

SUGGESTED SOLUTION

CA INTERMEDIATE

SUBJECT- COST & MANAGEMENT ACCOUNTING

Test Code - ISP 2410

BRANCH - () (Date:)

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MULTIPLE CHOICE QUESTIONS:

No.		ANSWER						
1.	(i) D	Rs. 7,87,10,000						
	(ii) C	Rs. 7,87,28,000 and Rs. 1,682.22 respectively						
	(iii) A	Rs. 92,400						
	(iv) B	Rs. 56,000 & Rs. 7,88,76,400 respectively						
	(v) A	Rs. 1,504.70 & 5 tonnes respectively						
2.	(i) D	Rs. 840						
	(ii) A	Rs. 25,20,000						
	(iii) A	1,18,000 over – absorbed						
	(iv) B	Rs. 0.472 per unit						
	(v) C	Rs. 18,880						
3.	С	It is probably the least time consuming and least costly approach to						
		budgeting						
4.	В	Fixed overheads						
5.	Α	Cost control seeks to attain lowest possible cost under best conditions						
6.	Α	Job cost sheet may be used for estimating profit of jobs						
7.	В	Bill of material						

(15 * 2 MARKS = 30)

ANSWER: 1(A)

	Sales	Profit
Year 2021 – 22	Rs. 1,20,000	8,000
Year 2022 – 23	Rs. 1,40,000	13,000
Difference	Rs. 20,000	5,000

(i) P/V Ratio =

=
$$\frac{Difference in profit}{Difference in sales} \times 100 = \frac{5000}{20,000} \times 100 = 25\%$$

Contribution in 2019 – 20 (1,20,000 \times 25%)	30,000
Less : Profit	8,000
Fixed Cost*	22,000

Contribution = Fixed Cost + Profit

∴ Fixed cost = Contribution – Profit

(ii) Break – even point

$$=\frac{Fixed\ cost}{P/_{V\ Ratio}} = \frac{22,000}{25\%} = \text{Rs. } 88,000$$

(iii) profit when sales are Rs. 1,80,000

	Rs.
Contribution (Rs. 1,80,000 \times 25%)	45,000
Less : Fixed cost	22,000
Profit	23,000

(iv) Sales to earn a profit of Rs. 12,000

$$=\frac{Fixed\ Cost+Desired\ Profit}{P_{/V}\ Ratio}=\frac{22,000+12,000}{25\%}$$

= Rs. 1,36,000

(v) Margin of safety in 2022 – 23

Margin of safety = Actual sales – Break – even sales = 1,40,000 - 88,000 = Rs. 52,000

(5 MARKS)

ANSWER: 1(B)

Apportionment of Joint Costs

Particulars	A (Rs.)	B (Rs.)
Selling Price	16,000	8,000
Less: Estimated profit	4,000	1,600
	(25% of Rs.16,000)	(20% of Rs. 8,000)
Cost of sales	12,000	6,400
Less: Selling & Distribution exp.	267	133
(Refer working note)	$(Rs. 400 \times 2/3)$	$(Rs. 400 \times 1/3)$
Less: Subsequent cost	5,000	3,000
Share of Joint cost	6,733	3,267

So, Joint cost of manufacture is to be distributed to A & B in the ratio of 6733 : 3267

Statement showing Cost of Production of A and B

Elements of cost	Joint Cost		Subsequent Cost		Total Cost	
	Α	В	Α	В	Α	В
Material	3,367	1,633	3,000	1,500	6,367	3,133
Labour	2,020	980	1,400	1,000	3,420	1,980
Overheads	1,346	654	600	500	1,946	1,154
Cost of production					11,733	6,267

Working Note:

Calculation of Selling and Distribution Expenses

Particulars	(Rs.)
Total Sales Revenue (Rs. 16,000 + Rs. 8,000)	24,000
Less: Estimated Profit (Rs. 4,000 + Rs. 1,600)	(5,600)
Cost of Sales	18,400
Less: Cost of production:	
- Joint Costs	(10,000)
- Subsequent costs (Rs. 5,000 + Rs. 3,000)	(8,000)
Selling and Distribution expenses (Balancing figure)	400

(5 MARKS)

ANSWER: 1(C)

(i) Effective hourly rate of earnings under Rowan Incentive Plan

Earnings under Rowan Incentive plan =

(Actual time taken
$$\times$$
 wage rate) + $\frac{Time\ Saved}{Time\ Allowed}$ \times Time taken \times Wage rate

= (5 hours
$$\times$$
 Rs. 120) + $\left(\frac{1 hour}{6 hours} \times 5 hours \times Rs. 120\right)$

(ii) Let time taken = x

$$\therefore Effective hourly rate = \frac{Earnings \ under \ Halsay \ Scheme}{Time \ taken}$$

Or, Effective hourly rate under Halsey Incentive Plan =

$$\frac{(\textit{Time taken} \times \textit{Rate}) + 50\% \ \textit{of Rate} \times (\textit{Time allowed-Time taken})}{\textit{Time taken}}$$

Or, Rs. 140 =
$$\frac{(X \times Rs.120) + 50\% \text{ of } Rs.120 \times (6-X)}{X}$$

$$Or$$
, $140X = 120X + 360 - 60X$

$$Or, 80X = 360$$

Or,
$$X = \frac{360}{80} = 4.5$$
 hours

Therefore, to earn effective hourly rate of Rs. 140 under Halsey Incentive Scheme worker has to complete the work in 4.5 hours.

(4 MARKS)

ANSWER: 2(A)

Working note:

Computation of revenues (at listed price), discount, cost of goods sold and customer level operating activities costs:

	Customers				
	Α	В	С	D	E
Units sold: (a)	4,500	6,000	9,500	7,500	12,750
Revenues (at listed price) (Rs.): (b) {(a) × Rs.6,480)}	2,91,60,000	3,88,80,000	6,15,60,000	4,86,00,000	8,26,20,000
Revenues (at listed price) (Rs.): (c)	2,91,60,000	3,82,32,000	5,64,30,000	4,69,80,000	7,43,58,000
{(a) ×Actual sellingprice)}	(4,500 × 6,480)	(6,000 × 6,372)	(9,500 × 5,940)	(7,500 × 6,264)	(12,750 × 5,832)

Discount (Rs.) (d) {(b) – (c)}	0	6,48,000	51,30,000	16,20,000	82,62,000			
Cost of goods sold (Rs.): (d) {(a) x Rs.5,400}	2,43,00,000	3,24,00,000	5,13,00,000	4,05,00,000	6,88,50,000			
Customer level operating a	Customer level operating activities costs							
Order taking costs(Rs.): (No. of purchaseorders × Rs. 4,500)	67,500	1,12,500	1,35,000	1,12,500	1,35,000			
Customer visitscosts (Rs.) (No. of customer visitsx Rs. 3,600)	7,200	10,800	21,600	7,200	10,800			
Delivery vehiclestravel costs (Rs.) (Kms travelled by	1,500	1,350	2,250	3,000	4,500			
delivery vehicles x Rs. 7.50 per km.)								
Product handlingcosts (Rs.) {(a) x Rs. 22.50}	1,01,250	1,35,000	2,13,750	1,68,750	2,86,875			
Cost of expediting deliveries (Rs.) {No. of expedited deliveries x Rs. 13,500}		-	-	_	13,500			
Total cost of customer level operating activities(Rs.)	1,77,450	2,59,650	3,72,600	2,91,450	4,50,675			

(i) Computation of Customer level operating income

	Customers				
	Α	A B C D			
	(Rs.)	(Rs.)	(Rs.)	(Rs.)	(Rs.)
Revenues (At list price) (Refer to workingnote)	2,91,60,000	3,82,32,000	5,64,30,000	4,69,80,000	7,43,58,000
Less: Cost of goods sold (Refer to workingnote)	(2,43,00,000)	(3,24,00,000)	(5,13,00,000)	(4,05,00,000)	(6,88,50,000)
Gross margin	48,60,000	58,32,000	51,30,000	64,80,000	55,08,000
Less: Customer level operatingactivities costs (Refer to workingnote)	(1,77,450)	(2,59,650)	(3,72,600)	(2,91,450)	(4,50,675)
Customer level operating income	46,82,550	55,72,350	47,57,400	61,88,550	50,57,325

(ii) Factors to be considered for dropping a customer:

Dropping customers should be the last resort to be taken by an entity. Factors to be considered should include:

- What is the expected future profitability of each customer?
- Are the currently least profitable or low profitable customers are likely to be highly profitable in the future?
- What costs are avoidable if one or more customers are dropped?

Can the relationship with the "problem" customers be restructured so that there is at "win- win" situation

(10 MARKS)

ANSWER: 3(A)

Statement of Cost of R Ltd. for the year ended 31st March, 2020 :

S. No.	Particulars	Amount (Rs.)	Amount (Rs.
(i)	Material Consumed		
	- Raw materials purchased	84,00,000	
	- Carriage inward	1,72,600	
A	Add : Opening stock of raw materials	6,20,000	
ι	Less : Closing stock of raw materials	(4,60,000)	87,32,600
(ii) [Direct employee (labour) cost :		
	- Direct wages	60,00,000	
	 Employer's contribution towards PF & ESIS 	7,20,000	67,20,000
(iii)	Direct expenses :		
	- Consumable materials	4,80,000	
	- Cost of power & fuel	28,00,000	32,80,000
	Prime Cost		1,87,32,600
(iv) \	Works / Factory overheads :		
	- Wages to foreman and store keeper	8,40,000	
	 Other indirect wages to factory staffs 	1,35,000	9,75,000
(Gross factory cost		1,97,07,600
A	Add : Opening value of W – I – P		7,84,000
l	Less : Closing value of W – I – P		(6,64,000)
	Factory Cost		1,98,27,600
(v) F	Research & development cost paid for improvement in		9,60,000
1	production process		
(vi)	Production planning office expenses		12,60,000
	Cost of production		2,20,47,600
	Add: Opening stock of finished goods		14,40,000
l l	Less : closing stock of finished goods		(9,80,000)
	Cost of Goods sold		2,25,07,600
(vii)	Administrative overheads :		
	- Salary to accountants	7,20,000	
	- Fees to statutory auditor	1,80,000	
	- Fees to cost auditor	80,000	
	- Fee paid to independent directors	9,40,000	19,20,000
(viii)	Selling overheads & Distribution overheads:		
	- Salary to delivery staffs		14,30,000
	Cost of Sales		2,58,57,600
	Profit (balancing figure)		24,02,400
	Sales come tax and Donation to PM National Relief Fund is avoid		2,82,60,000

Note: Income tax and Donation to PM National Relief Fund is avoided in the cost sheet.

(10 MARKS)

ANSWER: 3(B)

Standard Quantity of input for actual output (SQ) = 2,10,000 kg $\times \frac{100 \text{ kg}}{70 \text{ kg}}$ = 3,00,000 kg.

Actual price (AP) = $(Rs.2,52,000 \div 2,80,000 \text{ kg}) = Rs. 0.90 \text{ per kg}.$

(a) Material Usage Variance = $(SQ - AQ) \times SP$

$$= (3,00,000 - 2,80,000) \times 1 = 20,000 (F)$$

(b) Material Price Variance = $(SP - AP) \times AQ$

$$= (1 - 0.90) \times 2,80,000 = Rs. 28,000 (F)$$

(c) Material Cost Variance = $(SQ \times SP) - (AQ \times AP)$

=
$$(3,00,000 \times 1) - (2,80,000 \times 0.90)$$
 = Rs. 48,000 (F)

Check MCV = MPV + MUV

Rs. 48,000 (F) = Rs. 28,000 (F) + Rs. 20,000 (F)

(4 MARKS)

ANSWER: 4(A)

Working Notes:

1. Total Distance (in km.) covered per month

Bus route	Km. per	Trips per	Days per	Km. per
	trip	day	month	month
Delhi to Hisar	160	2	9	2,880
Delhi to Aligarh	160	2	12	3,840
Delhi to Alwar	170	2	6	2,040
Total				8,760

2. Passenger- km. per month

	Total seats available per month (at 100% capacity)	Capacity utilised		•		Km.per trip	Passenger- Km. per month
	,	(%)	Seats				
Delhi to Hisar & Back	900 (50 seats × 2 trips × 9 days)	90	810	160	1,29,600 (810 seats × 160 km.)		
Delhi to Aligarh & Back	1,200 (50 seats × 2 trips × 12 days)	95	1,140	160	1,82,400 (1,140 seats × 160 km.)		
Delhi to Alwar & Back			600	170	1,02,000 (600 seats × 170 km.)		
Total	•			4,14,000			

Monthly Operating Cost Statement

Particulars	(Rs.)	(Rs.)
(i) Running Costs		
Diesel {(8,760 km × 5 km) × Rs. 90}	1,57,680.00	
Lubricant oil {(8,760 km × 100) × Rs. 30}	2,628.00	1,60,308.00
(ii) Maintenance Costs		
Repairs & Maintenance		5,000.00
(iii) Standing charges		
Salary to driver	30,000.00	
Salary to conductor	26,000.00	
Salary of part-time accountant	7,000.00	
Insurance (Rs. 6,000 ÷12)	500.00	
Road tax (Rs. 21,912 ÷12)	1,826.00	
Permit fee	500.00	
Depreciation {(Rs. 15,00,000 × 30%) × 12}	37,500.00	1,03,326.00
Total costs per month before Passenger Tax		2,68,634.00
(i)+(ii)+(iii)		
Passenger Tax*		1,07,453.60
Total Cost		3,76,087.60
Add: Profit*		1,61,180.40
Total takings per month		5,37,268.00

^{*}Let total takings be X then,

X = Total costs per month before passenger tax + 0.2 X (passenger tax) + 0.3 X

(profit)
$$X = Rs. 2,68,634 + 0.2 X + 0.3 X$$

Passenger Tax = 20% of Rs. 5,37,268 = Rs. 1,07,453.60

Calculation of Rate per passenger km. and fares to be charged for different routes

Rate per Passenger – Km =
$$\frac{Total\ takings\ per\ month}{Total\ Passenger-Km.per\ month}$$

$$= \frac{Rs.5,37,268}{4,14,000 \ Passenger-Km} = 1.30 \ (pprox...)$$

Bus fare to be charged per passenger:

Delhi to Hisar = Rs. $1.30 \times 160 \text{ km}$ = Rs. 208.00Delhi to Aligarh = Rs. $1.30 \times 160 \text{ km}$ = Rs. 208.00Delhi to Alwar = Rs. $1.30 \times 170 \text{ km}$ = Rs. 221.00

(10 MARKS)

ANSWER: 4(B)

Process A Account

Dr. Cr.

	Rs.		Rs.
To Materials	40,000	By Transfer to Process B A/c.	1,20,000
To Labour	40,000		
To Overheads	16,000		
	96,000		
To Profit (20% of transfer price,	24,000		
i.e. 25% of cost)			
	1,20,000		1,20,000

Process B Account

Dr. Cr.

	Rs.		Rs.
To Process A/c.	1,20,000	By Finished Stock A/c.	
(Transferred from Process A)		(Transfer to finished stock)	2,88,000
To Labour	56,000		
To Overhead	40,000		
	2,16,000		
To Profit (25% of transfer price	72,000		
i.e., 33.33% of cost)			
	2,88,000		2,88,000

Statement of Total Profit

	Rs.
Profit from Process A	24,000
Profit from Process B	72,000
Profit on Sales (Rs. 4,00,000 – Rs. 2,88,000)	1,12,000
Total Profit	2,08,000

(4 MARKS)

ANSWER: 5(A)

	Particulars		(Rs.)	(Rs.)
(i)	Work-in-Progress Ledger Control A/c	Dr.	5,88,000	
	To Stores Ledger Control A/c			5,88,000
	(Being issue of direct materials to production)		
(ii)	Factory Overhead control A/c	Dr.	7,50,000	
	To Wages Control A/c			7,50,000
	(Being allocation of Indirect wages)			
(iii)	Factory Overhead Control A/c	Dr.	2,25,000	
	To Costing Profit & Loss A/c			2,25,000
	(Being transfer of over absorption of Factory	<u>/</u>		

***************************************	overhead)	Dr.	1,55,000	
(iv)	Costing Profit & Loss A/c			
	To Administration Overhead Control A/c			1,55,000
	(Being transfer of under absorption of			
	Administration overhead)			
(v)	Factory Overhead Control A/c	Dr.	2,00,000	
	To Stores Ledger Control A/c			2,00,000
	(Being transfer of deficiency in stock of raw mate	erial)		

(Note: Costing P/&/L = P/&/L and SLC = MLC)

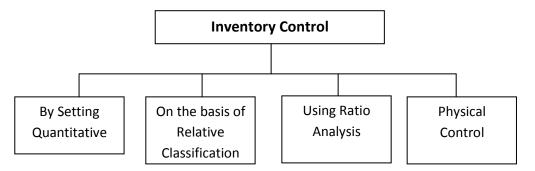
(5 MARKS)

ANSWER: 5(B)

Inventory Control: The Chartered Institute of Management Accountants (CIMA) defines Inventory Control as "The function of ensuring that sufficient goods are retained in stock to meet all requirements without carrying unnecessarily large stocks."

The objective of inventory control is to make a balance between sufficient stock and over - stock. The stock maintained should be sufficient to meet the production requirements so that uninterrupted production flow can be maintained. Insufficient stock not only pause the production but also cause a loss of revenue and goodwill. On the other hand, Inventory requires some funds for purchase, storage, maintenance of materials with a risk of obsolescence, pilferage etc. A trade-off between Stock-out and Over-stocking is required. The management may employ various methods of Inventory control to have a balance.

Management may adopt the following basis for Inventory control:



EXAMINERS' COMMENTS ON THE PERFORMANCE OF EXAMINEES:

This was a numerical question relating to the topic 'Material cost' to calculate EOQ and Total Inventory cost. Performance of the examinees was good.

(5 MARKS)

ANSWER: 5(C)

The difference between the allocation and apportionment is important to understand because the purpose of these two methods is the identification of the items of cost to cost un its or centers. However, the main difference between the above methods is given below.

(1) Allocation deals with the whole items of cost, which are identifiable with any one department. For example, indirect wages of three departments are separately obtained and hence each department will be charged by the respective amount of wages individually.

On the other hand, apportionment deals with the proportions of an item of cost for example; the cost of the benefit of a service department will be divided between those

departments which has availed those benefits.

- (2) Allocation is a direct process of charging expenses to different cost centres whereas apportionment is an indirect process because there is a need for the identification of the appropriate portion of an expense to be borne by the different departments benefited.
- (3) The allocation or apportionment of an expense is not dependent on its nature, but the relationship between the expense and the cost centre decides that whether it is to be allocated or apportioned.
- (4) Allocation is a much wider term than apportionment.

(4 MARKS)

ANSWER: 6(A)

· Cost classification based on variability

- (i) Fixed Costs These are the costs which are incurred for a period, and which, within certain output and turnover limits, tend to be unaffected by fluctuations in the levels of activity (output or turnover). They do not tend to increase or decrease with the changes in output. For example, rent, insurance of factory building etc., remain the same for different levels of production.
- (ii) Variable Costs These costs tend to vary with the volume of activity. Any increase in the activity results in an increase in the variable cost and vice-versa. For example, cost of direct labour, etc.
- (iii) Semi-variable Costs These costs contain both fixed and variable components and are thus partly affected by fluctuations in the level of activity. Examples of semi variable costs are telephone bills, gas and electricity etc.
- Cost classification based on controllability
- (i) Controllable 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. For example, direct costs comprising direct labour, direct material, direct expenses and some of the overheads are generally controllable by the shop level management.
- (ii) Uncontrollable Costs Costs which cannot be influenced by the action of a specified member of an undertaking are known as uncontrollable costs. For example, expenditure incurred by, say, the tool room is controllable by the foreman in-charge of that section but the share of the tool-room expenditure which is apportioned to a machine shop is not to be controlled by the machine shop foreman.

(4 MARKS)

ANSWER: 6(B)

Production Budget (in units)

Particulars	Hot Coffee	Cold Coffee	Fruit Juice	Carbonated Soft Drink
October 2023				
Sales*	2,10,000	2,38,000	3,36,000	60,000
Add: Closing stock	15,000	14,000	12,000	5,500
Total Quantity Required	2,25,000	2,52,000	3,48,000	65,500

Less: Opening stock	12,000	13,000	11,000	7,500
Production	2,13,000	2,39,000	3,37,000	58,000
November 2023				
Sales*	3,15,000	1,66,600	3,36,000	50,000
Add: Closing stock	13,000	15,000	10,000	6,000
Total Quantity Required	3,28,000	1,81,600	3,46,000	56,000
Less: Opening stock	15,000	14,000	12,000	5,500
Production	3,13,000	1,67,600	3,34,000	50,500
December 2023				
Sales*	4,72,500	1,16,620	3,36,000	30,000
Add: Closing stock	11,000	16,000	13,000	7,000
Total Quantity Required	4,83,500	1,32,620	3,49,000	37,000
Less: Opening stock	13,000	15,000	10,000	6,000
Production	4,70,500	1,17,620	3,39,000	31,000

^{*}sales units are taken from sales budget

Sales Budget (in Units and sales value)

Particulars	Hot Coffee	Cold Coffee	Fruit Juice	Carbonated Soft Drink
October 2023	2,10,000	2,38,000	3,36,000	60,000
(in units)	[1,40,000	[3,40,000	[420000	
	+ (1,40,000	-(3,40,000	-	
	x 50%)]	x 30%)]	(4,20,000x20%)]	
October 2023	42,00,000	95,20,000	67,20,000	12,00,000
(Sales Value in	(2,10,000	(2,38,000	(3,36,000 x	(60,000
Rs.)	x Rs. 20)	x Rs. 40)	Rs.20)	x Rs. 20)
November	3,15,000	1,66,600	3,36,000	50,000
2023(in units)	[2,10,000	[2,38,000		
	+(2,10,000	-(2,38,000		
	x 50%)]	x 30%)]		
November 2023	63,00,000	66,64,000	67,20,000	10,00,000
(Sales Value in	(3,15,000	(1,66,600	(3,36,000 x Rs.	(50,000
Rs.)	x Rs. 20)	x Rs. 40)	20)	x Rs. 20)
December	4,72,500	1,16,620	3,36,000	30,000
2023(in units)	[3,15,000	[1,66,600		
	+(3,15,000	-(1,66,600		
	x 50%)]	x 30%)]		

December 2023	94,50,000	46,64,800	67,20,000	6,00,000
(Sales Value in	(4,72,500	(1,16,620	(3,36,000 x Rs.	(30,000
Rs.)	x Rs. 20)	x Rs. 40)	20)	x Rs. 20)

Sales Budget can also be presented in following way:

	Oct 20	Oct 2023		Nov 2023)23
	Quantity (units)	Amount (Rs.)	Quantity (units)	Amount (Rs.)	Quantity (units)	Amount (Rs.)
Hot Coffee @ Rs. 20 per unit	2, 10,000	42,00,000	3,15,000	63,00,000	4,72,500	94,50,000
Cold Coffee @ Rs. 40 per unit	2,38,000	95,20,000	1,66,600	66,64,000	1,16,620	46,64,800
Fruit Juice @ Rs. 20 per unit	3,36,000	67,20,000	3,36,000	67,20,000	3,36,000	67,20,000
Carbonated Soft Drink @ Rs. 20 per unit	60,000	12,00,000	50,000	10,00,000	30,000	6,00,000
		2,16,40,000		2,06,84,000		2,14,34,800

(10 MARKS)