(GI-5+7, GI-6, GI-8, GI-9, SI-2+4, SI-3 & VI-2)

DATE: 25.08.2019 **MAXIMUM MARKS: 100** **TIMING: 3¼ Hours**

PAPER : COSTING

Answer to questions are to be given only in English except in the case of candidates who have opted for Hindi Medium. If a candidate who has not opted for Hindi Medium. His/her answer in Hindi will not be valued.
Question No. 1 is compulsory.
Candidates are also required to answer any Four questions from the remaining Five Questions.
In case, any candidate answers extra question(s)/sub-question(s) over and above the required number, then only the requisite number of questions best answered in the answer book shall be valued.
Wherever necessary, suitable assumptions may be made and disclosed by way of note.

Answer 1:

(a) (i) $\text{Break-even sales} = \frac{\text{Fixed Cost}}{\text{P/V Ratio}}$ **{1 M}**

$\text{P/V Ratio} = \frac{\text{Change in Profit}}{\text{Change in Sales}} \times 100 \text{ or, } \frac{\text{Rs. } 37,50,000}{\textit{Rs.}\ 7,80,60,000 - \textit{Rs.}\ 5,93,10,000} \times 100$

$\text{Or, } \frac{\text{Rs. } 37,50,000}{\textit{Rs.}\ 1,87,50,000} \times 100 \text{ or, } 20\%$

$\text{Break-even sales} = \frac{\textit{Rs.}\ 98,50,000}{20\%} = \text{Rs. } 4,92,50,000$ **{1 M}**

(ii) Profit/ loss = Contribution – Fixed Cost **{1 M}**
= Rs. 8,20,00,000 × 20% - Rs. 98,50,000
= Rs. 1,64,00,000 – Rs. 98,50,000 = Rs. 65,50,000 **{1 M}**

(iii) To earn same amount of profit in 20X8-X9 as was in 20X7-X8, it has to earn the same amount of contribution as in 20X7-X8.
Sales – Variable cost = Contribution equal to 20X7-X8 contribution
Contribution in 20X7-X8 = Sales in 20X7-X8 × P/V Ratio in 20X7-X8
= Rs. 5,93,10,000 × 20% = Rs. 1,18,62,000
Let the number of units to be sold in 20X8-X9 = X
Sales in 20X8-X9 – Variable cost in 20X8-X9 = Desired Contribution
90 X – 80 X = Rs. 1,18,62,000
Or, 10 X = 1,18,62,000
Or, X = 11,86,200 units
Therefore, Sales amount required to earn a profit equals to 20X7-X8 profit
= Rs. 90 × 11,86,200 units = Rs. 10,67,58,000 **{1 M}**

Answer:

(b) (i) $\text{Optimum run size or Economic Batch Quantity (EBQ)} = \sqrt{\frac{2xDxS}{C}}$ **{1 M}**

Where, D = Annual demand i.e. 1.15% of 8,00,00,000 = 9,20,000 units
S = Set-up cost per run = Rs. 3,500

C = Inventory holding cost per unit per annum
= Rs. 1.5 × 12 months = Rs. 18

$$EBQ = \sqrt{\frac{2 \times 9{,}20{,}000 \text{ units} \times \text{Rs. } 3{,}500}{\text{Rs. } 18}} = 18{,}915 \text{ units}$$ **{1 M}**

(ii) Calculation of Total Cost of set-up and inventory holding

	Batch size	No. of setups	Set-up Cost (Rs.)	Inventory holding cost (Rs.)	Total Cost (Rs.)	
A	40,000 units	23 $\left(\frac{9{,}20{,}000}{40{,}000}\right)$	80,500 (23 × Rs. 3,500)	3,60,000 $\left(\frac{40{,}000 \times \text{Rs. } 18}{2}\right)$	4,40,500	**{1 M}**
B	18,915 units It can be done in fraction	49 $\left(\frac{9{,}20{,}000}{18{,}915}\right)$	1,71,500 (49 × Rs. 3,500)	1,70,235 $\left(\frac{18{,}915 \times \text{Rs. } 18}{2}\right)$	3,41,735	**{1 M}**
				Extra Cost (A – B)	98,765	**{1 M}**

Answer:

(c)

Cost Sheet
(for the quarter ending 30 September 2018)

	Amount (Rs.)	
(i) Raw materials consumed		**{1/4 Each x 20 point = 5 M}**
Opening stock of raw materials	2,45,600	
Add: Purchase of materials	12,22,650*	
Less: Closing stock of raw materials	(2,08,000)	
Raw materials consumed	12,60,250	
Add: Direct wages (1,47,000×175%)	2,57,250	
Direct Expenses	1,80,000	
(ii) Prime cost	16,97,500	
Add: Factory overheads (2,57,250/175%)	1,47,000	
Gross Factory cost	18,44,500	
Add: Opening work-in-process	1,70,800	
Less: Closing work-in-process	(1,90,000)	
(iii) Factory cost	18,25,300	
Add: Administration overheads (10% of factory overheads)	14,700	
Add: Opening stock of finished goods	3,10,000	
Less: Closing stock of finished goods	(2,75,000)	
(iv) Cost of goods sold	18,75,000	
Add: Selling & distribution overheads	60,000	
Cost of sales	19,35,000	
(v) Net Profit	2,75,000	
Sales	22,10,000	

*(18,75,000 + 2,75,000 – 3,10,000 – (1,47,000 × 10%) + 1,90,000 –1,70,800 – (2,57,250 × 100/175%) - 1,80,000 – 2,57,250 + 2,08,000 – 2,45,600) = 12,22,650

Working Notes:

Purchase of raw materials = Raw material consumed + Closing stock - opening stock of raw material
Raw material consumed = Prime cost - Direct wages - Direct expenses
Factory Overheads = 2,57,250*100/175
Prime cost = Factory cost + Closing WIP – Opening WIP – Factory overheads

Factory Cost = Cost of Production goods sold + Closing stock of Finished goods – Opening stock of finished goods – Administrative overheads
Net Profit = Sales - Cost of sales
Alternative solution

Cost Sheet
(for the quarter ending 30 September 2018)

	Amount (Rs.)
(i) Raw materials consumed	
Opening stock of raw materials	2,45,600
Add: Purchase of materials	12,37,350*
Less: Closing stock of raw materials	(2,08,000)
Raw Material consumed	12,74,950
Add: Direct wages (1,47,000×175%	2,57,250
Direct Expenses	1,80,000
(ii) Prime cost	17,12,,200
Add: Factory overheads (2,57,250/175%)	1,47,000
Gross Factory cost	18,59,200
Add: Opening work-in-process	1,70,800
Less: Closing work-in-process	(1,90,000)
(iii) Factory cost/works cost/cost of production	18,40,000
Add: Opening stock of finished goods	3,10,000
Less: Closing stock of finished goods	(2,75,000)
(iv) Cost of goods sold	18,75,000
Add: Administration overheads (10% of factory overheads)	14,700
Add: Selling & distribution overheads	60,000
Cost of sales	19,49,700
(v) Net Profit	2,60,300
Sales	22,10,000

*(18,75,000 + 2,75,000 – 3,10,000 + 1,90,000 –1,70,800 – 1,47,500 - 1,80,000 – 2,57,250 + 2,08,000 – 2,45,600) = 12,37,350.

Working Notes:
Purchase of raw materials = Raw material consumed + Closing stock - opening stock of raw material
Raw material consumed = Prime cost - Direct wages - Direct expenses
Factory Overheads = 257250*100/175
Prime cost = Factory cost + Closing WIP – Opening WIP – Factory overheads
Factory Cost = Cost of Production goods sold + Closing stock of Finished goods – Opening stock of finished goods
Net Profit = Sales - Cost of sales

Answer:
(d) (i) **Raw Material Control A/c**

	(Rs.)		**(Rs.)**	
To Balance b/d	2,82,450	By General Ledger Adjustment A/c	27,200	**{1 M}**
To General Ledger Adjustment A/c	12,43,810	By Work-in-progress Control A/c	13,60,430	
		By Costing P&L A/c (Loss) (OR GLA)	6,000	
		By Balance c/d	1,32,630	
	15,26,260		15,26,260	

(ii) **Work-in-Progress Control A/c**

	(Rs.)		(Rs.)
To Balance b/d	2,38,300	By Finished Goods Control A/c	13,76,200
To Raw Material Control A/c	13,60,430	By Costing P&L A/c (OR GLA)	12,300
To Wages Control A/c	2,56,800	By Balance c/d	6,03,380
To Factory OH Control A/c	1,36,350		
	19,91,880		19,91,880

{1 M}

(iii) **Finished Goods Control A/c**

	(Rs.)		(Rs.)
To Balance b/d	3,92,500	By Cost of Goods sold A/c (OR GLA)	14,56,500
To General Ledger Adjustment A/c	45,900	By Balance c/d	3,58,100
To Work-in-process Control A/c	13,76,200		
	18,14,600		18,14,600

{1 M}

(iv) **General Ledger Adjustment A/c**

	(Rs.)		(Rs.)
To Costing P&L A/c (sales) (Balancing figure)	25,68,910	By Balance b/d	9,13,250
” Raw Material Control A/c	27,200	” Raw Material Control A/c	12,43,810
		” Wages Control A/c	2,56,800
		” Factory OH Control A/c	1,36,350
		” Finished Goods Control A/c	45,900
	25,96,110		25,96,110

{2 M}

OR

General ledger adjustment account

	(Rs.)		(Rs.)
To Raw Material Control A/c	27,200	By Balance b/d	9,13,250
” Raw Material control account(loss)	6,000	” Raw Material Control A/c	12,43,810
'' WIP control Account (rejection)	12,300	” Wages Control A/c	2,56,800
“ Finished stock Control Account	14,56,500	” Factory OH Control A/c	1,36,350
“ Balance c/d	10,94,110	” Finished Goods Control A/c	45,900
	25,96,110		25,96,110

Working:

Factory Overhead Control A/c

	(Rs.)		(Rs.)
To General Ledger Adjustment A/c	1,36,350	By Work-in-progress A/c	1,36,350
	1,36,350		1,36,350

Answer 2:

(a)

Process-I A/c

Particulars	Qty. (kgs)	Amount (Rs.)	Particulars	Qty. (kgs)	Amount (Rs.)
To Material A	6,000	3,00,000	By Normal loss	500	8,000
To Material B	4,000	4,00,000	By Process-II A/c	9,200	7,38,857
To Labour	--	21,500	By Abnormal loss A/c	300	24,093
To Overhead $\left(\frac{\text{Rs.92,000x 430hrs}}{\text{800hrs}}\right)$	--	49,450			
	10,000	7,70,950		10,000	7,70,950

{3 M}

$* \frac{\{(\text{Rs. } 3,00,000 + \text{Rs. } 4,00,000 + \text{Rs. } 21,500 + \text{Rs. } 49,450) - \text{Rs. } 8,000\}}{(10,000 - 500) \text{ units}} = \frac{\text{Rs. } 7,70,950 - \text{Rs. } 8,000}{9,500 \text{ units}} = \text{Rs. } 80.3105$

Process-II A/c

Particulars	Qty. (kgs)	Amount (Rs.)	Particulars	Qty. (kgs)	Amount (Rs.)
To Process-I A/c	9,200	7,38,857	By Normal loss	1,000	--
To Material C	6,600	8,25,000	By Packing Dept. A/c (See the working notes)	18,000	18,42,496
To Material D	4,200	3,15,000	By WIP A/c (See the working notes)	1,000	1,00,711
To Flavouring essence	--	3,300			
To Labour	--	18,500			
To Overheads $\left(\frac{\text{Rs.92,000 x 370hrs}}{\text{800hrs}}\right)$	--	42,550			
	20,000	19,43,207		20,000	19,43,207

{3 M}

Abnormal loss A/c

Particulars	Qty. (kgs)	Amount (Rs.)	Particulars	Qty. (kgs)	Amount (Rs.)
To Process-I A/c	300	24,093	By Bank	300	4,800
			By Costing Profit & Loss A/c	--	19,293
	300	24,093		300	24,093

{2 M}

Working Notes:

Calculation of Equivalent Production units

Input	Units	Output	Units	Process-I		Mat-C & D		Labour & OH	
				(%)	Units	(%)	Units	(%)	Units
	9,200	Transferred to Packing	18,000	100	18,000	100	18,000	100	18,000
Mat-C	6,600	Closing WIP	1,000	100	1,000	100	1,000	50	500
Mat-D	4,200	Normal loss	1,000	--	--	--	--	--	--
	20,000		20,000		19,000		19,000		18,500

{1 M}

Calculation of Unit cost

Cost component	Amount (Rs.)	Equivalent units	Cost per unit (Rs.)
Transferred-in	7,38,857	19,000	38.8872
Material-C	8,25,000	19,000	43.4211
Material-D	3,15,000	19,000	16.5789
Flavouring essence	3,300	19,000	0.1737
Total Material Cost	18,82,157	19,000	99.0609
Labour	18,500	18,500	1.0000
Overheads	42,550	18,500	2.3000
Total Cost	19,43,207		102.3609

{1 M}

Value of Materials transferred to Packing Department
= 18,000 unit × Rs.102.3609 = 18,42,496
Value of WIP : For Materials- 1,000 units × Rs.99.0609 = Rs.99,061
For Labour & Overheads 500 units × Rs.3.30 = Rs. 1,650
Rs.1,00,711

Answer:

(b) Calculation of :

1. Time saved and wages:

Workmen	A	B
Standard time (hrs.)	40	40
Actual time taken (hrs.)	32	30
Time saved (hrs.)	8	10
Wages paid @ Rs. x per hr. (Rs.)	32x	30x

{1 M}

2. Bonus Plan:

	Halsey	Rowan
Time saved (hrs.)	8	10
Bonus (Rs.)	4x	7.5x
	$\left[\frac{8 \text{ hrs x Rs. x}}{2}\right]$	$\left[\frac{10 \text{ hrs}}{40 \text{ hrs}} \text{ x } 30\text{hrs x Rs. x}\right]$

{1 M}

3. Total wages:
Workman A: 32x + 4x= Rs. 36x Workman B: 30x + 7.5x = Rs. 37.5x
Statement of factory cost of the job

Workmen	A (Rs.)	B (Rs.)
Material cost (assumed)	y	y
Wages (shown above)	36x	37.5x
Works overhead	240	225
Factory cost (given)	2,600	2,600

{2 M} **{2 M}**

The above relations can be written as follows: 36x + y + 240 = 2,600 (i)
37.5x+ y+ 225 = 2,600 (ii)
Subtracting (i) from (ii) we get 1.5x – 15 = 0
Or, 1.5 x = 15
Or, x = Rs. 10 per hour
On substituting the value of x in (i) we get y = Rs. 2,000
Hence the wage rate per hour is Rs. 10 and the cost of raw material is Rs. 2,000 on the job.

{2 M} **{2 M}**

Answer 3:

(a) Material Price Variance = Actual Quantity (Std. Price – Actual Price) **{2 M}**

X = 12,500 units (Rs.40 – Rs.44) = 50,000 (A)
Y = 18,000 units (Rs.30 – Rs.28) = 36,000 (F)
Z = 88,500 units (Rs.10 – Rs.12) = 1,77,000 (A) 1,91,000 (A)

Material Usage Variance = Std. Price (Std. Qty – Actual Qty.) **{2 M}**

X = Rs.40 (6,000 × 2 – 12,500) = 20,000 (A)
Y = Rs.30 (6,000 × 3 – 18,000) = Nil
Z = Rs.10 (6,000 × 15 – 88,500) = 15,000 (F) 5,000 (A)

Material Mix Variance = Std. Price (Revised Std. Qty. – Actual Qty.) **{2 M}**

$$X = \text{Rs. } 40\ (\frac{1,19,000 \times 2}{20} - 12,500) = 24,000\ (A)$$

$$Y = \text{Rs. } 30\ (\frac{1,19,000 \times 3}{20} - 18,000) = 4,500\ (A)$$

$$Z = \text{Rs. } 10\ (\frac{1,19,000 \times 15}{20} - 88,500) = 7,500\ (F) \qquad 21,000\ (A)$$

Material Yield Variance = Std. Price (Std. Qty. – Revised Std. Qty.) **{2 M}**

$$X = \text{Rs. } 40\ (6,000 \times 2 - \frac{1,19,000 \times 2}{20}) = 4,000\ (F)$$

$$Y = \text{Rs. } 30\ (6,000 \times 3 - \frac{1,19,000 \times 3}{20}) = 4,500\ (F)$$

$$Z = \text{Rs. } 10\ (6,000 \times 15 - \frac{1,19,000 \times 15}{20}) = 7,500\ (F)\ 16,000\ (F)$$

Labour Rate Variance = Actual Hours (Std. Rate – Actual Rate) **{1 M}**
= 2,500 hours (Rs.55 – Rs.58) = 7,500 (A)

Labour Efficiency Variance = Std. Rate (Std. Hours – Actual Hours) **{1 M}**
= Rs.55 (6,000 × 3 – 17,500) = 27,500 (F)

Answer:

(b)

Calculation of "Activity Rate"

Cost Pool	Cost (Rs.) [A]	Cost Driver [B]	Cost Driver Rate (Rs.) [C] = [A]÷[B]	
Machine Department Expenses	18,48,000	Machine Hours (1,32,000 hrs.)	14.00	**{1/2 M}**
Assembly Department Expenses	6,72,000	Assembly Hours (42,000 hrs.)	16.00	**{1/2 M}**
Setup Cost	90,000	No. of Production Runs (450*)	200.00	**{1/2 M}**
Stores Receiving Cost	1,20,000	No. of Requisitions Raised on the Stores (120)	1,000.00	**{1/2 M}**
Order Processing and Dispatch	1,80,000	No. of Customers Orders Executed (3,750)	48.00	**{1/2 M}**
Inspection and Quality Control Cost	36,000	No. of Production Runs (450*)	80.00	**{1/2 M}**
Total (Rs.)	29,46,000			

*Number of Production Run is 450 (150 + 120 + 180)

Statement Showing "Overheads Allocation"

Particulars of Cost	Cost Driver	P	Q	R	Total	
Machine Department Expenses	Machine Hours	4,20,000 (30,000 × Rs. 14)	6,72,000 (48,000 × Rs. 14)	7,56,000 (54,000 × Rs. 14)	18,48,000	{1 M}
Assembly Department Expenses	Assembly Hours	2,40,000 (15,000 × Rs. 16)	---	4,32,000 (27,000 × Rs. 16)	6,72,000	{1 M}
Setup Cost	No. of Production Runs	30,000 (150 × Rs. 200)	24,000 (120 × Rs. 200)	36,000 (180 × Rs. 200)	90,000	{1 M}
Stores Receiving Cost	No. of Requisitions Raised on the Stores	40,000 (40 × Rs. 1,000)	30,000 (30 × Rs.1, 000)	50,000 (50 × Rs. 1,000)	1,20,000	{1 M}
Order Processing and Dispatch	No. of Customers Orders Executed	60,000 (1,250 × Rs. 48)	48,000 (1,000 × Rs. 48)	72,000 (1,500 × Rs. 48)	1,80,000	{1 M}
Inspection and Quality Control Cost	No. of Production Runs	12,000 (150 × Rs. 80)	9,600 (120 × Rs. 80)	14,400 (180 × Rs. 80)	36,000	{1 M}
Overhead (Rs.)		8,02,000	7,83,600	13,60,400	29,46,000	{1 M}

Answer 4:

(a) Effective machine hours = 200 hours × 75% = 150 hours

Computation of Comprehensive Machine Hour Rate

	Per month (Rs.)	Per hour (Rs.)	
Fixed cost			
Supervision charges	18,000.00		
Electricity and lighting	9,500.00		
Insurance of Plant and building (Rs.18,250 ÷12)	1,520.83		
Other General Expenses (Rs.17,500÷12)	1,458.33		
Depreciation (Rs.64,800÷12)	5,400.00		
	35,879.16	239.19	{1 M}
Direct Cost			
Repairs and maintenance	17,500.00	116.67	{1 M}
Power	65,000.00	433.33	{1 M}
Wages of machine man		139.27	{1 M}
Wages of Helper		109.41	{1 M}
Machine Hour rate (Comprehensive)		1,037.87	

Wages per machine hour

		Machine Man	Helper	
Wages for 200 hours				
Machine-man (Rs.400 × 25)		Rs.10,000.00	---	
Helper (Rs.275 × 25)		---	Rs.6,875.00	
Dearness Allowance (DA)		Rs.4,575.00	Rs.4,575.00	
	{3 M}	Rs.14,575.00	Rs.11,450.00	{2 M}
Production bonus (1/3 of Basic and DA)		4,858.33	3,816.67	
Leave wages (10% of Basic and DA)		1,457.50	1,145.00	
		20,890.83	16,411.67	
Effective wage rate per machine hour		Rs.139.27	Rs.109.41	

Answer :

(b) **Contract Account**

Particulars	(Rs.)	Particulars	(Rs.)
To Material issued	9,48,000	By Machine (Working note 1)**	7,45,270
″ Direct Wages (4,57,200 – 1,08,000)	3,49,200		
″ Administrative charges	7,20,000		
″ Supervisor's salary (Rs. 50,000 × 9 × 2/3)	3,00,000		
″ Machine**	7,85,270	″ Works cost (balancing figure)	23,57,200
	31,02,470		31,02,470
″ Works cost	23,57,200	″ Value of work certified (50%×42,00,000)	21,00,000 **{1 M}**
″ Costing P&L A/c (Notional profit) **{4 M}**	3,32,100	″ Cost of work uncertified (Working Note 2)	5,89,300 **{1 M}**
	26,89,300		26,89,300

** Alternatively Depreciation on machine can be shown debit side of Contract Account.

Working notes:

1. Written down value of Machine:

$$\text{Depreciation} = \frac{\text{Rs. } 7,85,270 - \text{Rs. } 75,000}{9 \text{ years}} \times \frac{185 \text{days}}{365 \text{days}} = \text{Rs. } 40,000$$ **{2 M}**

Hence the value of machine after the period of 185 days = Rs. 7,85,270 – Rs. 40,000 = Rs. 7,45,270

2. The cost of 2/3rd of the contract is Rs. 23,57,200

$\therefore$ Cost of 100% " " " " $\frac{\text{Rs. } 23,57,200}{2} \times 3 = \text{Rs. } 35,35,800$ **{2 M}**

$\therefore$ Cost of 50% of the contract which has been certified by the architect is Rs. 17,67,900. Also, the cost of 1/6th (2/3 – 1/2) of the contract, which has been completed but not certified by the architect is Rs. 5,89,300.

Answer 5:

(a) (i) Annual Cost Statement of three vehicles

	(Rs.)
Diesel {(1,34,784 km. ÷ 4 km) × Rs. 65} (Refer to Working Note 1)	21,90,240
Oil & sundries {(1,34,784 km. ÷ 100 km.) × Rs. 250}	3,36,960
Maintenance {(1,34,784 km. × Rs. 0.25) + Rs. 6,000} (Refer to Working Note 2)	39,696
Drivers' salary {(Rs.24,000 × 12 months) × 3 trucks}	8,64,000
Licence and taxes (Rs. 25,000 × 3 trucks)	75,000
Insurance	45,000
Depreciation {(Rs. 29,00,000 ÷ 10 years) × 3 trucks}	8,70,000
General overhead	1,15,600
Total annual cost	45,36,496

{6 M}

(ii) Cost per km. run

$$\text{Cost per kilometer run} = \frac{\text{Total annual cost of vehicles}}{\text{Total kilometre travelled annually}} \text{ (Refer to Working Note 1)}$$

$$= \frac{\text{Rs. } 45,36,496}{1,34,784 \text{ Kms}} = \text{Rs. } 33.66$$

{1 M}

(iii) Freight rate per tonne km (to yield a profit of 10% on freight

$$\text{Cost per tonne km.} = \frac{\text{Total annual cost of three vehicles}}{\text{Total effective tonnes kms. per annum}} \text{ (Refer to Working Note 1)}$$

$$= \frac{\text{Rs. } 45,36,496}{6,06,528 \text{ Kms}} = \text{Rs. } 7.48$$

$$\text{Freight rate per tonne km.} \left(\frac{\text{Rs. } 7.48}{0.9}\right) \text{ x } 1 = \text{Rs. } 8.31$$

{1 M}

Working Notes:

1. Total kilometer travelled and Commercial tonnes kilometer (load carried) by three trucks in one year

Truck	**One way distance in kms**	**No. of trips**	**Total distance covered in km per day (with load)**	**Total distance covered in km per day (up & down)**	**Load carried per trip / day in tonnes**	**Total effective tonnes km**
	a	b	c = a × b	d = c × 2	e	f = 27/3 × c
1	16	4	64	128	6	576
2	40	2	80	160	9	720
3	30	3	90	180	12	810
Total			234	468	27	2,106

{1 M}

Total kilometre travelled by three trucks in one year

(468 km. × 24 days × 12 months) = 1,34,784

Total effective tonnes kilometre of load carried by three trucks during one year

(2,106 tonnes km. × 24 days × 12 months) = 6,06,528 tonne-km

2. Fixed and variable component of maintenance cost:

$$\text{Variable maintenane cost km.} = \frac{\text{Difference in maintenane cost}}{\text{Difference in distance travelled}}$$

$$= \frac{\text{Rs. } 46,050 - \text{Rs. } 45,175}{1,60,200 \text{ kms} - 1,56,700 \text{ kms}} = \text{Rs. } 0.25$$

{1 M}

Fixed maintenance cost =Total maintenance cost–Variable maintenance cost

= Rs. 46,050 – 1,60,200 kms × Rs. 0.25= Rs. 6,000

Answer:

(b) (a) Flexible Budget before marketing efforts:

	Product A (Rs.) 6,000 units		Product B (Rs.) 9,000 units	
	Per unit	**Total**	**Per unit**	**Total**
Sales	120.00	7,20,000	78.00	7,02,000
Raw material cost	60.00	3,60,000	42.00	3,78,000
Direct labour cost per unit	30.00	1,80,000	18.00	1,62,000
Variable overhead per unit	12.00	72,000	6.00	54,000
Fixed overhead per unit	8.00	48,000	4.00	36,000
Total cost	110.00	6,60,000	70.00	6,30,000
Profit	10.00	60,000	8.00	72,000

{5 M}

(b) Flexible Budget after marketing efforts:

	Product A (Rs.) 7,500 units		Product B (Rs.) 9,500 units	
	Per unit	**Total**	**Per unit**	**Total**
Sales	120.00	9,00,000	78.00	7,41,000
Raw material cost	60.00	4,50,000	42.00	3,99,000
Direct labour cost per unit	30.00	2,25,000	18.00	1,71,000
Variable overhead per unit	13.20	99,000	6.60	62,700
Fixed overhead per unit	6.72	50,400	3.98	37,800
Total cost	109.92	8,24,400	70.58	6,70,500
Profit	10.08	75,600	7.42	70,500

{5 M}

Answer 6:

(a) Controllable costs and Uncontrollable costs: Cost that can be controlled, typically by a cost, profit or investment centre manager is called controllable cost. Controllable costs incurred in a particular responsibility centre can be influenced by the action of the executive heading that responsibility centre.

Costs which cannot be influenced by the action of a specified member of an undertaking are known as uncontrollable costs.

{5 M}

Answer:

(b) Cost plus contract: Under cost plus contract, the contract price is ascertained by adding a percentage of profit to the total cost of the work. Such types of contracts are entered into when it is not possible to estimate the contract cost with reasonable accuracy due to unstable condition of material, labour services etc.

Following are the advantages of cost plus contract:

(i) The contractor is assured of a fixed percentage of profit. There is no risk of incurring any loss on the contract.

(ii) It is useful specially when the work to be don is not definitely fixed at the time of making the estimate.

(iii) Contractee can ensure himself about the 'cost of contract' as he is empowered to examine the books and documents of the contractor to ascertain the veracity of the cost of contract.

{5 M}

Answer:

(c) In integrated accounting system cost and financial accounts are kept in the same set of books. Such a system will have to afford full information required for Costing as well as for Financial Accounts. In other words, information and data should be recorded in such a way so as to enable the firm to ascertain the cost (together with the necessary analysis) of each product, job, process, operation or any other identifiable activity. It also ensures the ascertainment of marginal cost, variances, abnormal losses and gains. In fact all information that management requires from a system of Costing for doing its work properly is made available. The integrated accounts give full information in such a manner so that the profit and loss account and the balance sheet can be prepared according to the requirements of law and the management maintains full control over the liabilities and assets of its business. Since, only one set of books are kept for both cost accounting and financial accounting purpose so there is no necessity of reconciliation of cost and financial accounts. **{5 M}**

Answer:

(d) The impact of IT in cost accounting may include the followings:

(i) After the introduction of ERPs, different functional activities get integrated and as a consequence a single entry into the accounting system provides custom made reports for every purpose and saves an organisation from preparing different sets of documents. Reconciliation process of results of both cost and financial accounting systems become simpler and less sophisticated.

(ii) A move towards paperless environment can be seen where documents like Bill of Material, Material Requisition Note, Goods Received Note, labour utilisation report etc. are no longer required to be prepared in multiple copies, the related department can get e-copy from the system.

(iii) Information Technology with the help of internet (including intranet and extranet) helps in resource procurement and mobilisation. For example, production department can get materials from the stores without issuing material requisition note physically. Similarly, purchase orders can be initiated to the suppliers with the help of extranet. This enables an entity to shift towards Just-in-Time (JIT) approach of inventory management and production. **{5 M}**

(iv) Cost information for a cost centre or cost object is ascertained with accuracy in timely manner. Each cost centre and cost object is codified and all related costs are assigned to the cost object or cost centre. This process automates the cost accumulation and ascertainment process. The cost information can be customised as per the requirement. For example, when an entity manufacture or provide services, it can know information job-wise, batch-wise, process-wise, cost centre wise etc.

(v) Uniformity in preparation of report, budgets and standards can be achieved with the help of IT. ERP software plays an important role in bringing uniformity irrespective of location, currency, language and regulations.

(vi) Cost and revenue variance reports are generated in real time basis which enables the management to take control measures immediately.

(vii) IT enables an entity to monitor and analyse each process of manufacturing or service activity closely to eliminate non value added activities.

The above are examples of few areas where Cost Accounting is done with the help of IT.

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