## PAPER - 8

## COST ACCOUNTING

## Time Allowed: 3 Hours

The figures in the margin on the right side indicate full marks.

## SECTION - A (Compulsory)

1. Choose the correct option:
(i) Which standards deals with the principles and methods of determining depreciation and amortization cost?
a. CAS 9
b. CAS 12
c. CAS 15
d. CAS 16
(ii) $\qquad$ is anything for which a separate measurement of cost is required.
a. Cost driver
b. Cost centre
c. Cost unit
d. Cost object
(iii) Direct Expenses $\qquad$ includes imputed cost.
a. Shall
b. Shall not
c. Shall be
d. None of these
(iv) Fixed costs are treated as
a. Overhead costs
b. Prime costs
c. Period costs
d. Conversion costs
(v) Sales budget is a $\qquad$ .
a. expenditure budget
b. functional budget
c. master budget
d. None of these
(vi) In which of the following situations an abnormal gain in a process occurs:
a. When normal loss is equal to actual loss
b. When the actual output is greater than the planned output
c. When actual loss is more than the expected
d. When actual loss is less than the expected loss
(vii) Absorption means
a. Charging of overheads to cost centres
b. Charging of overhead to cost units
c. Charging of overheads to cost centres or cost units
d. None of the above

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(viii) Primary packing cost is a part of
a. Direct material cost
b. Distribution overhead
c. Selling overhead
d. Production cost
(ix) Equivalent production of 1,000 units, $60 \%$ complete in all respect, is:
a. 1,000 units
b. 1,600 units
c. 600 units
d. 1,060 units
(x) When costing loss is ₹ 5,600 , administrative overhead under-absorbed being ₹ 600 , the loss as per financial accounts should be $\qquad$ .
a. ₹ 5,000
b. ₹ 5,600
c. ₹ 6,200
d. None of the above
(xi) Contribution is ₹ $3,00,000$ and sales is ₹ $15,00,000$. Compute $\mathrm{P} / \mathrm{V}$ ratio.
a. $15 \%$
b. $20 \%$
c. $22 \%$
d. $17.5 \%$
(xii) What is the labour rate variance if standard hours for 100 units of output are $400 @$ ₹ 2 per hour and actual hours taken are 380 @ ₹ 2.25 per hour?
a. ₹ 120 (adverse)
b. ₹ 100 (adverse)
c. ₹ 95 (adverse)
d. ₹ 25 (favourable)
(xiii) Standard cost of material for a given quantity of output is ₹ 15,000 while the actual cost of material used is ₹ 16,200 . The material cost variance is:
a. ₹ $1,200(\mathrm{~A})$
b. ₹ $16,200(\mathrm{~A})$
c. ₹ $15,000(\mathrm{~F})$
d. ₹ $31,200(\mathrm{~A})$
(xiv) Job Costing is used in:
a. Furniture making
b. Repair shops
c. Printing press
d. All of the above
(xv) Under Taylor's differential piece rate scheme, if a worker fails to complete the task within the standard time, then he is paid
a. $83 \%$ of the piece work rate
b. $175 \%$ of the piece work rate
c. $67 \%$ of the piece work rate
d. $125 \%$ of the piece work rate

## Answer:

| (i) | (ii) | (iii) | (iv) | (v) | (vi) | (vii) | (viii) | (ix) | (x) | (xi) | (xii) | (xiii) | (xiv) | (xv) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| d | d | b | c | b | d | b | d | c | c | b | c | a | d | a |

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## COST ACCOUNTING

## SECTION-B

(Answer any five questions out of seven questions given. Each question carries $\mathbf{1 4}$ Marks)
[5x14=70]
2. (a) MNQ LLP submits the following information on 31st March 2024. Based on the given data, illustrate and prepare a statement of cost.

| Details | (₹) |  |  |
| :--- | ---: | :---: | :---: |
| Sales for the year | $\mathbf{2 , 7 5 , 0 0 0}$ |  |  |
| Inventories at the beginning of the year: Finished goods | $\mathbf{7 , 0 0 0}$ |  |  |
| Work in Progress | $\mathbf{4 , 0 0 0}$ |  |  |
| Purchase of the material for the year | $\mathbf{1 , 1 0 , 0 0 0}$ |  |  |
| Material inventory: At the beginning of the year | $\mathbf{3 , 0 0 0}$ |  |  |
| At the end of the year | $\mathbf{4 , 0 0 0}$ |  |  |
| Direct Labour | $\mathbf{6 5 , 0 0 0}$ |  |  |
| Factory overhead: $\mathbf{6 0 \%}$ of direct labour cost | $\mathbf{8 , 0 0 0}$ |  |  |
| Inventories at the end of the year: Finished goods | $\mathbf{6 , 0 0 0}$ |  |  |
| Work in Progress |  |  |  |
| Other expenses for year: |  |  |  |
| Selling expenses $-\mathbf{1 0 \%}$ of sales |  |  |  |
| Administrative expense $-\mathbf{5 \%}$ of sales |  |  |  |

(b) Anil Ltd. buys its annual requirement of $\mathbf{3 6 , 0 0 0}$ units in six installments. Each unit costs ₹ 1 and the ordering cost is $₹ 25$. The inventory carrying cost is estimated at $20 \%$ of unit value. Compute the total annual cost of the existing inventory policy. Determine how much money can be saved by using EOQ?

Answer:
(a)

| Details | $(₹)$ | $(₹)$ |
| :--- | ---: | ---: |
| Inventory (RM) at the beginning of the year | 3,000 |  |
| Add: Purchase of RM during the year | $1,10,000$ |  |
|  | $1,13,000$ |  |
| Less: Inventory (RM) at the end of the year | $(4,000)$ |  |
| Material consumed |  | $1,09,000$ |
| Add: Direct Labour |  | 65,000 |
| Prime Cost |  | $1,74,000$ |
| Add: Factory Overhead @ 60\% of direct labour |  | 39,000 |
| Works Cost |  | $2,13,000$ |
| Adjustment for work in progress | 4,000 |  |
| Opening WIP | $(6,000)$ | $(2,000)$ |
| Less: Closing WIP |  | $2,11,000$ |
|  |  | 13,750 |
| Add: Administrative Overhead @ 5\% of Sales (2,75,000) |  | $2,24,750$ |
| Cost of Production |  |  |
| Adjustment for Finished goods |  |  |
| Opening Stock of Finished Goods | $(8,000)$ | $(1,000)$ |
| Less: Closing stock of Finished Goods |  | $2,23,750$ |
| Cost of goods sold |  | 27,500 |
| Add: Selling overhead @ $10 \%$ of sales $(2,75,000)$ |  | $2,51,250$ |
| Cost of Sales |  | 23,750 |
| Profit (Balancing figure) |  | $2,75,000$ |
| Sales |  |  |

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## COST ACCOUNTING

(b)


Comparative Cost Statement of Existing Purchase Policy with proposed EOQ Purchase Policy

|  | Existing Purchase PolicyOrdering Quantity $=\frac{36,000}{6}=6,000$ units |  | Proposed EOQ Purchase Policy Ordering Quantity = 3,000 units |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | (₹) |  | (₹) |
| Purchase Cost | $36,000 \times 1$ | 36,000 | $36,000 \times 1$ | 36,000 |
| Ordering Cost | $6 \times 25$ | 150 | $12 \times 25$ | 300 |
| Carrying Cost |  | 600 |  | 300 |
| Total Cost |  | 36,750 |  | 36,600 |

Net Savings = ₹ 36, $750-₹ 36,600=₹ 150$.
3. (a) A manufacturing unit produces two products $X$ and $Y$. the following information is furnished:

| Particulars | Product X | Product Y |
| :--- | ---: | ---: |
| Units produced (quantity) | $\mathbf{2 0 , 0 0 0}$ | $\mathbf{1 5 , 0 0 0}$ |
| Units sold (quantity) | $\mathbf{1 5 , 0 0 0}$ | $\mathbf{1 2 , 0 0 0}$ |
| Machine Hours utilized | $\mathbf{1 0 , 0 0 0}$ | $\mathbf{5 , 0 0 0}$ |
| Design charges | $\mathbf{1 5 , 0 0 0}$ | $\mathbf{1 8 , 0 0 0}$ |
| Software development charges | $\mathbf{2 4 , 0 0 0}$ | $\mathbf{3 6 , 0 0 0}$ |

Royalty paid on sales ₹ 54,000 [@ ₹ 2 per unit sold, for both the products]; Royalty paid on units produced $\mathfrak{₹} 35,000$ [@ ₹1 per unit produced, for both the products], Hire charges of equipment used in manufacturing process of Product $X$ only ₹ 5,000 . Compute the direct expenses.
(b) Prepare and pass the journal entries for the following transactions in a double entry cost accounting system:

| Particulars | Amount (₹) |
| :--- | ---: |
| A) Issue of Material: |  |
| - Direct | $\mathbf{5 , 5 0 , 0 0 0}$ |
| - Indirect | $\mathbf{1 , 5 0 , 0 0 0}$ |
| B) Allocation of wages and salaries: |  |
| - Direct | $\mathbf{2 , 0 0 , 0 0 0}$ |
| - Indirect | $\mathbf{4 0 , 0 0 0}$ |
| C) Overheads absorbed in jobs: |  |
| - Factory | $\mathbf{1 , 5 0 , 0 0 0}$ |
| - Administration | $\mathbf{5 0 , 0 0 0}$ |
| - Selling | $\mathbf{3 0 , 0 0 0}$ |
| D) Under / Over absorbed overhead: |  |
| - Factory (Over) | $\mathbf{2 0 , 0 0 0}$ |
| - Administration (Under) | $\mathbf{1 0 , 0 0 0}$ |

## Answer:

(a) Computation of Direct Expenses

| Particulars | Product $\mathrm{X}(₹)$ | Product Y $(₹)$ |
| :--- | ---: | ---: |
| Royalty paid on sales | $15,000 \times 2=30,000$ | $12,000 \times 2=24,000$ |
| Add: Royalty paid on units produced | $20,000 \times 1=20,000$ | $15,000 \times 1=15,000$ |
| Add: Hire charges of equipment used in <br> manufacturing process of Product X only | 5,000 | --- |
| Add: Design charges | 15,000 | 18,000 |
| Add: Software development charges related to <br> production | 24,000 | 36,000 |
| Direct Expenses | 94,000 | 93,000 |

## Note:

1. Royalty on production and royalty on sales are allocated on the basis of units produced and units sold respectively. These are directly identifiable and traceable to the number of units produced and units sold. Hence, this is not an apportionment.
2. No adjustments are made related to units held, i.e., closing stock.
(b)

Journal

| Particulars | Dr. | Cr . |
| :---: | :---: | :---: |
|  | Amount (₹) | Amount (₹) |
| Work in Progress Control A/c Dr. | 5,50,000 |  |
| Factory Overhead Control A/c Dr. To Material Control A/c | 1,50,000 | 7,00,000 |
| Work in Progress Control A/c Dr. | 2,00,000 |  |
| Factory Overhead Control A/c Dr. To Wages Control A/c | 40,000 | 2,40,000 |
| Work in Progress Control A/c Dr. To Factory Overhead Control A/c | 1,50,000 | 1,50,000 |
| Finished Goods Control A/c Dr. To Administrative Overhead Control A/c | 50,000 | 50,000 |
| Cost of Sales A/c Dr. To Selling and Distribution Overhead Control A/c | 30,000 | 30,000 |
| Factory Overhead Control A/c Dr. <br> To Costing Profit and Loss A/c  | 20,000 | 20,000 |
| Costing Profit and Loss A/c Dr. To Administrative Overhead Control A/c | 10,000 | 10,000 |

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## COST ACCOUNTING

4. (a) A transport service company is running five buses between two towns, which are 50 kilometers apart. Seating capacity of each bus is $\mathbf{5 0}$ passengers. The following particulars are obtained from their books for April 2023:

| Particulars | Amount (₹) |
| :--- | ---: |
| Wage of drivers, conductors and cleaners | $\mathbf{2 , 4 0 , 0 0 0}$ |
| Salaries of office staff | $\mathbf{1 , 0 0 , 0 0 0}$ |
| Diesel oil and other oil | $\mathbf{3 , 5 0 , 0 0 0}$ |
| Repairs and maintenance | $\mathbf{8 0 , 0 0 0}$ |
| Taxation, insurance etc. | $\mathbf{1 , 6 0 , 0 0 0}$ |
| Depreciation | $\mathbf{2 , 6 0 , 0 0 0}$ |
| Interest and other expenses | $\mathbf{2 , 0 0 , 0 0 0}$ |
| Total | $\mathbf{1 3 , 9 0 , 0 0 0}$ |

Actually, passengers carried were $75 \%$ of seating capacity. All buses ran on all day of the month. Each bus made one round trip per day. Calculate the cost per passenger kilometer.
(b) A contractor has undertaken a construction work at a price of ₹ $\mathbf{5 , 0 0 , 0 0 0}$ and begun the execution of work on $1^{\text {st }}$ January 2023. The following are the particulars of the contract up to 31st December, 2023:

| Particulars | Amount (₹) |  | Amount (₹) |
| :--- | ---: | :--- | ---: |
| Machinery | $\mathbf{3 0 , 0 0 0}$ | Overheads | $\mathbf{8 , 2 5 2}$ |
| Materials | $\mathbf{1 , 7 0 , 6 9 8}$ | Materials returned | $\mathbf{1 , 0 9 8}$ |
| Wages | $\mathbf{1 , 4 8 , 7 5 0}$ | Work certified | $\mathbf{3 , 9 0 , 0 0 0}$ |
| Direct expenses | $\mathbf{6 , 3 3 4}$ | Cash received | $\mathbf{3 , 6 0 , 0 0 0}$ |
| Uncertified work | $\mathbf{9 , 0 0 0}$ | Materials on 31.12.2022 | $\mathbf{3 , 7 6 6}$ |
| Wages outstanding | $\mathbf{5 , 3 8 0}$ |  |  |
| Value of Machinery on | $\mathbf{2 2 , 0 0 0}$ |  |  |
| $\mathbf{3 1 . 1 2 . 2 0 2 2}$ |  |  |  |

It was decided that the profit made on the contract in the year should be arrived at by deducting the cost of work certified from the total value of the architect's certificate, that $1 / 3$ rd of the profit so arrived at should be regarded as a provision against contingencies and that such provision should be increased by taking to the credit of Profit \& Loss Account only such portion of the $2 / 3$ rd profit, as the cash received to the work certified. Prepare the contract account for the year and show the amount taken to the credit of the Profit and Loss account.

Answer:
(a) Operating Cost Statement for the month of April 2023

| Particulars | Amounts <br> $(₹)$ | Amounts <br> $(₹)$ |
| :--- | :---: | :---: |
| A. Standing Charges |  |  |
| Wages of drivers, conductors and cleaners. | $2,40,000$ |  |
| Salaries of office staff | $1,00,000$ |  |
| Taxation, insurance etc. | $1,60,000$ |  |
| Interest and other expenses | $2,00,000$ |  |
| Depreciation | $2,60,000$ |  |

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\(\left.\begin{array}{|l|r|r|}\hline Total standing charges \& \& 9,60,000 <br>
\hline B. Running and Maintenance Charges \& \& <br>
\hline Repairs and maintenance \& 80,000 \& <br>

\hline Diesel oil and other oil \& \& 4,50,000\end{array}\right]\)| Total running and maintenance charges |  |
| :--- | ---: |
| C. Total cost [A+B] | $13,90,000$ |
| D. Cost per passenger kilometre* ₹ $13,90,000 / 5,62,500 ~ p a s s e n g e r ~$ <br> kilometers | 2.471 |

Working:

* Passenger kilometers are computed as below:
$=$ Number of buses $\times$ Distance in one round trip $\times$ Seating capacity available $\times$ Percentage of seating capacity actually used $\times$ Number of days in a month $\times$ No. of trips
$=5$ buses $\times 50$ kilometers $\times 2 \times 50$ passengers $\times 75 \% \times 30$ days
$=5,62,500$ passenger-kms
(b)


## Contract Account

Dr. Cr

| Particulars | $(₹)$ | Particulars | $(₹)$ |
| :--- | ---: | :--- | ---: |
| To Depreciation on Machinery <br> A/c [WN-1] | 8,000 | By Materials (Returned) A/c | 1,098 |
|  |  | By Materials at site c/d | 3,766 |
| To Materials A/c | $1,70,698$ | By Cost of Construction c/d (Bal. fig.) | $3,42,550$ |
| To Wages A/c | $1,48,750$ |  |  |
| To Outstanding Wages A/c | 5,380 |  |  |
| To Direct Expenses A/c | 6,334 |  | $3,47,414$ |
| To Overheads A/c | 8,252 |  |  |
|  | $3,47,414$ |  | $3,90,000$ |
| To Cost of Construction b/d | $3,42,550$ | By Work in Progress A/c | 9,000 |
| To Notional Profit c/d (Bal. <br> fig.) | 56,450 | - Value of work certified | $5,99,000$ |
|  |  | - Cost of uncertified work | 56,450 |
|  | $3,99,000$ |  |  |
| To Profit \& Loss A/c [WN-2] | 34,738 | By Notional Profit b/d |  |
| To Work in progress A/c |  |  | 56,450 |
| - Provision for Contingencies | 21,712 |  |  |
| (Bal. fig.) | 56,450 |  |  |
|  |  |  |  |

Working Notes

1. Depreciation on Machinery $=₹ 30,000-₹ 22,000=₹ 8,000$
2. Since, degree of completion is above $50 \%$ so amount transferred to Profit \& Loss A/c

$$
=\frac{2}{3} \times 56,450 \times \frac{3,60,000}{3,90,000}=₹ 34,738 .
$$

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## COST ACCOUNTING

5. (a) In manufacturing the main Product ' $A$ ', a company processes the resulting waste material into two By-Products B and C. Using reversal cost method of By-Products, prepare a comparative profit and loss statement of the three products from the following data:
(i) Total cost up to separation point was ₹ $\mathbf{6 8 , 0 0 0}$

|  | A | B | C |
| :--- | ---: | ---: | ---: |
| (ii) Sales (all production) | ₹ $\mathbf{1 , 6 4 , 0 0 0}$ | $₹ \mathbf{1 6 , 0 0 0}$ | $₹ \mathbf{2 4 , 0 0 0}$ |
| (iii) Estimated net profit \% to Sale Value | - | $\mathbf{2 0 \%}$ | $\mathbf{3 0 \%}$ |
| (iv) Estimated Selling Expenses as \% of Sales Value | $\mathbf{2 0 \%}$ | $\mathbf{2 0 \%}$ | $\mathbf{2 0 \%}$ |
| (v) Costs after separation | - | $₹ \mathbf{4 , 8 0 0}$ | $₹ \mathbf{7 , 2 0 0}$ |

(b) Using the following information calculate each of three labour variance for each department:

|  | Department X | Department Y |
| :---: | ---: | ---: |
| Gross wages direct | $₹ \mathbf{2 8 , 0 8 0}$ | $₹ \mathbf{1 9 , 3 7 0}$ |
| Standard hours produced | $\mathbf{8 , 6 4 0}$ | $\mathbf{6 , 0 1 5}$ |
| Standard rate per hour | $₹ 3$ | $₹ 3.40$ |
| Actual hours worked | $\mathbf{8 , 2 0 0}$ | $\mathbf{6 , 3 9 5}$ |

Answer:
(a)

Allocation of Joint Cost to Product B and Product C

|  | Product B $(₹)$ | Product C (₹) |
| :--- | ---: | ---: |
| Sales | 16,000 | 24,000 |
| Less: Profit | $20 \% \times 16,000=3,200$ | $30 \% \times 24,000=7,200$ |
| Total Cost | 12,800 | 16,800 |
| Less: Selling Expenses | $20 \% \times 16,000=3,200$ | $20 \% \times 24,000=4,800$ |
|  | 9,600 | 12,000 |
| Less: Cost after Separation | 4,800 | 7,200 |
| Share in Joint Cost | 4,800 | 4,800 |

$\therefore$ Share in Joint Cost of Product A $=68,000-(4,800+4,800) \quad=₹ 58,400$

Comparative Profit and Loss Statement

| Particulars | Product A $(₹)$ | Product B $(₹)$ | Product C $(₹)$ | Total (₹) |
| :--- | ---: | ---: | ---: | ---: |
| Sales (A) | $1,64,000$ | 16,000 | 24,000 | $2,04,000$ |
| Joint Cost | 58,400 | 4,800 | 4,800 | 68,000 |
| Cost After Separation | - | 4,800 | 7,200 | 12,000 |
| Selling Expenses | 32,800 | 3,200 | 4,800 | 40,800 |
| Total Cost (B) | 91,200 | 12,800 | 16,800 | $1,20,800$ |
| Profit (A - B) | 72,800 | 3,200 | 7,200 | 83,200 |

Selling Expense of Product $\mathrm{A}=20 \% \times 1,64,000=₹ 32,800$.

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(b) Department X:

SH - Standard Hours for Actual Output $=8,640$ hours
SR - Standard Rate per hour $=₹ 3$ per hour
AH - Actual Hours Paid for $=8,200$
$\mathrm{AR}-$ Actual Rate per hour $=\frac{₹ 28,080}{8,200 \text { hours }}$
(i) Labour Cost Variance $=\mathrm{SH} \times \mathrm{SR}-\mathrm{AH} \times \mathrm{AR}$
$=₹ 8,640 \times 3-8,200 \times \frac{28,080}{8,200}$
= ₹ $25,920-28,080$
= ₹ 2,160 (A)
(ii) Labour Rate Variance

$$
=(\mathrm{SR}-\mathrm{AR}) \times \mathrm{AH}=\mathrm{SR} \times \mathrm{AH}-\mathrm{AR} \times \mathrm{AH}
$$

$$
=(3 \times 8,200)-\left(\frac{28,080}{8,200} \times 8,200\right)
$$

$$
=₹ 24,600 \text { - ₹ } 28,080
$$

= ₹ 3,480 (A)
(iii) Labour Efficiency Variance $=(\mathrm{SH}-\mathrm{AH}) \times \mathrm{SR}$

$$
\begin{aligned}
& =(8,640-8,200) \times 3 \\
& =₹ 1,320(\mathrm{~F})
\end{aligned}
$$

Department Y:
SH $=6,015$ hours
SR = ₹ 3.40 per hour
$\mathrm{AH}=6,395$ hours
$A R=\frac{₹ 19,370}{6,395 \text { hours }}$
(i) Labour Cost Variance
$=\mathrm{SH} \times \mathrm{SR}-\mathrm{AH} \times \mathrm{AR}$
$=(6,015 \times ₹ 3.40)-\left(6,395 \times \frac{19,370}{6,395}\right)$
$=₹ 1,081(\mathrm{~F})$
(ii) Labour Rate Variance
$=(S R-A R) \times A H=S R \times A H-A R \times A H$
$=(₹ 3.40 \times 6,395)-\left(\frac{19,370}{6,395} \times 6,395\right)$
$=₹ 2,373(\mathrm{~F})$
(iii) Labour Efficiency Variance $=(\mathrm{SH}-\mathrm{AH}) \times \mathrm{SR}$

$$
=(6,015-6,395) \times ₹ 3.40
$$

$$
=₹ 1,292 \text { (A) }
$$

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## COST ACCOUNTING

6. S Ltd. furnishes you the following information relating to the half year ended $30^{\text {th }} \mathbf{J u n e}$, 2023:
Fixed Expenses
₹ $\mathbf{4 5 , 0 0 0}$
Sales Value
₹ $\mathbf{1 , 5 0 , 0 0 0}$
Profit
₹ $\mathbf{3 0 , 0 0 0}$

During the second half of the year the company has projected a loss of ₹ $\mathbf{1 0 , 0 0 0}$. Calculate:
(i) The Break Even Sales and Margin of Safety for the six months ending 30 ${ }^{\text {th }}$ June, 2023.
(ii) Expected sales volume for the second half of the year assuming that the P/V Ratio and Fixed expenses remain constant in the second half year also.
(iii) The Break Even Sales and Margin of Safety for the whole year 2023.

Answer:
(i) P/V Ratio $=\frac{\text { Contribution }}{\text { Sales }} \times 100=\frac{\text { Fixed Cost }+ \text { Profit }}{\text { Sales }} \times 100=\frac{45,000+30,000}{1,50,000} \times 100=50 \%$

Break Even Sales for the six months ending $30^{\text {th }}$ June, $2023=\frac{\text { Fixed Cost }}{\text { P/V Ratio }}=\frac{45,000}{50 \%}=₹ 90,000$
Margin of Safety for the six months ending 30 ${ }^{\text {th }}$ June, $2023=$ Sales - Break Even Sales
$=1,50,000-90,000$
$=₹ 60,000$.
(ii) Income Statement for the second half of the year 2023

| Particulars | Workings | (₹) |
| :--- | :---: | :---: |
| Sales | Sales $=\frac{\text { Contribution }}{\text { P/V Ratio }}=\frac{35,000}{50 \%}$ | 70,000 |
| Less: Variable Cost | Bal. fig. or Sales $\times(1-$ P/V Ratio $)$ | 35,000 |
| Contribution | Fixed Cost - Loss $=45,000-10,000$ | 35,000 |
| Less: Fixed Cost |  | 45,000 |
| Loss |  | 10,000 |

Step $1-$ Calculation of Contribution $=$ Fixed Cost - Loss $=45,000-10,000=₹ 35,000$
Step 2 - Calculation of Sales
Step 3 - Calculation of Variable Cost
(iii) Break Even Sales for the year $2023=\frac{\text { Fixed Cost for the year }}{\text { P/V Ratio }}=\frac{45,000+45,000}{50 \%}=₹ 1,80,000$

Margin of Safety for the year 2023 = Sales for year - Break Even Sales

$$
=(1,50,000+70,000)-1,80,000
$$

$$
=₹ 40,000
$$

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## COST ACCOUNTING

7. (a) The monthly budgets for manufacturing overheads of a concern for two levels of activity were as follows:

| Capacity | $\mathbf{6 0 \%}$ | $\mathbf{1 0 0 \%}$ |
| :--- | ---: | ---: |
| Budgeted Production (units) | $\mathbf{6 0 0}$ | $\mathbf{1 , 0 0 0}$ |
|  | $\mathbf{( ₹ )}$ | $\mathbf{( ₹ )}$ |
| Wages | $\mathbf{1 , 2 0 0}$ | $\mathbf{2 , 0 0 0}$ |
| Consumable stores | $\mathbf{9 0 0}$ | $\mathbf{1 , 5 0 0}$ |
| Maintenance | $\mathbf{1 , 1 0 0}$ | $\mathbf{1 , 5 0 0}$ |
| Power and fuel | $\mathbf{1 , 6 0 0}$ | $\mathbf{2 , 0 0 0}$ |
| Depreciation | $\mathbf{4 , 0 0 0}$ | $\mathbf{4 , 0 0 0}$ |
| Insurance | $\mathbf{1 , 0 0 0}$ | $\mathbf{1 , 0 0 0}$ |
| Total Cost | $\mathbf{9 , 8 0 0}$ | $\mathbf{1 2 , 0 0 0}$ |

You are required to:
i. Inspect which of the items are fixed, variable and semi-variable.
ii. Prepare a budget for $\mathbf{8 0 \%}$ capacity, and
iii. Compute total cost, both fixed and variable per unit of output at $\mathbf{6 0 \%}, \mathbf{8 0 \%}$ and $\mathbf{1 0 0 \%}$ capacity.
(b) Explain the scope and objective of Cost Accounting Standard (CAS).

Answer:
(a) (i) Statement showing segregation of the items in Fixed, Variable and Semi-Variable

| Items of <br> Cost | Nature of Cost | Variable Cost p.u | Fixed |
| :---: | :---: | :---: | :---: |
| Wages | Variable | $\frac{1,200}{600}=₹ 2 \text { p.u. }$ |  |
| Consumable stores | Variable | $\frac{900}{600}=₹ 1.50 \text { p.u. }$ |  |
| Maintenance | Semi- <br> Variable | $\begin{aligned} & =\frac{\text { Change in totalCost }}{\text { Change in Output }} \\ & =\frac{1,500-1,100}{1,000-600}=\frac{400}{400}=₹ 1 \text { p.u. } \end{aligned}$ | Total Cost - Variable Cost $\begin{aligned} & =1,100-(600 \times 1) \\ & =₹ 500 \end{aligned}$ |
| Power and fuel | Semi- <br> Variable | $\begin{aligned} & =\frac{\text { Change in totalCost }}{\text { Change in Output }} \\ & =\frac{2,000-1,600}{1,000-600}=\frac{400}{400}=₹ 1 \text { p.u. } \end{aligned}$ | Total Cost - Variable Cost $\begin{aligned} & =1,600-(600 \times 1) \\ & =₹ 1,000 \end{aligned}$ |
| Depreciation | Fixed |  | ₹ 4,000 |
| Insurance | Fixed |  | ₹ 1,000 |

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(ii)
Budget at $80 \%$ Capacity

| Production | $\mathbf{1 , 0 0 0} \times \mathbf{8 0 \% = 8 0 0} \mathbf{u n i t s ~ ( \mathbf { Z } )}$ |
| :--- | ---: |
| Wages | $800 \times 2=1,600$ |
| Consumable stores | $800 \times 1.50=1,200$ |
| Maintenance | $800 \times 1+500=1,300$ |
| Power and fuel | $800 \times 1+1,000=1,800$ |
| Depreciation | 4,000 |
| Insurance | 1,000 |
| Total Cost | 10,900 |

(iii)

| Capacity | $\mathbf{6 0 \%}$ |  | $\mathbf{8 0 \%}$ |  | $\mathbf{1 0 0 \%}$ |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Production | $\mathbf{6 0 0}$ units |  | $\mathbf{8 0 0}$ units |  | $\mathbf{1 0 0 0}$ units |  |
|  | p.u. <br> (₹) | Total <br> (₹) | p.u. <br> (₹) | Total <br> (₹) | p.u. <br> (₹) | Total <br> (₹) |
| Variable Costs |  |  |  |  |  |  |
| Wages | 2.00 | 1,200 | 2.00 | 1,600 | 2.00 | 2,000 |
| Consumable stores | 1.50 | 900 | 1.50 | 1,200 | 1.50 | 1,500 |
| Maintenance | 1.00 | 600 | 1.00 | 800 | 1.00 | 1,000 |
| Power and Fuel | 1.00 | 600 | 1.00 | 800 | 1.00 | 1,000 |
| Total Variable Costs | 5.50 | 3,300 | 5.50 | 4,400 | 5.50 | 5,500 |
| Fixed Costs |  |  |  |  |  |  |
| Maintenance |  | 500 |  | 500 |  | 500 |
| Power and Fuel |  | 1,000 |  | 1,000 |  | 1,000 |
| Depreciation |  | 4,000 |  | 4,000 |  | 4,000 |
| Insurance | 1,000 |  | 1,000 |  | 1,000 |  |
| Total Fixed Costs | 6,500 | 6,500 | 6,500 | 6,500 | 6,500 | 6,500 |
|  | 600 |  | 800 |  | 1,000 |  |
| Total Costs | $=10.83$ |  | $=8.125$ |  | $=6.50$ |  |

(b)

The scope and objective of Cost Accounting Standard (CAS): The Cost Accounting Standards:
(i) provide a structured approach to measurement of costs in manufacturing process or service industry;
(ii) integrate, harmonize, and standardize cost accounting principles and practices;
(iii) provide guidance to users to achieve uniformity and consistency in classification, measurement, assignment, and allocation of costs to products and services;
(iv) arrive at the basis of computing the cost of product, activity, or service where required by legal or regulatory bodies;

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(v) enable practicing members to make use of Cost Accounting Standards in the attestation of General Purpose Cost statements; and
(vi) assist in clear and uniform understanding of all the related issues by various user organizations, Government Bodies, regulators, research agencies, and academic institutions
8. (a) Distinguish between Financial and Cost Accounting.
(b) Identify and name any five CAS along with their numbers.
(c) Analyse the Time Rate, Piece Rate and Differential Piece Rate Systems with regard to labour.

Answer:
(a) Difference between Financial and Cost Accounting:

| Basis of <br> Comparison | Financial Accounting | Cost Accounting |
| :--- | :--- | :--- |
| Purpose | It is prepared for providing information <br> about the results of the business <br> activities as a whole for a particular <br> period to the users. | The main purpose of Cost <br> Accounting is to provide information <br> to the management for the proper <br> planning, control and decision <br> making. |
| Need | Financial Accounts are maintained as <br> per the requirements of Companies Act <br> and Income Tax Act. | Cost accounts are maintained to <br> meet the requirement of the <br> Management. |
| Recording | Transactions are classified, recorded <br> and analysed subjectively. | In cost accounting, transactions are <br> classified, recorded and analysed <br> objectively according <br> to the purpose for which costs are <br> incurred. |
| Analysis of <br> profit | Financial accounting reveals the profit <br> of a business as a whole. | Cost Accounting shows the profit <br> made on each product, job or <br> process. |

(b) Name of five CAS along with their numbers:

CAS 1: Classification of Cost
CAS 2: Capacity Determination
CAS 3: Production and Operation Overheads
CAS 4: Cost of Production for Captive Consumption
CAS 5: Average (Equalized) Cost of Transportation
(c) A. Time Rate System:
i. Time Rate at Ordinary Levels: Under this method, rate of payment of wages per hour is fixed and payment is made accordingly on the basis of time worked irrespective of the output produced.
ii. Time Rate at High Wage Levels: This system is a variation of time rate at ordinary levels in the sense that in this system, workers are paid at time rate but the rate is much higher than that is normally paid in the industry or area.
iii. Graduated Time Rate: Under this method payment is made at time rate, which varies according to personal qualities of the workers.

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B. Piece Rate System: This method is also called as payment by results where the workers are paid as per the production achieved by them. Thus, if a worker produces higher output, he can earn higher wages. Under the piece rate system of wage payment, the workers receive a flat rate of wages either for time worked or for units manufactured.
C. Differential Piece Rate System: Under these methods, the rate per standard hour of production is increased as the output level rises. The increase in rates may be proportionate to the increase in output or proportionately more or less than that as may be decided. In other words, a worker is paid higher wages for higher productivity as an incentive.

