Time Allowed: 3 Hours **Full Marks: 100**

The figures in the margin on the right side indicate full marks.
Where considered necessary, suitable assumptions may be made and
clearly indicated in the answer.
Answer Question No. 1 and any five from Question No. 2, 3, 4, 5, 6, 7 and 8.

SECTION - A

(Compulsory)

1. (a)

(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)	(x)	(xi)	(xii)
c	d	d	c	a	c	d	a	c	a	c	c

(b)

(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
True	False	False	True	False	True	False

(c)

(i)	(ii)	(iii)	(iv)	(v)	(vi)
pre-determined	document	excess (or additional or more or higher)	capacity	reconcile	sales budget

SECTION - B

(Answer any five questions)

2. (a)

High Low method	Units	Cost in ₹
Highest month	900	2,000
Lowest month	(400)	(1,000)
Net total	500	1000

The additional cost between the highest and lowest month

$$\frac{₹1,000}{500} = ₹\ 2 \text{ per unit}$$

So, taking either higher or lower number

Higher → 900×₹ 2 = ₹ 1,800 So fixed cost = ₹ 200

Lower → 400 × ₹ 2 = ₹ 800 So fixed cost = ₹ 200

(b) (i) The Accounting standard 6 (CAS -6) deals with principles and methods of determining the Material Cost. Material for the purpose of this standard includes raw materials, process materials, and additives, manufactured / bought out components, sub-assemblies, accessories, semi-finished goods, consumable stores, spares and other indirect materials. This standard does not deal with Packing Materials as a separate standard is being issued on the subject. This standard deals with the principles and methods of classification, measurement and assignment of Material Cost, for determination of the cost of product or service, and the presentation and disclosure in cost statements.

- **Objective** - The objective of this standard is to bring uniformity and consistency in the principles and methods of determining the Material Cost with reasonable accuracy.
- **Scope-** This standard should be applied to cost statements which require classification, measurement, assignment, presentation and disclosure of Material Costs including those requiring attestation.

(ii) The Institute of Cost Accountants of India issued 24 CAS till to date (31/03/2023). Classification of cost is the arrangement of items of costs in logical groups having regard to their nature (subjective classification) or purpose (objective classification).

The Scheme of classification should be such, so that every item of cost can be classified. As per CAS-1 the following basis are normally followed:

a) Nature of expense;
b) Relation to object – traceability;
c) Functions / activities;
d) Behaviour - Fixed, Semi-variable or Variable;
e) Management decision making;
f) Production Process and
g) Time period

(iii) The cost statements shall disclose the following: -

1. The basis of assignment of overheads to the cost objects.
2. Overheads incurred in foreign exchange.
3. Overheads relating to resources received from or supplied to related parties.
4. Any Subsidy / Grant / Incentive or any amount of similar nature received / receivable reduced from overheads.
5. Credits / recoveries relating to overheads.
6. Any abnormal cost not forming part of the overheads.
7. Any unabsorbed overheads.

3. (a)

i. EOQ = $\sqrt{\frac{2AO}{C}}$ A = Annual requirement = 36,000 units

O = Ordering Cost per order = ₹ 25

C = Carrying cost per unit per annum = 1 x 20% = ₹ 0.20

EOQ = $\sqrt{\frac{2 \times 36,000 \times 25}{0.20}}$ = 3,000 units

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

	Existing Purchase Policy Ordering Quantity = $\frac{36,000}{6}$ = 6,000 units		**Proposed EOQ Purchase Policy Ordering Quantity = 3,000 units**	
		₹		₹
Purchase Cost	36,000 x 1	36,000	36,000 x 1	36,000
Ordering Cost	6 x 25	150	12 x 25	300
Carrying Cost	$\frac{1}{2} \times 6,000 \times 1 \times 20\%$	600	$\frac{1}{2} \times 3,000 \times 1 \times 20\%$	300
Total Cost		36,750		36,600

Net Savings = ₹ 36,750 - ₹ 36,600 = ₹ 150

(ii) This is also in the form of incidental material residue coming out of certain types of manufacturing processes but it is usually in small amounts and has low measurable utility or market value, recoverable without further processing. Numerous examples of scrap may be given; scrap may arise in the form of turnings, borings, trimmings, fillings, shavings etc., from metals on which machine operations are carried out; saw dust and trimmings in the timber industry; dead heads and bottom ends in foundries; and cuttings, pieces, and split in leather industries. Scrap should always be physically available unlike waste which may or may not be present in the form of a residue.

Accounting treatment of scrap is as follows:

- **Sales credited to revenue**

  In this method, the scrap is not cost and its value does not, therefore, appear separately in the cost accounts. Only a quantitative record of the scrap returned to storeroom from the shops is maintained and the sale value realized

from time to time is credited to the profit and loss account as miscellaneous revenue.

- **Credit to overhead**
  In this method and in the following method the scrap is assigned a cost. The cost is usually the sale value of the scrap less selling and distribution costs. If the scrap has no ready market but has only utility or use value, and is taken as a credit to manufacturing overhead. The effect of this credit is to reduce the overhead recovery rate. When predetermined overhead rates are in use, it is more expedient to credit an estimated allowance for the scrap instead of the amount of actual scrap.
- **Credit to jobs**
  The scrap is assigned a cost and is traced to the job which yielded the scrap. This affords a reasonable amount of credit to the jobs and widely different.
- **Transfer to other jobs**
  Scrap arising in one job may be issued for utilization in another job. Such transfers of scrap from one job to another should be affected through Material Transfer Notes. Alternatively, scrap may be returned to store room and subsequently issued to another job for utilisation. The latter method is more appropriate when some further processing is required on the scrap before it can be utilized for other jobs.

(b) (i) Labour turnover is the rate of change in the labour force of a concern during a specific period. In every organisation some employees leave every year while new employees are recruited in their place. This is a natural phenomenon in industrial sector and it gives rise to the problem of labour turnover. The rate at which the employees depart from the organisation is normally measured as the ratio of number of persons leaving in a period to the average number of employees on the pay roll. A controlled level of labour turnover is considered as desirable because it helps the firm to adjust the size of its labour force in response to needs such as for seasonal changes or changes in technology.

The rate of labour turnover is high if the number of employees leaving the organisation occurs frequently. This leads to—

(i) decrease in the productivity and efficiency in the concern,
(ii) destabilize normal flow of work,
(iii) increases the labour cost.

Causes of Labour Turnover

The causes giving rise to high labour turnover may be broadly classified under the following heads:

- **Personnel Causes:** Workers may leave employment purely on personal grounds, e.g.,
  a) Dislike for the job, locality or environments.
  b) Domestic troubles and family responsibilities.
  c) Change of line for betterment.
  d) Retirement due to old age and ill health.
  e) Death.

  In all such cases, personal factors count the most and employer can practically do nothing to help the situation.
- **Unavoidable Causes:** In certain circumstances it becomes obligatory on the part of the management to ask some of the workers to leave. These circumstances are:
  a) Retrenchment due to seasonal trade, shortage of any material and other resources, slack market for the product, etc.
  b) Discharge on disciplinary grounds.
  c) Discharge due to continued or long absence.
- **Avoidable Causes:** Under this head, may be grouped the causes which need the attention of the management most so that the turnover may be kept low by taking remedial measures. The main reasons for which workers leave are:
  a) Unsuitability of job
  b) Low pay and allowance
  c) Unsatisfactory working conditions
  d) Unhappy relations with co-workers and unsatisfactory behaviour of superior
  e) Dispute between rival trade unions.
  f) Lack of transport, accommodation, medical and other facto₹
  g) Lack of amenities like recreational centres, schools, etc.

  The above causes may also be classified in a different manner under three heads, viz., Financial Causes, Social and Economic Causes and Psychological Causes relating to human relationship.

Measurement of Labour Turnover

It is essential for any organisation to measure the Labour Turnover. This is necessary for having an idea about the turnover in the organisation and also to

compare the labour turnover of the previous period with the current one. The following methods are available for measurement of the labour turnover:

- **Additions Method:** Under this method, number of employees added during a particular period is taken into consideration for computing the Labour Turnover. The method of computing is as follows:

  Labour Turnover = $\frac{\text{Number of Additions}}{\text{Average Number of Workers during the period}}$ x 100

- **Separation Method:** In this method, instead of taking the number of employees added, number of employees left during the period is taken into consideration. The method of computation is as follows:

  Labour Turnover = $\frac{Number\ of\ Separation}{\text{Average Number of Workers during the period}}$ x 100

- **Replacement Method:** In this method neither the additions nor the separations are taken into consideration. The number of employees replaced is taken into consideration for computing the labour turnover.

  Labour Turnover = $\frac{Number\ of\ Replacements}{\text{Average Number of Workers during the period}}$ x 100

- **Flux Method:** Under this method Labour Turnover is computed by taking into consideration the additions as well as separations. The turnover can also be computed by taking replacements and separations also. Computation is done as per the following methods:

  Labour Turnover = $\frac{\frac{1}{2}\text{x (Number of Additions+Number of Separations)}}{\text{Average Number of workers during the period}}$ x 100

(ii) Let 'T' be the time taken by the worker

Earnings under Rowan Plan = T x R + $\frac{TS}{TA}\ x\ T\ x\ R$

T = Time Taken,

TA = Time Allotted or Allowed,

TS = Time Saved = TA – T,

R = Rate per hour

or, Earnings = T x 1.25 + $\frac{40-T}{40}\ x\ T\ x\ 1.25$

or, = $\frac{50T+50T-1.25T^2}{40}$

or, = $\frac{100 - 1.25T^2}{40}$

Factory Cost = Material Cost + Wages + Factory Overhead

or, 161.875 = 100 + $\frac{100T-1.25T^2}{40}$+0.5T

or, 6,475 = 4,000 + 100T – $1.25T^2$ + 20T

or, $1.25T^2$ - 120T + 2,475 = 0
Dividing the equation by 1.25
or, T^2 - 96T + 1,980 = 0
or, T^2 - 66T - 30T + 1,980 = 0
or, T (T - 66) - 30 (T - 66) = 0
or, (T - 66) (T - 30) = 0
or, T ≠ 66 [Since, Time taken should not be more than Time Allotted]
So, T = 30. Hence, Time taken by the worker = 30 hours

4. (a) Since, different materials are used for producing products, it is advisable, preferable and appropriate to use the method of absorbing overheads based on percentage of material cost instead of percentage on prime cost which is shown as follows:

Particulars	**Product A** ₹	**Product B** ₹	**Product C** ₹
Materials	1,600	2,000	800
Labour	1,200	1,000	400
Prime Cost	2,800	3,000	1,200
Actual Overhead Incurred	800	650	350
	$= \frac{Rs.\ 800}{Rs.\ 1,600} x100$ **= 50%**	$= \frac{Rs.\ 650}{Rs.\ 2,000} x100$ **= 32.50%**	$= \frac{Rs.\ 350}{Rs.\ 800} x100$ **= 43.75%**

Overhead Recovery Rate is calculated based on historical data. So, actual overhead is used to calculate the future recovery rate.

(b)

Journal

Particulars		**Dr.** Amount (₹)	**Cr.** Amount (₹)
Material Control A/c	Dr	40,000	
To Cash A/c			40,000
Work in Progress Control A/c	Dr	30,000	
To Material Control A/c			30,000
Wages Control A/c	Dr	24,000	
To Cash A/c			24,000
Factory Overhead Control A/c (24,000 x 30%)	Dr	7,200	
To Wages Control A/c			7,200
Work in Progress Control A/c (24,000 x 70%)	Dr	16,800	
To Wages Control A/c			16,800

Factory Overhead Control A/c Dr To Cash		19,000	19,000
Work in Progress Control A/c Dr To Factory Overhead Control A/c		18,000	18,000
Selling and Distribution Overhead Control A/c Dr To Cash A/c		4,000	4,000
Cost of Sales A/c Dr To Selling and Distribution Overhead A/c		4,000	4,000
Finished Goods Control A/c Dr To Work in Progress Control A/c		40,000	40,000
Debtors A/c Dr To Profit and Loss A/c		58,000	58,000
Cash A/c Dr To Debtors A/c		13,800	13,800
Creditors A/c Dr To Cash A/c		12,000	12,000

5. (a)

Cost Sheet Component 'The Blank'

Particulars	Batch Size					
	10 Components		100 Components		1,000 Components	
	p.u.	Total	p.u.	Total	p.u.	Total
	₹.	₹.	₹.	₹.	₹.	₹.
A. Production Cost						
Material Cost	0.06	0.60	0.06	6.00	0.06	60.00
Machine Operators Wages (WN 1)	0.12	1.20	0.12	12.00	0.12	120.00
Overheads (WN 2)	0.25	2.50	0.25	25.00	0.25	250.00
Total Production Cost	**0.43**	**4.30**	**0.43**	**43.00**	**0.43**	**430.00**
B. **Setting up Cost**						
Machine Operator Wages (WN 3)	0.168	1.68	0.0168	1.68	0.00168	1.68
Overheads (WN 4)	0.350	3.50	0.035	3.50	0.0035	3.50
Total Setting up Cost	**0.518**	**5.18**	**0.0518**	**5.18**	**0.00518**	**5.18**
Total Cost	**0.948**	**9.48**	**0.4818**	**48.18**	**0.43518**	**435.18**

Working Notes:

	10 Components	100 Components	1,000 Components
Time taken to produce the Components @ 10 minutes per component	100 Minutes $or, \frac{100}{60}\ hours$	1,000 Minutes $or, \frac{1,000}{60} hours$	10,000 Minutes $or, \frac{10,000}{60} hours$
1. Machine Operators Wage @ ₹ 0.72 per hour	$\frac{100}{60} x\ 0.72$ $= Rs.\ 1.20$	$\frac{1,000}{60} x\ 0.72$ $= Rs.\ 12$	$\frac{10,000}{60} x\ 0.72$ $= Rs.\ 120$
2. Overheads @ ₹ 1.50 per hour	$\frac{100}{60} x\ 1.50$ $= Rs.\ 2.50$	$\frac{1,000}{60} x\ 1.50$ $= Rs.\ 25$	$\frac{10,000}{60} x\ 1.50$ $= Rs.\ 250$

Setting up Cost

3. Machine Operators Wages = 2 hours 20 minutes ×₹ 0.72 = $2\frac{1}{3} \times 0.72 = Rs.\ 1.68$

4. Overhead = 2 hours 20 minutes ×₹ 1.50 = $2\frac{1}{3} \times\ 1.50 = Rs.\ 3.50$

(b)

Dr **Contract Account** Cr

Particulars	₹	Particulars	₹
To Materials A/c (Purchased)	1,00,000	By Materials at Site c/d	25,000
To Wages A/c	45,000	By Cost of Construction c/d	1,40,000
To Outstanding Wages A/c	5,000		
To General Expenses A/c	10,000		
To Depreciation on Plant A/c	5,000		
	1,65,000		1,65,000
To Cost of Construction b/d	1,40,000	By Work in Progress A/c	
To Notional Profit c/d	80,000	- Value of Work Certified	2,00,000
		- Escalation	5,000
		- Cost of Uncertified Work	15,000
	2,20,000		2,20,000
To Profit & Loss A/c	19,512	By Notional Profit b/d	80,000
To Work in Progress A/c			
- Provision for Contingencies	60,488		
	80,000		80,000

Working Notes:

- Increase in Contract Price due to Escalation in the Prices of Materials and Labour

  Cost of Materials and Labour incurred = 1,00,000 + 45,000 + 5,000 – 25,000
  = ₹1,25,000

  Increase in prices of Materials and Labour by 25%

  So, Cost of Materials and Labour before increase in Prices

  $= 1{,}25{,}000\ x\ \frac{100}{125} = ₹\ 1{,}00{,}000$

  Increase in Contract Price (beyond 5% increase)

  $= \frac{25}{100}\ x\ \left(1{,}25{,}000 - 1{,}00{,}000\ x\ \frac{105}{100}\right) = \frac{25}{100}\ x\ (1{,}25{,}000 - 1{,}05{,}000)$ = ₹5,000

- Amount to be transferred to Profit & Loss A/c

$$= \frac{1}{3}\ x\ 80{,}000\ x\ \frac{1{,}50{,}000}{2{,}05{,}000} = ₹19{,}512$$

6. (a)

Statement of Equivalent Production

Inputs		Output		Equivalent Production Units					
				Material		Labour		Overhead	
Items	Units	Items	Units	% Completion	Units	% Completion	Units	% Completion	Units
Op. WIP	200	Op. WIP	200	-	-	60	120	60	120
Units Introduced	1,050	Finished Goods (Introduced & Completed)	900	100	900	100	900	100	900
			150	100	150	70	105	70	105
		Cl. WIP							
	1,250		1,250		1,050		1,125		1,125

Transfer to Next Process = 1,100 units (given)

Work done on Op. WIP and Completed = 200 units

Work done on units introduced and completed (1,100 – 200) = 900 units

Statement of Cost per unit

Particulars	Amount (₹)	Equivalent Units	Cost per unit (₹)
Material	1,050	1,050	1
Labour	2,250	1,125	2
Production Overhead	1,125	1,125	1

Valuation of Closing Stock

Particulars	Units	Cost per unit (₹)	Total Cost (₹)
Material	150	1	150
Labour	105	2	210
Production Overhead	105	1	105
			465

Process Account

Particulars	Units	Rate	Amount (₹)	Particulars	Units	Rate	Amount (₹)
To Opening Stock A/c	200	4	800	By Closing Stock A/c	150	$\frac{465}{150} = 3.10$	465
To Material A/c	1,050	1	1,050				
To Labour A/c			2,250	By Finished Stock A/c	1,100	$\frac{4,760}{1,100} = 4.33$	4,760
To Production Overhead A/c			1,125				
	1,250		5,225		1,250		5,225

(b) Total Distance travelled by 10 bus per month

= (Distance of route one way × 2) × Number of trips per day × Number of days operating in the month × Number of buses

= 20 × 2 × 3 × 25 × 10 = 30,000 km per month

Computation of Passenger-Km per month

$= Total\ Distance\ Travelled\ by\ 10\ bus\ per\ month\ x\ Number\ of\ passenger$

$= 30{,}000\ x\ 40\ =\ 12{,}00{,}000\ passenger - km\ per\ month$

Computation of Total Cost for 10 bus per month
(Excluding Commission of Driver and Conductor)

Particulars		**₹**
Fixed or Standing Charges		**(Cost per month)**
Depreciation	$\frac{₹.\ 50{,}000\ x\ 10}{5\ years} x \frac{1}{12}$	8,333.33
Insurance	$\frac{₹\ 50{,}000\ x\ 10\ x\ 3\%}{12}$	1,250.00
Tax	$\frac{₹\ 1{,}000\ x\ 10}{12}$	833.33
Garage Charges		1,000.00
Salary of Drivers	₹ 150 x 10	1,500.00

Salary of Conductors	₹ 100×10	1,000.00
Cost of Stationery		500.00
Salary of Manager		2,000.00
Salary of Accountant		1,500.00
Maintenance Charges		
Repairs	$\frac{₹\ 1,000 \times 10}{12}$	833.34
Running Charges		
Petrol and Oil	$\frac{30,000\ km}{100\ km} \times ₹\ 25$	7,500
		26,250.00

Let the taking be ₹ X

Total Cost (Excluding Commission) + Commission + Profit = Takings

$$or, 26,250 + \frac{10}{100}X + \frac{15}{100}X = X$$

$$or, \frac{75}{100}X = 26,250$$

$$or, X = 35,000$$

$$\therefore \boldsymbol{Takings} = ₹\,\mathbf{35,000}$$

Profit = $15\% \times 35,000 = ₹\ 5,250$

Commission of Driver and Conductor = $10\% \times 35,000 = ₹\ 3,500$

$$\therefore Fare\ per\ passenger - km = \frac{₹.\ 35,000}{1,20,000\ passenger - km} = ₹\ 0.0292$$

$$\approx ₹\ 0.03$$

7. (a) Fixed production costs absorbed

Particulars	₹
Budgeted fixed production costs	1,60,000
Budgeted output (normal level of activity 800 units) Therefore, the absorption rate : 1,60,000/800 = ₹200 per unit	
During the first quarter, the fixed production cost absorbed by Boost Would be (220 units × ₹200)	44,000

Under / over recovery of overheads during the period

Particulars	₹
Actual fixed production overhead (1/4 of ₹1,60,000)	40,000
Absorbed fixed production overhead	44,000
Over-recovery of overheads	4,000

Particulars	₹	₹
Sales revenue (160 units × ₹2,000) : (A)		3,20,000
Less : Production costs:		
- Variable cost (220 units × ₹ 800)	1,76,000	
- Fixed overheads absorbed (220units × ₹ 200)	44,000	2,20,000

Profit for the Quarter (Absorption Costing)

Particulars	₹	₹
Add :Opening Stock		-----
Less: Closing Stock (₹ 2,20,000/220 units × 60 units)		(60,000)
Cost of Goods sold		1,60,000
Less: Adjustment forever-absorption of fixed production overheads		(4,000)
Less: Selling & Distribution Overheads:		
-Variable (160 units× ₹ 400)	64,000	
- Fixed (1/4th of ₹ 2,40,000)	60,000	1,24,000
Cost of Sales (B)		2,80,000
Profit {(A) – (B)}		40,000

Profit for the Quarter (Marginal Costing)

Particulars	₹	₹
Sales revenue (160 units × ₹ 2,000):(A)		3,20,000
Less: Production costs: -Variable cost (220 units × ₹ 800)		1,76,000
Add: Opening Stock Less: Closing Stock (₹ 1,76,000/220 units × 60 units)		----- (48,000)
Variable cost of goods sold		1,28,000
Add: Selling & Distribution Overheads: -Variable (160 units × ₹ 400)		64,000
Total Variable Cost (B)		1,92,000
Contribution {(C) = (A) – (B)}		1,28,000
Less: Fixed Costs: - Production cost - Selling & distribution cost	 (40,000) (60,000)	 (1,00,000)
Profit		28,000

(b) **a.** Applying limiting factor analysis to make or buy.

Statement of profitability on which the above decision is to be taken

	Component A	**Component B**	**Component C**
Variable cost of production	3	4	6
Outside purchase price	2	6	12
Excess (variable cost of production minus buy price)	1	-2	-6

Component A should be bought out regardless of any limiting factor since variable cost of production is higher than the outside purchase price.

b. If machine hours are limited to 4,000 hours (Component A is to be bought and thus the in house production of component A is not considered).

	Component B	**Component C**
Excess cost	2	6
Machine hours per unit	0.5	2
Excess cost per machine hour	₹ 4	₹ 3

Component C has the lowest excess cost per limiting factor so it should be bought out.

Check

	Component B	**Component C**
Units production in 4ooo machine hours	8000 units	2000 units
Production costs	₹ 32,000	₹14,000
Purchase costs	₹ 48,000	₹ 26,000
Excess cost of purchase	₹ 16,000	₹ 12,000

c. If labour hours are limited to 4,000 hours Component A is to be bought and thus the in house production of component A is not considered).

	Component B	**Component C**
Excess cost	2	6
Labour hours	3	4
Excess cost per labour hour	Rs 0.66	Rs 1.50

Therefore, component B has the lowest excess cost per limiting factor and should be bought out

Check

	Component B	Component C
Units production in 4 labour hours	1333 units	1000 units
Production costs	₹ 5332	₹ 6000
Purchase costs	₹ 7998	₹12000
Excess cost of purchase	₹ 2666	₹ 6000

8. (a) SQ = Standard Quantity for Actual Output

Material A = $\frac{40}{90} x\ 4{,}18{,}500 = 1{,}86{,}000\ kg$

Material B = $\frac{10}{90} x\ 4{,}18{,}500 = 46{,}500\ kg$

Material C = $\frac{50}{90} x\ 4{,}18{,}500 = 2{,}32{,}500\ kg$

SP = Standard Price per unit

Material A = ₹ 76 Material B = ₹ 50 Material C = ₹ 20

AQ = Actual Quantity used

Material A = 1,95,000 kg Material B = 42,500 kg Material C = 2,25,000 kg

AP = Actual Price per unit

Material A = ₹ 80 Material B = ₹ 52 Material C = ₹ 21

RSQ = Revised Standard Quantity for Actual Input

Material A = $\frac{40}{100} x\ (1{,}95{,}000 + 42{,}500 + 2{,}25{,}000) = \frac{40}{100} x\ 4{,}62{,}500 = 1{,}85{,}000\ kg$

Material B = $\frac{10}{100} x\ 4{,}62{,}500 = 46{,}250\ kg$

Material C = $\frac{50}{100} x\ 4{,}18{,}500 = 2{,}31{,}250\ kg$

i. Material Cost Variance = SQ x SP – AQ x AP

Material A = 1,86,000 x ₹76 – 1,95,000 x ₹80 = ₹ 14,64,000 (A)

Material B = 46,500 x ₹50 – 42,500 x₹ 52 = ₹ 1,15,000 (F)

Material C = 2,32,500 x₹ 20 – 2,25,000 x ₹21 = ₹ 75,000 (A)

= **₹ 14,24,000 (A)**

ii. Material Price Variance = (SP – AP) x AQ

Material A =₹ (76 – 80) x 1,95,000 = ₹ 7,80,000 (A)

Material B = ₹(50 – 52) x 42,500 = ₹ 85,000 (A)

Material C =₹ (20 – 21) x 2,25,000 = ₹ 2,25,000 (A)

= ₹ 10,90,000 (A)

iii. Material Usage Variance = (SQ – AQ) x SP

Material A = (1,86,000 – 1,95,000) x ₹76 = ₹ 6,84,000 (A)
Material B = (46,500 – 42,500) x₹ 50 = ₹ 2,00,000 (F)
Material C = (2,32,500 – 2,25,000) x₹ 20 = ₹ 1,50,000 (F)
= **₹ 3,34,000 (A)**

iv. Material Mix Variance = (RSQ – AQ) x SP

Material A = (1,85,000 – 1,95,000) x ₹76 = ₹ 7,60,000 (A)
Material B = (46,250 – 42,500) x ₹50 = ₹ 1,87,500 (F)
Material C = (2,31,250 – 2,25,000) x ₹20 = ₹ 1,25,000 (F)
= **₹ 4,47,500 (A)**

v. Material Yield Variance = (SQ – RSQ) x SP

Material A = (1,86,000 – 1,85,000) x ₹76 = ₹ 76,000 (F)
Material B = (46,500 – 46,250) x ₹50 = ₹ 12,500 (F)
Material C = (2,32,500 – 2,31,250) x₹ 20 = ₹ 25,000 (F)
= **₹ 1,13,500 (F)**

(b)

KAEHLER CO.LTD
Production Budget for the Quarter ended
March 2022 and for the month April, 2022

(Figures in Units)

Particulars	**January**	**February**	**March**	**April**
Budgeted Sales	10,800	15,600	12,200	10,400
Add: Closing Inventory	3,900	3,050	2,600	2,450
	14,700	18,650	14,800	12,850
Less: Opening Inventory	2,700	3,900	3,050	2,600
Required Monthly Production	12,000	14,750	11,750	10,250

KAEHLER CO.LTD.
Direct Material Usage and Purchase Budget
for the Quarter ended March 2022

Material A

Particulars	**January**	**February**	**March**
Production Requirement – 4 units of Material A for each unit of finished Product			
Add: Closing Inventory	48,000	59,000	47,000
	29,500	23,500	20,500
Less : Opening Inventory	77,500	82,500	67,500
Budgeted Purchase	24,000	29,500	23,500
	53,500	53,000	44,000

Material B

Particulars	January	February	March
Production Requirement – 5 units of Material B for each unit of finished Product			
Add: Closing Inventory	60,000	73,750	58,750
	36,875	29,375	25,625
Less : Opening Inventory	96,875	1,03,125	67,500
Budgeted Purchase	30,000	36,785	29,375
	66,875	66,250	55,000