

(CA ALL INTERMEDIATE BATCHES)

DATE: 31.12.2020

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 first answered in the answer book shall be valued and subsequent extra question(s) answered shall be ignored.

Wherever necessary, suitable assumptions may be made and disclosed by way of note.

Answer 1:**(a)**

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

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

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

$$\text{Break-even sales} = \frac{\text{Rs. } 98,50,000}{20\%} = \text{Rs. } 4,92,50,000 \text{ } \{1^{1/2} \text{ M}\}$$

$$\begin{aligned} \text{Profit/ loss} &= \text{Contribution} - \text{Fixed Cost} \\ &= \text{Rs. } 8,20,00,000 \times 20\% - \text{Rs. } 98,50,000 \\ &= \text{Rs. } 1,64,00,000 - \text{Rs. } 98,50,000 = \text{Rs. } 65,50,000 \text{ } \{1^{1/2} \text{ M}\} \end{aligned}$$

(ii) 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

$$= \text{Rs. } 5,93,10,000 \times 20\% = \text{Rs. } 1,18,62,000$$

Let the number of units to be sold in 20X8-X9 = X

Sales in 20X8-X9 – Variable cost in 20X8-X9 = Desired Contribution

$$90 X - 80 X = \text{Rs. } 1,18,62,000$$

$$\text{Or, } 10 X = 1,18,62,000$$

$$\text{Or, } X = 11,86,200 \text{ units}$$

Therefore, Sales amount required to earn a profit equals to 20X7-X8 profit

$$= \text{Rs. } 90 \times 11,86,200 \text{ units} = \text{Rs. } 10,67,58,000 \text{ } \{2 \text{ M}\}$$

Answer:**(b)**

(i) Calculation of total cost for 'Professionals Protect Plus' policy

	Particulars	Amount (Rs.)	Amount (Rs.)
1.	Marketing and Sales support:		
	- Policy development cost	11,25,000	
	- Cost of marketing	45,20,000	
	- Sales support expenses	11,45,000	67,90,000
2.	Operations:		
	- Policy issuance cost	10,05,900	

	- Policy servicing cost	35,20,700	
	- Claims management cost	1,25,600	46,52,200 }{3/4 M}
3.	IT Cost		74,32,000 }{1/4 M}
4.	Support functions		
	- Postage and logistics	10,25,000	
	- Facilities cost	15,24,000	
	- Employees cost	5,60,000	
	- Office administration cost	16,20,400	47,29,400 }{1/4 M}
	Total Cost		2,36,03,600 }{1 M}

(ii) Calculation of cost per policy = $\frac{\text{Total cost}}{\text{No. of policies}} = \frac{\text{₹}2,36,03,600}{528} = \text{₹}44,703.79$ }{1 M}

(iii) Cost per rupee of insured value = $\frac{\text{Total cost}}{\text{Total insured value}} = \frac{\text{₹} 2.36 \text{ crore}}{\text{₹} 1,320 \text{ crore}} = \text{₹} 0.0018$ }{1 M}

Answer:

(c)

**Production Statement
For the year ended 31st March, 2018**

	Amount (Rs.)
Direct materials	9,00,000
Direct wages	7,50,000
Prime Cost	16,50,000 }{1 ^{1/2} M}
Factory overheads	4,50,000
Cost of Production	21,00,000 }{1 M}
Administration overheads	4,20,000
Selling and distribution overheads	5,25,000
Cost of Sales	30,45,000 }{1 ^{1/2} M}
Profit	6,09,000
Sales value	36,54,000 }{1 M}

Answer:

(d) Employee turnover rate using:

(i) Separation Method:

$$= \frac{\text{No. of workers left} + \text{No. of workers discharged}}{\text{Average number of workers}} \times 100$$

$$= \frac{(40 + 120)}{(3,600 + 3,790) / 2} \times 100 = \frac{160}{3,695} \times 100 = 4.33\% \text{ } \{1 \text{ M}\}$$

(ii) Replacement Method:

$$= \frac{\text{No. of workers replaced}}{\text{Average number of workers}} \times 100 = \frac{150}{3,695} \times 100 = 4.06\% \text{ } \{1 \text{ M}\}$$

(iii) New Recruitment Method:

$$= \frac{\text{No. of workers newly recruited}}{\text{Average number of workers}} \times 100$$

$$= \frac{\text{No. Recruitments} - \text{No. of Replacements}}{\text{Average number of workers}} \times 100$$

$$= \frac{350 - 150}{3,695} \times 100 = \frac{200}{3,695} \times 100 = 5.41\% \text{ } \{1 \text{ M}\}$$

(iv) Flux Method:

$$= \frac{\text{No. of separations} + \text{No. of accessions}}{\text{Average number of workers}} \times 100$$

$$= \frac{(160 + 350)}{(3,600 + 3,790) / 2} \times 100 = \frac{510}{3,695} \times 100 = 13.80\% \text{ } \{2 \text{ M}\}$$

Answer 2:

(a) (i) Statement of Equivalent Production (Average cost method)

Input (Units)	Particulars	Output Units	Equivalent Production					
			Materials		Labour		Overheads	
			(%*)	Units**	(%)*	Units**	(%)*	Units**
20,000	Completed	14,000	100	14,000	100	14,000	100	14,000
	WIP	6,000	100	6,000	33-1/3	2,000	33-1/3	2,000
20,000		20,000		20,000	{1 M}	16,000	{1 M}	16,000}{1 M}

*Percentage of completion

** Equivalent units

(ii) Statement showing Cost for each element

Particulars	Materials	Labour	Overhead	Total
Cost of opening work-in- progress (Rs.)	6,00,000	1,00,000	1,00,000	8,00,000
Cost incurred during the month (Rs.)	25,60,000	15,00,000	15,00,000	55,60,000
Total cost (Rs.) : (A)	31,60,000	16,00,000	16,00,000	63,60,000
Equivalent units : (B)	20,000	16,000	16,000	
Cost per equivalent unit (Rs.) : C= (A ÷ B)	{1 M} 158	{1 M} 100	{1 M} 100	358

(iii) Statement of Apportionment of cost

	(Rs.)	(Rs.)
Value of output transferred: (A) (14,000 units × Rs. 358)		50,12,000}{1 M}
Value of closing work-in-progress: (B)		
Material (6,000 units × Rs.158)	9,48,000	
Labour (2,000 units × Rs. 100)	2,00,000	
Overhead (2,000 units × Rs. 100)	2,00,000	13,48,000}{1 M}
Total cost : (A + B)		63,60,000

(iv) Process- A Account

Particulars	Units	(Rs.)	Particulars	Units	(Rs.)
To Opening WIP	4,000	8,00,000	By Completed units	14,000	50,12,000
To Materials	16,000	25,60,000	By Closing WIP	6,000	13,48,000
To Labour		15,00,000			
To Overhead		15,00,000			
	20,000	63,60,000}{1 M}		20,000	63,60,000}{1 M}

Answer:

(b) Working Notes:

(i) Computation of Annual consumption & Annual Demand for raw material 'Dee':

Sales forecast of the product 'Exe'	20,000 units
Less: Opening stock of 'Exe'	1,800 units
Fresh units of 'Exe' to be produced	18,200 units
Raw material required to produce 18,200 units of 'Exe' (18,200 units × 2 kg.)	36,400 kg.
Less: Opening Stock of 'Dee'	2,000 kg.
Annual demand for raw material 'Dee'	34,400 kg.}{1 M}

(ii) Computation of Economic Order Quantity (EOQ):

$$EOQ = \sqrt{\frac{2 \times \text{Annual demand of 'Dee'} \times \text{Ordering cost}}{\text{Carrying cost per unit per annum}}}$$

$$= \sqrt{\frac{2 \times 17,200 \text{ kg.} \times ₹ 720}{₹ 125 \times 13.76\%}} = \sqrt{\frac{2 \times 17,200 \text{ kg.} \times ₹ 720}{₹ 17.2}} = 1,200 \text{ kg.} \quad \{2 M\}$$

(iii) Re- Order level:

$$= (\text{Maximum consumption per day} \times \text{Maximum lead time})$$

$$= \left\{ \left(\frac{\text{Annual Consumption of 'Dee'}}{364 \text{ days}} + 20 \text{ kg.} \right) \times 8 \text{ days} \right\}$$

$$= \left\{ \left(\frac{18,200 \text{ kg.}}{364 \text{ days}} + 20 \text{ kg.} \right) \times 8 \text{ days} \right\} = 560 \text{ kg.} \quad \{2 M\}$$

(iv) **Minimum consumption per day of raw material 'Dee':**

Average Consumption per day = 50 Kg.
 Hence, Maximum Consumption per day = 50 kg. + 20 kg. = 70 kg.
 So Minimum consumption per day will be

$$\text{Average Consumption} = \frac{\text{Min. consumption} + \text{Max. consumption}}{2}$$

$$\text{Or, 50 kg.} = \frac{\text{Min. consumption} + 70\text{kg}}{2}$$

Or, Min. consumption = 100 kg - 70 kg. = 30 kg.

(a) **Re-order Quantity :**

$$\text{EOQ} - 200 \text{ kg.} = 1,200 \text{ kg.} - 200 \text{ kg.} = 1,000 \text{ kg. } \{1 \text{ M}\}$$

(b) **Maximum Stock level:**

= Re-order level + Re-order Quantity - (Min. consumption per day × Min. lead time)

$$= 560 \text{ kg.} + 1,000 \text{ kg.} - (30 \text{ kg.} \times 4 \text{ days})$$

$$= 1,560 \text{ kg.} - 120 \text{ kg.} = 1,440 \text{ kg. } \{1 \text{ M}\}$$

(c) **Minimum Stock level:**

= Re-order level - (Average consumption per day × Average lead time)

$$= 560 \text{ kg.} - (50 \text{ kg.} \times 6 \text{ days}) = 260 \text{ kg. } \{1 \text{ M}\}$$

(d) **Impact on the profitability of the company by not ordering the EOQ.**

		When purchasing the ROQ	When purchasing the EOQ
I	Order quantity	1,000 kg.	1,200 kg.
II	No. of orders a year	$\frac{17,200 \text{ kg.}}{1,000 \text{ kg.}} = 17.2 \text{ or } 18 \text{ orders}$	$\frac{17,200 \text{ kg.}}{1,200 \text{ kg.}} = 14.33 \text{ or } 15 \text{ orders}$
III	Ordering Cost	18 order × Rs. 720 = Rs. 12,960	15 orders × Rs. 720 = Rs. 10,800
IV	Average Inventory	$\frac{1,000 \text{ kg.}}{2} = 500 \text{ kg.}$	$\frac{1,200 \text{ kg.}}{2} = 600 \text{ kg.}$
V	Carrying Cost	500 kg. × Rs. 17.2 = Rs. 8,600	600 kg. × Rs. 17.2 = Rs. 10,320
VI	Total Cost	Rs. 21,560	Rs. 21,120

Extra Cost incurred due to not ordering EOQ = Rs. 21,560 - Rs. 21,120 = Rs. 440 {2 M}

Answer 3:

(a) **Costing books**

Stores Control Account

Particulars	(Rs.)	Particulars	(Rs.)
To Balance b/d	32,000	By W.I.P. Control A/c	1,60,000
To General ledger adjustment A/c	1,58,000	By Work overhead control A/c	20,000
To Work in progress control A/c	80,000	By Costing Profit and Loss A/c	6,000
		By Balance c/d	84,000
	2,70,000		2,70,000

} {1 M}

W.I.P. Control Account

Particulars	(Rs.)	Particulars	(Rs.)
To Balance b/d	60,000	By Stores control A/c	80,000
To Stores control A/c	1,60,000	By Costing profit and loss A/c (Cost of sales)	4,00,000
To Direct wages control A/c	65,000		
To Works overhead control A/c	2,40,000	By Balance c/d	45,000
	5,25,000		5,25,000

{1 M}

Works Overhead Control Account

Particulars	(Rs.)	Particulars	(Rs.)
To General ledger adjustment A/c	2,50,000	By W.I.P. Control A/c	2,40,000
To Store ledger control A/c	20,000	By Costing profit & loss A/c (under recovery)	30,000
	2,70,000		2,70,000

{1 M}

Costing Profit & Loss Account

Particulars	(Rs.)	Particulars	(Rs.)
To W.I.P. control A/c (Cost of sales)	4,00,000	By General ledger adjustment A/c	
To Works overhead control A/c	30,000	Cost of sales	4,00,000
To Stores control A/c (shortage)	6,000	10% profit	40,000
To Profit	4,000		
	4,40,000		4,40,000

{2 M}

(a) Financial Books

Profit & Loss Account

Particulars	(Rs.)	Particulars	(Rs.)
To Opening stock		By Sales	4,40,000
Stores	32,000	By Closing stock:	
W.I.P.	60,000	Stores	84,000
	92,000	W.I.P.	45,000
			1,29,000
To Purchases	1,58,000	By Income from investment	10,000
To Wages incurred	70,000	By Loss	11,000
To Overheads incurred	2,50,000		
To Loss on sale of capital assets	20,000		
	5,90,000		5,90,000

{3 M}

Reconciliation statement

	(Rs.)	(Rs.)
Profit as per Cost Accounts		4,000
Add: Income from investment recorded in Financial accounts		10,000
		14,000
Less: Under absorption of wages in Cost accounts	5,000	
Loss on sales of capital asset only included in Financial accounts	20,000	25,000
Loss as per Financial accounts		11,000

{2 M}

Answer:

(b) Working Notes :

(a) Calculation of number of Patient days

35 Beds × 150 days	=	5,250
25 Beds × 80 days	=	2,000
Extra beds	=	750
Total	=	8,000

{1/2 M}

Statement of Profitability

Particulars	Amount	Amount
Income for the year (Rs. 2,000 per patient per day × 8,000 patient days)		1,60,00,000
Less : Variable Costs :		
Doctor Fees (Rs. 2,50,000 per month × 12)	30,00,000	
Food to Patients (Variable)	8,80,000	
Other services to patients (Variable)	3,00,000	
Laundry charges (Variable) – (Rs.)	6,00,000	
Medicines (Variable) – (Rs.)	7,50,000	
Bed Hire Charges (Rs.100 × 750 Beds)	75,000	
Total Variable costs		56,05,000
Contribution		1,03,95,000
Less : Fixed Costs :		
Rent (Rs. 75,000 per month × 12)	9,00,000	
Supervisor (2 persons ×Rs.25,000 × 12)	6,00,000	
Nurses (4 persons ×Rs. 20,000 × 12)	9,60,000	
Ward Boys (4 persons ×Rs. 5,000 × 12)	2,40,000	
Repairs (Fixed)	81,000	
Other fixed expenses – (Rs.)	10,80,000	
Administration expenses allocated – (Rs.)	10,00,000	
Total Fixed Costs		48,61,000
Profit		55,34,000

{Each Bold Amount in Table = 1/2 M}

(1) Calculation of Contribution per Patient day

Total Contribution – Rs. 1,03,95,000

Total Patient days - 8,000

Contribution per Patient day – Rs. 1,03,95,000 / 8,000 = Rs. 1,299.375 }{1/2 M}

Breakeven Point = Fixed Cost / Contribution per Patient day

= Rs. 48, 61,000 / Rs. 1,299.375

= 3,741 patient days }{1 M}

Answer 4:

(a) (i) Material Price Variance = Actual Quantity (Std. Price – Actual Price)

Limestone	=	340 $\left(\text{Rs. } 565 - \frac{\text{Rs. } 1,90,400}{340} \right)$	
	=	340 (Rs. 565 - Rs. 560)	= 1,700 (F) }{1/2 M}
Silica	=	105 $\left(\text{Rs. } 4,800 - \frac{\text{Rs. } 5,09,250}{105} \right)$	
	=	105 (Rs. 4,800 - Rs. 4,850)	= 5,250 (A) }{1/2 M}
Alumina	=	25 $\left(\text{Rs. } 32,100 - \frac{\text{Rs. } 8,12,500}{25} \right)$	
	=	25 (Rs. 32,100 - Rs. 32,500)	= 10,000 (A) }{1/2 M}
Iron ore	=	30 $\left(\text{Rs. } 1,800 - \frac{\text{Rs. } 53,400}{30} \right)$	
	=	30 (Rs. 1,800 - Rs. 1,780)	= 600 (F) }{1/2 M}
Others	=	23 $\left(\text{Rs. } 2,400 - \frac{\text{Rs. } 51,750}{23} \right)$	
	=	23 (Rs. 2,400 - Rs. 2,250)	= 3,450 (F) }{1/2 M}
			<u>9,500 (A)</u>

(ii) Material Mix Variance = Std. Price (Revised Std. Quantity – Actual Quantity)

Limestone	=	Rs. 565 (523 × 65% - 340)	
	=	Rs. 565 (339.95-340)	= 28.25(A) {1/2 M}
Silica	=	Rs. 4,800 (523 × 20% - 105)	
	=	Rs. 4,800 (104.6-105)	= 1,920(A) {1/2 M}
Alumina	=	Rs. 32,100 (523 × 5% - 25)	
	=	Rs. 32,100 (26.15 - 25)	= 36,915 (F) {1/2 M}
Iron ore	=	Rs. 1,800 (523 × 5% - 30)	
	=	Rs. 1,800 (26.15 - 30)	= 6,930 (A) {1/2 M}
Others	=	Rs. 2,400 (523 × 5% - 23)	
	=	Rs. 2,400 (26.15 - 23)	= 7,560 (F) {1/2 M}
			<u>35,596.75 (F)</u>

(iii) Material Yield Variance=Std. Price(Standard Quantity– Revised Std. Quantity)

Limestone	=	Rs. 565 (500 × 65% - 523 × 65%)	
	=	Rs. 565 (325 - 339.95)	= 8,446.75 (A) {1/2 M}
Silica	=	Rs. 4,800 (500 × 20% - 523 × 20%)	
	=	Rs. 4,800 (100 - 104.6)	= 22,080 (A) {1/2 M}
Alumina	=	Rs. 32,100 (500 × 5% - 523 × 5%)	
	=	Rs. 32,100 (25 - 26.15)	= 36,915 (A) {1/2 M}
Iron ore	=	Rs. 1,800 (500 × 5% - 523 × 5%)	
	=	Rs. 1,800 (25 - 26.15)	= 2,070 (A) {1/2 M}
Others	=	Rs. 2,400 (500 × 5% - 523 × 5%)	
	=	Rs. 2,400 (25 - 26.15)	= 2,760 (A) {1/2 M}
			<u>72,271.75 (A)</u>

(iv) Material Cost Variance = (Std. Quantity × Std. Price) – (Actual Quantity × Actual Price)

Limestone	=	Rs. 565 × (500 × 65%) - Rs. 1,90,400	
	=	Rs. 1,83,625 - Rs. 1,90,400	= 6,775 (A) {1/2 M}
Silica	=	Rs. 4,800 × (500 × 20%) - Rs. 5,09,250	
	=	Rs. 4,80,000 - Rs. 5,09,250	= 29,250 (A) {1/2 M}
Alumina	=	Rs. 32,100 (500 × 5%) - Rs. 8,12,500	
	=	Rs. 8,02,500 - Rs. 8,12,500	= 10,000 (A) {1/2 M}
Iron ore	=	Rs. 1,800 (500 × 5%) - Rs. 53,400	
	=	Rs. 45,000 - Rs. 53,400	= 8,400 (A) {1/2 M}
Others	=	Rs. 2,400 (500 × 5%) - Rs. 51,750	
	=	Rs. 60,000 - Rs. 51,750	= 8,250 (F) {1/2 M}
			<u>46,175 (A)</u>

Answer:

(b)

Dr. Contract Account for the year ended 31st March, 2019 Cr.

Particulars	HP-1 (Rs.)	HP-2 (Rs.)	Particulars	HP-1 (Rs.)	HP-2 (Rs.)
To Balance b/d: W-I-P	7,80,000	2,80,000	By Closing material at site	47,000	52,000
To Material purchased	6,20,000	8,10,000	By W-I-P:		
To Wages: (Rs. 85,000 +Rs. 12,000) (Rs. 62,000 + Rs. 8,400)	97,000	70,400	Value of work certified	20,50,000	16,10,000
			Cost of work not certified	1,90,000	1,40,000
To Donation to local club*	5,000	2,500			
To Plant hire charges: (Rs. 72,000 × 1/3) (Rs. 57,000 × 1/3)	24,000	19,000			
To Depreciation on concrete mixture**:					

} Each Amount 1/2 M}

(Rs. 8,20,000 × 15% × 180/365)	60,658				
(Rs. 8,20,000 × 15% × 100/365)		33,699			
To Notional profit	7,00,342	5,86,401			
	22,87,000	18,02,000		22,87,000	18,02,000

* Assuming donation paid to local club was exclusively for the above projects, hence included in the contract account.

** Depreciation on concrete mixture machine is charged on the basis of number of days used for the projects, as it is clearly mentioned in the question that this machine can be used for other projects also.

(Land purchased and brokerage and registration fee paid for this purpose cannot be charged to contract account, hence not included in the contract account)

Answer 5:

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

	Product A (Rs.)		Product B (Rs.)	
	6,000 units		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

(ii) Flexible Budget after marketing efforts:

	Product A (Rs.)		Product B (Rs.)	
	7,500 units		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

Answer:

(b) Hours worked by Mr.Z = No. of normal days worked + Overtime + holiday/
Sunday worked

= (21 days × 7.5 hours) + (9.5 hours + 8.5 hours) + (5 hours + 6 hours)

= 157.5 hours + 18 hours + 11 hours = 186.50 hours. }1 M}

(i) Calculation of earnings per day

Particulars	Amount (Rs.)
Basic salary (Rs. 1,000 × 26 days)	26,000
Dearness allowance (20% of basic salary)	5,200
	31,200
House rent allowance (16% of basic salary)	4,160
Employer's contribution to Provident fund (12% × Rs. 31,200)	3,744
Employer's contribution to Pension fund (7% × Rs. 31,200)	2,184
	41,288
No. of working days in a month (days)	26
Rate per day	1,588
Transport allowance per day	50
Earnings per day	1,638

(ii) Calculation of effective wage rate per hour of Mr. Z:

Particulars	Amount (Rs.)
Basic salary (Rs. 1,000 × 26 days)	26,000
Additional basic salary for Sunday & holiday (Rs. 1,000 × 2 days)	2,000
Dearness allowance (20% of basic salary)	5,600
	33,600
House rent allowance (16% of basic salary)	4,480
Transport allowance (Rs. 50 × 23 days)	1,150
Overtime allowance (Rs. 160 × 2 × 2 hours)*	640
Employer’s contribution to Provident fund (12% × Rs. 33,600)	4,032
Employer’s contribution to Pension fund (7% × Rs. 33,600)	2,352
Total monthly wages	46,254
Hours worked by Mr. Z (hours)	186.5
Effective wage rate per hour	248

{Each Bold Amount = 1/2 M}

*(Daily Basic + DA) ÷ 7.5 hours
 = (1,000+200) ÷ 7.5 = Rs. 160 per hour

(iii) Calculation of wages to be charged to Job no. HT200
 = Rs. 248 × 100 hours = Rs. 24,800 }{1 M}

Answer 6:

- (a) (i) Discretionary Cost Centre: The cost centre whose output cannot be measured in financial terms, thus input-output ratio cannot be defined. The cost of input is compared with allocated budget for the activity. Example of discretionary cost centres are Research & Development department, Advertisement department where output of these department cannot be measured with certainty and co-related with cost incurred on inputs. }{2^{1/2} M}
- (ii) Investment Centres: These are the responsibility centres which are not only responsible for profitability but also has the authority to make capital investment decisions. The performance of these responsibility centres are measured on the basis of Return on Investment (ROI) besides profit. Examples of investment centres are Maharatna, Navratna and Miniratna companies of Public Sector Undertakings of Central Government. }{2^{1/2} M}

Answer:

- (b) The advantages of zero-based budgeting are as follows:
- It provides a systematic approach for the evaluation of different activities and ranks them in order of preference for the allocation of scarce resources.
 - It ensures that the various functions undertaken by the organization are critical for the achievement of its objectives and are being performed in the best possible way.
 - It provides an opportunity to the management to allocate resources for various activities only after having a thorough cost-benefit-analysis. The chances of arbitrary cuts and enhancement are thus avoided.
 - The areas of wasteful expenditure can be easily identified and eliminated.
 - Departmental budgets are closely linked with corporation objectives. The technique can also be used for the introduction and implementation of the system of 'management by objective.' Thus, it cannot only be used for fulfilment of the objectives of traditional budgeting but it can also be used for a variety of other purposes.
- {Each Point 1 Mark}

Answer:

(c) Difference between Cost Control and Cost Reduction

Cost Control		Cost Reduction	
1.	Cost control aims at maintaining the costs in accordance with the established standards.	1.	Cost reduction is concerned with reducing costs. It challenges all standards and endeavours to better them continuously
2.	Cost control seeks to attain lowest possible cost under existing conditions.	2.	Cost reduction recognises no condition as permanent, since a change will result in lower cost.
3.	In case of Cost Control, emphasis is on past and present	3.	In case of cost reduction it is on present and future.
4.	Cost Control is a preventive function	4.	Cost reduction is a corrective function. It operates even when an efficient cost control system exists.
5.	Cost control ends when targets are achieved	5.	Cost reduction has no visible end.

{Each Point 1 Mark}

Answer:

(d) Treatment of by-product cost in Cost Accounting:

- (i) When they are of small total value, the amount realized from their sale may be dealt as follows:
 - Sales value of the by-product may be credited to Costing Profit & Loss Account and no credit be given in Cost Accounting. The credit to Costing Profit & Loss Account here is treated either as a miscellaneous income or as additional sales revenue.
 - The sale proceeds of the by-product may be treated as deduction from the total costs. The sales proceeds should be deducted either from production cost or cost of sales.
- (ii) When they require further processing:

In this case, the net realizable value of the by-product at the split-off point may be arrived at by subtracting the further processing cost from realizable value of by-products. If the value is small, it may be treated as discussed in (i) above.

{2^{1/2} M}

{2^{1/2} M}

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