectMaterials | $2,30,400$ |
| DirectLabour: |  |
| Fabrication Deptt. $(240$ hours $\times$ Rs. 50$)$ | 12,000 |
| Assembly Deptt. $(180$ hours $\times$ Rs. 50$)$ | 9,000 |
| Production Overheads: |  |


| Fabrication Deptt. (210 hours $\times$ Rs. 3.60) | 756 |
| :--- | ---: |
| Assembly Deptt. (180 hours $\times$ Rs. 1.22) | 220 |
| Total Production Cost | $2,52,376$ |

4. (a) COMPUTATIONOF VARIANCES
(i) Overhead Cost Variance $=$ Absorbed Overheads - Actual Overheads
$=($ Rs. $87,200+$ Rs. 44,800$)-($ Rs. $1,21,520+$ Rs. 55,680$)$
$=$ Rs. 45,200 (A)
(ii) Fixed Overhead Cost $=$ Absorbed Fixed Overheads - Actual Fixed Overheads Variance $=$ Rs. 87,200 - Rs.1,21,520
$=$ Rs.34,320 (A)
(iii) Variable Overhead Cost = Standard Variable Overheads for Production - Actual Variance Variable Overheads
$=$ Rs. 44,800 - Rs. 55,680
$=$ Rs. 10,880 (A)
(iv) Fixed Overhead Volume $=$ Absorbed Fixed Overheads - Budgeted Fixed Variance Overheads
$=$ Rs. 87,200 - Rs.1,09,000
$=$ Rs. 21,800 (A)
(v) Fixed Overhead Expenditure $=$ Budgeted Fixed Overheads -Actual Fixed Overheads Variance
(vi) Calendar Variance $=$ Possible Fixed Overheads - Budgeted Fixed Overheads
$=$ Rs.1,03,550 - Rs.1,09,000
$=$ Rs. $5,450(\mathrm{~A})$

## WORKING NOTE

| Fixed Overheads per Unit $=\frac{\text { Budgeted Fixed Overheads }}{\text { Budgeted Output }}=\frac{\text { Rs. } 12,00,000}{1,20,000 \text { units }}$ | Rs. 10 |
| :---: | :---: |
| Fixed Overheads element in Semi-Variable Overheads i.e. 60\% of Rs. 1,80,000 | Rs. 1,08,000 |
| $\text { Fixed Overheads per Unit }=\frac{\text { Budgeted Fixed Overheads }}{\text { Budgeted Output }}=\frac{\text { Rs. } 1,08,000}{1,20,000 \text { units }}$ | Rs. 0.90 |
| Standard Rate of Absorption of Fixed Overheads per unit (Rs. $10+$ Rs.0.90) | Rs. 10.90 |
| Fixed Overheads Absorbed on 8,000 units @ Rs10.90 | Rs. 87,200 |
| Budgeted Variable Overheads | Rs. 6,00,000 |
| Add : Variable element in Semi-Variable Overheads $40 \%$ of Rs. 1,80,000 | Rs. 72,000 |


| Total Budgeted Variable Overheads <br> Standard Variable Cost per unit $=\underline{\text { Budgeted Variable Overheads }}=\frac{\text { Rs.6,72,000 }}{1,20}$ | $\begin{array}{r} \text { Rs. } 6,72,000 \\ \text { Rs. } 5.60 \end{array}$ |
| :---: | :---: |
|  |  |
| Budgeted Output 1,20,000units |  |
| Standard Variable Overheads for 8,000 units @ Rs.5.60 | Rs. 44,800 |
| Budgeted Annual Fixed Overheads (Rs. 12,00,000 + 60\% of Rs. 1,80,000) | Rs.13,08,000 |
| $\text { Possible Fixed Overheads }=\frac{\text { BudgetedFixed Overheads }}{\text { RudnotadDave }} \times \text { ActualDays }$ | Rs.1,03,550 |
| $=\left\lfloor\frac{\text { Rs. } 1,09,000}{20 \text { Days }} \times 19 \text { Days }\right\rfloor$ |  |
| Actual Fixed Overheads (Rs.1,10,000 + 60\% of Rs. 19,200) | Rs.1,21,520 |
| Actual Variable Overheads (Rs. $48,000+40 \%$ of Rs.19,200) | Rs. 55,680 |

(b) Calculation of Cost of Production of A Ltd. for the period.....

| Particulars | Amount(Rs.) |
| :--- | ---: |
| Raw materials purchased | $64,00,000$ |
| Add: Opening stock | $2,88,000$ |
| Less: Closing stock | $4,46,000)$ |
| Material consumed | $62,42,000$ |
| Wages paid | $23,20,000$ |
| Prime cost | $85,62,000$ |
| Repairand maintenance costofplant \& machinery | $9,80,500$ |
| Insurance premium paid for inventories | 26,000 |
| Insurance premium paid for plant\& machinery | 96,000 |
| Quality control cost | 86,000 |
| Research \& developmentcost | 92,600 |
| Administrative overheads related with factory and production | $9,00,000$ |
|  | $1,07,43,100$ |
| Add: Opening value of W-I-P | $4,06,000$ |
| Less: Closing value of W-I-P | $(6,02,100)$ |
|  | $1,05,47,000$ |
| Less: Amount realised by selling scrap | $(9,200)$ |
| Add: Primary packing cost | 10,200 |
| 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.
5. (a) (i) Calculation of total project cost per day of concession period:

| Activities | Amount(Rs.in lakh) |
| :--- | ---: |
| Site clearance | 170.70 |


| Land developmentand filling work |  |  |  |  | 9,080.35 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Sub base and base courses |  |  |  |  | 10,260.70 |
| Bituminous work |  |  |  |  | 35,070.80 |
| Bridge, flyovers, underpasses, Pedestrian subway, footbridge, etc |  |  |  |  | 29,055.60 |
| Drainage and protection work |  |  |  |  | 9,040.50 |
| Traffic sign, marking and road appurtenance |  |  |  |  | 8,405.00 |
| Maintenance, repairing and rehabilitation |  |  |  |  | 12,429.60 |
| Environmental management |  |  |  |  | 982.00 |
| Total Project cost |  |  |  |  | 1,14,495.25 |
| Administration and toll plaza operation cost |  |  |  |  | 1,120.00 |
| Total Cost |  |  |  |  | 1,15,615.25 |
| Concession period in days ( 25 years $\times 365$ days) |  |  |  |  | 9,125 |
| Cost per day of concession period (Rs.in lakh) |  |  |  |  | 12.67 |
| Computation of toll fee: |  |  |  |  |  |
| Cost to be recovered per day $=$ Cost per day of concession period $+15 \%$ profit on cost$=\text { Rs. } 12,67,000+\text { Rs. } 1,90,050=\text { Rs. } 14,57,050$ |  |  |  |  |  |
|  |  |  |  |  |  |
| $\text { Cost per equivalentvehicle }=\frac{₹ 14,57,050}{76,444 \text { units (Referworkingnote) }}$ |  |  |  |  |  |
|  |  |  |  |  |  |
| = Rs. 19.06 per equivalentvehicle |  |  |  |  |  |
| Vehicle type-wise toll fee: |  |  |  |  |  |
| SI. No. | Type of v |  | Equivalent cost <br> [A] | Weight <br> [B] | Toll fee per vehicle [A×B] |
| 1. | Two whe |  | Rs. 19.06 | 1 | 19.06 |
| 2. | Car and |  | Rs. 19.06 | 4 | 76.24 |
| 3. | Bus and |  | Rs. 19.06 | 6 | 114.36 |
| 4. | Heay vehicles | commercial | Rs. 19.06 | 9 | 171.54 |

## Working Note:

The cost per day has to be recovered from the daily traffic. The each type of vehicle is to be converted into equivalent unit. Let's convert all vehicle types equivalent to Two-wheelers.

| SI. No. | Type of vehicle | Daily traffic <br> volume [A] | Weight | Ratio <br> $[B]$ | Equivalent Two- <br> wheeler [A×B] |
| :--- | :--- | :---: | :---: | :---: | :---: |
| 1. | Two wheelers | 44,500 | 0.05 | 1 | 44,500 |
| 2. | Car and SUVs | 3,450 | 0.20 | 4 | 13,800 |
| 3. | Bus and LCV | 1,800 | 0.30 | 6 | 10,800 |
| 4. | Heavy commercial <br> vehicles <br> Total | 816 | 0.45 | 9 | 7,344 |
|  |  |  |  |  | 76,444 |

(b) (i) Statement of profitability of an Oil Mill (after carrying out further processing) for the quarter ending 31st March 2019.

| Products | Sales Value after <br> further <br> processing | Share of Joint <br> cost | Additional <br> processing <br> cost | Total cost <br> after <br> processing | Profit (loss) |
| :---: | ---: | ---: | ---: | ---: | ---: |
| A | $25,87,500$ | $14,80,000$ | $6,45,000$ | $21,25,000$ | $4,62,500$ |
| B | $2,25,000$ | $2,96,000$ | $1,35,000$ | $4,31,000$ | $(2,06,000)$ |
| C | 90,000 | 74,000 |  | 74,000 | 16,000 |
| D | $6,75,000$ | $3,70,000$ | 22,500 | $3,92,500$ | $2,82,500$ |
|  | $35,77,500$ | $22,20,000$ | $8,02,500$ | $30,22,500$ | $5,55,000$ |

(ii) Statement of profitability at the split off point

| Products | Selling <br> price of <br> split off | Output in <br> units | Sales value at <br> split off point | Share of joint <br> cost | Profit at split <br> off point |
| :---: | ---: | ---: | ---: | ---: | ---: |
| A | 225.00 | 8,000 | $18,00,000$ | $14,80,000$ | $3,20,000$ |
| B | 90.00 | 4,000 | $3,60,000$ | $2,96,000$ | 64,000 |
| C | 45.00 | 2,000 | 90,000 | 74,000 | 16,000 |
| D | 112.50 | 4,000 | $4,50,000$ | $3,70,000$ | 80,000 |
|  |  |  | $27,00,000$ | $22,20,000$ | $4,80,000$ |

Note: Share of Joint Cost has been arrived at by considering the sales value at split off point.
6. (a) The essential features, which a good cost and management accounting system should possess, are as follows:
(i) Informative and simple: Cost and management accounting system should be tailor-made, practical, simple and capable of meeting the requirements of a business concern. The system of costing should not sacrifice the utility by introducing meticulous and unnecessary details.
(ii) Accurate and authentic: The data to be used by the cost and management accounting system should be accurate and authenticated; otherwise it may distort the output of the system and a wrong decision may be taken.
(iii) Uniformity and consistency: There should be uniformity and consistency in classification, treatment and reporting of cost data and related information. This is required for benchmarking and comparability of the results of the system for both horizontal and vertical analysis.
(iv) Integrated and inclusive: The cost and management accounting system should be integrated with other systems like financial accounting, taxation, statistics and operational research etc. to have a complete overview and clarity in results.
(v) Flexible and adaptive: The cost and management accounting system should be flexible enough to make necessary amendments and modification in the system to incorporate changes in technological, reporting, regulatory and other requirements.
(vi) Trust on the system: Managementshould have trust on the system and its output. For this, an active role of management is required for the development of such a system that reflects a strong conviction in using information for decision making.
(b)

| Bills of Material | Material Requisition Note |
| :--- | :--- |
| 1.It is document or list of materials prepared by the <br> engineering/drawing department. | 1.It is prepared by the foreman of the <br> consuming department. |
| 2.It is a complete schedule of component parts and <br> raw materials required for a particular job or work <br> order. | 2.It is a document authorizing Store- <br> Keeper to issue material to the <br> consuming department. |
| 3.It often serves the purpose of a Store Requisition <br> as it shows the complete schedule of materials <br> required for a particular job i.e. it can replace stores <br> requisition. | 3.It cannotreplace bill of material. |
| 4.It can be used for the purpose of quotation. | 4.It is useful in arriving historical cost <br> only. |
| 5.It helps in keeping a quantitative control on on <br> materials drawnthrough Stores Requisition. | 5.It shows the material actually drawn <br> from stores. |

(c) The following steps are useful for minimizing labour turnover:
(a) Exit interview. An interview to be arranged with each outgoing employee to ascertain the reasons of his leaving the organization.
(b) Job analysis and evaluation: to ascertain the requirement of each job.
(c) Organization should make use of a scientific system of recruitment, placementand promotion for employees.
(d) Organization should create healthy atmosphere, providing education, medical and housing facilities for workers.
(e) Committee for settling workers grievances.
(d)

| Sr. No | Job Costing | Batch Costing |
| :--- | :--- | :--- |
| 1 | Method of costing used for non- standard and <br> non- repetitive products produced as per <br> customer specifications and against specific <br> orders. | Homogeneous products produced in a <br> continuous production flow in lots. |
| 2 | Cost determined foreach Job. | Cost determined in aggregate for the <br> entire Batch and then arrived at on per <br> unit basis. |
| 3 | Jobs are different from each other and <br> independentofeach other. Each Job is unique. | Products produced in a batch are <br> homogeneous and lackofindividuality. |

