Intermediate Course: Group – I **(Mock Test Paper – Series : 1)**
DATE: 31.08.2024 **MAXIMUM MARKS: 100** **TIMING: 3¼ Hours**

COST AND MANAGEMENT ACCOUNTING

1. **The question paper comprises two parts, Part I and Part II.**
2. **Part I comprises Case Scenario based Multiple Choice Questions (MCQs) for 30 Marks.**
3. **Part II comprises questions which require descriptive type answers for 70 Marks.**

PART I – Case Scenario based MCQs
Part I is Compulsory.

TOTAL MARKS: 30 MARKS

Write the most appropriate answer to each of the following multiple choice questions by choosing one of the four options given, All questions are compulsory.

Ans. 1 to Ans. 5 :
CASE SCENARIO

1. Ans. d
2. Ans. a
3. Ans. b
4. Ans. a
5. Ans. c

MCQ [5 MCQ of 2 Marks Each : Total 10 Marks]

Ans. 6 to Ans. 10 :
CASE SCENARIO

6. Ans. a
7. Ans. d
8. Ans. c
9. Ans. b
10. Ans. a

MCQ [5 MCQ of 2 Marks Each : Total 10 Marks]

11. Ans. b
12. Ans. a
13. Ans. b
14. Ans. d
15. Ans. a

{2 M Each}

PART – II - DESCRIPTIVE QUESTIONS

QUESTIONS NO. 1 IS COMPULSORY
ATTEMPT ANY FOUR QUESTIONS THE REMAINING FIVE QUESTIONS

TOTAL MARKS: 70 MARKS

Answer 1:

(a) (i) Calculation of Economic Order Quantity

{1 M}{ $EOQ = \sqrt{\frac{2AO}{C}} = \sqrt{\frac{2 \times 3{,}60{,}000\ units \times ₹\ 1200}{₹\ 24}}$ = 6,000 units **}{1 M}**

Where,
A = Annual Demand = 3,60,000 units
O = Ordering cost per order = Rs.1200
C = Inventory carrying cost per unit per annum = 10% of Rs.240 = Rs. 24

(ii) Re-order Level = Safety Stock + Lead Time Consumption **}{1/2 M}**
= 6,500 + (1,000 x 45) units = 51,500 units **}{1 M}**

Or,

Minimum level of cycle locks + [Average rate of consumption × Average time required to obtain fresh delivery] **}{1/2 M}**
= 6,500 + (1,000 x 45) units = 51,500 units **}{1 M}**

(iii) Evaluation of Profitability of Different Options of Order Quantity

(a) When EOQ is ordered (order size of 6,000 units)

		(**Rs.**)	
Purchase Cost	(3,60,000 units x Rs. 240)	8,64,00,000	**}{1/4 M}**
Ordering Cost	[(3,60,000 units/6,000 units) x Rs. 1,200]	72,000	**}{1/4 M}**
Carrying Cost	(6,000 units x Rs.240 x ½ x 10/100)	72,000	**}{1/4 M}**
Total Cost		8,65,44,000	**}{1/4 M}**

(b) When Quantity Discount is accepted (order size of 30,000 units)

		(**Rs.**)	
Purchase Cost	[3,60,000 units x Rs. 235.2 (240 - 4.8)]	8,46,72,000	**}{1/4 M}**
Ordering Cost	[(3,60,000 units/30,000 units) x Rs.1,200]	14,400	**}{1/4 M}**
Carrying Cost	(30,000 units x Rs. 235.2 x ½ x 10/100)	3,52,800	**}{1/4 M}**
Total Cost		8,50,39,200	**}{1/4 M}**

Advise – The total cost of inventory is lower if discount is accepted. Hence, the company is advised to accept the quantity discount. **}{1/2 M}**

Answer:

(b) (i) Amount of under-absorption of production overheads during the current year

	(₹)	
Total production overheads actually incurred	4,50,000	**}{1/2 M}**
during the current year		
Less : 'Written off' obsolete stores	42,000	**}{1/2 M}**
Net production overheads actually incurred : (A)	4,08,000	**}{1/2 M}**
Production overheads absorbed by 43,000 machine		
hours@ Rs. 8 per hour : (B)	3,44,000	**}{1/2 M}**
Amount of under – absorption of production overheads :		
[(A) – (B)]	**64,000**	**}{1 M}**

(ii) Accounting treatment of under absorption of production overheads

It is given in the statement of the question that 18,000 units were produced, and 5,000 units were 40% complete, 20% of the under-absorbed overheads were due to defective planning and the rest were attributable to normal increase in costs of indirect materials and indirect labour.

1.	(20 % of Rs. 64,000) i.e., Rs. 12,800 of under-absorbed overheads were due to defective planning. This being abnormal, should be debited to the Costing Profit and Loss A/c.	Rs. 12,800	**}{1/2 M}**
2.	Balance (80% of Rs.64,000) i.e., Rs. 51,200 of under-absorbed overheads should be distributed over work-in-progress, finished goods and cost of sales by using supplementary rate.	Rs. 51,200	**}{1/2 M}**
	Total under-absorbed overheads	Rs. 64,000	

Apportionment of unabsorbed overheads of Rs. 51,200 over, work-in progress, finished goods and cost of sales

	Equivalent Completed Units	(Rs.)	
Work-in-Progress			
(5,000 units × 40%×Rs. 2.56)	2,000	5,120	{1 M}
(Refer to working note)			
Finished goods			
(8,000 units × Rs. 2.56)	8,000	20,480	{1 M}
Cost of sales			
(10,000 units × Rs. 2,56)	10,000	25,600	{1 M}
	20,000	51,200	

Working Note

Supplementary rate per unit = $\frac{51,200}{20,000}$ = ₹ 2.56 **{1 M}**

Answer 2:

(i) Statement of Profit under Absorption Costing

Particulars	April (Rs.)	May (Rs.)	June (Rs.)	
Sales (units)	4,200	4,500	5,200	
Selling price per unit	2,050	2,050	2,050	
Sales value (A) {1/2 M}{	86,10,000	{1/2 M}{ 92,25,000	1,06,60,000	{1/2 M}
Cost of Goods Sold:				
Opening Stock @ Rs.1,480	0	5,92,000	4,44,000	
Production cost @ Rs.1,480	68,08,000	65,12,000	81,40,000	
Closing Stock @ Rs.1,480	(5,92,000)	(4,44,000)	(8,88,000)	
Under/ (Over) absorption	40,000	60,000	(50,000)	
Add: Fixed Selling Overheads	95,000	95,000	95,000	
Cost of Sales (B)	63,51,000	68,15,000	77,41,000	
Profit (A – B) {1/2 M}{	22,59,000	{1/2 M}{ 24,10,000	29,19,000	{1/2 M}

Workings:

1. Calculation of full production cost

	(Rs.)	
Direct Materials (4 kg. × Rs. 120)	480	{1/4 M}
Direct labour (6 hours × Rs. 60)	360	{1/4 M}
Variable production Overhead (150% of Rs. 360)	540	{1/4 M}
Total Variable cost	1,380	{1/4 M}
Fixed production overhead $\left(\frac{₹\ 60,00,000}{₹\ 60,000\ \text{units}}\right)$	100	{1/4 M}
	1,480	{1/4 M}

2. Calculation of Opening and Closing stock

	April	May	June	
Opening Stock	0	400	300	
Add: Production	4,600	4,400	5,500	
Less: Sales	4,200	4,500	5,200	
Closing Stock	{1/4 M}{ 400	300	{1/4 M} 600	{1/4 M}

3. Calculation of Under/Over absorption of fixed production overhead

	April (Rs.)	May (Rs.)	June (Rs.)
Actual Overhead	5,00,000	5,00,000	5,00,000
Overhead absorbed	4,60,000	4,40,000	5,50,000

	(4,600 units × Rs.100)	(4,400 units × Rs.100)	(5,500 units × Rs.100)	
Under/(Over) absorption	{1/2 M}{ 40,000	{1/2 M}{ 60,000	(50,000)	}{1/2 M}

(ii) Statement of Profit under Marginal Costing

Particulars	April (Rs.)	May (Rs.)	June (Rs.)	
Sales (units)	4,200	4,500	5,200	
Selling price per unit	2,050	2,050	2,050	
Sales value {1/2 M}{	86,10,000	92,25,000 }{1/2 M}	1,06,60,000	}{1/2 M}
Less: Variable production cost @ Rs.1,380	57,96,000 }{1/4 M}	62,10,000 }{1/4 M}	71,76,000	}{1/4 M}
Contribution {1/2 M}{	28,14,000	30,15,000 }{1/2 M}	34,84,000	}{1/2 M}
Less: Fixed Production Overheads	5,00,000 {1/4 M}	5,00,000 {1/4 M}	5,00,000	}{1/4 M}
Less: Fixed Selling Overheads	95,000	95,000	95,000	
Profit {1/2 M}{	22,19,000	24,20,000 }{1/2 M}	28,89,000	}{1/2 M}

(iii) Reconciliation of profit under Absorption costing to Marginal Costing

Particulars	April (Rs.)	May (Rs.)	June (Rs.)
Profit under Absorption Costing	22,59,000	24,10,000	29,19,000
Add: Opening Stock	0	{1/4 M}{ 40,000 (400 × Rs.100)	{1/4 M}{ 30,000 (300 × Rs.100)
Less: Closing Stock	{1/4 M}{ 40,000 (400 × Rs.100)	{1/4 M}{ 30,000 (300 × Rs.100)	{1/4 M}{ 60,000 (600 × Rs.100)
Profit under Marginal Costing	22,19,000	24,20,000	28,89,000

Answer 3:

(a) Operating Cost Statement

	Particulars	Total Cost Per annum (Rs.)	
A.	Fixed Charges:		
	Insurance	15,600	
	Garage rent (Rs. 2,400 × 4 quarters)	9,600	
	Road Tax	5,000	
	Salary of operating staff (Rs. 7,200 × 12 months)	86,400	
	Depreciation	68,000	
	Total (A)	1,84,600	
B.	Variable Charges:		{2 M}
	Repairs (Rs. 4,800 × 4 quarters)	19,200	
	Tyres and Tubes (Rs. 3,600 × 4 quarters)	14,400	
	Diesel {(1,80,000 km. ÷ 5 km.) × Rs. 13}	4,68,000	
	Oil and Sundries {(1,80,000 km. ÷ 100 km.) × Rs. 22}	39,600	
	Total (B)	5,41,200	
	Total Operating Cost (A+B)	7,25,800	
	Add: Passenger tax (Refer to WN-1)	3,01,275	
	Add: Profit (Refer to WN-1)	3,42,359	
	Total takings	13,69,434	

Calculation of Cost per passenger kilometre and one way fare per passenger:

Cost per Passenger-Km. $= \frac{Total\ Operating\ Cost}{Total\ Passenger-Km.}$

$= \frac{Rs.\ 7,25,800}{40,32,000\ Passenger-Km.} = Rs.\ 0.18$ **}{1 M}**

One way farer per Passenger $= \frac{Total\ Takings}{Total\ Passenger-Km.} \times 30\ Km.$

$= \frac{Rs.\ 13,69,434}{40,32,000\ Passenger-Km.} \times 30\ Km. = Rs.10.20$ **}{1 M}**

Working Notes:

1. Let total taking be X then Passenger tax and profit will be as follows:
   X = Rs. 7,25,800 + 0.22 X + 0.25X
   X – 0.47 X = Rs. 7,25,800
   $X = \frac{Rs.\ 7,25,800}{0.53} = Rs.\ 13,69,434$ **}{1 M}**
   Passenger tax = Rs. 13,69,434 × 0.22 = Rs. 3,01,275 **}{1 M}**
   Profit = Rs. 13,69,434 × 0.25 = Rs. 3,42,359 **}{1 M}**
2. Total Kilometres to be run during the year
   = 30 km.× 2 sides × 10 trips × 25 days × 12 months = **1,80,000** Kilometres **}{1/2 M}**
3. Total passenger Kilometres
   = 1,80,000 km. × 32 passengers × 70% = **40,32,000** Passenger- km. **}{1/2 M}**

Answer:

(b) Computation of profit forgone on account of employee turnover

	(Rs.)	
Contribution foregone (as calculated above)	8,13,000	
Settlement cost due to leaving	2,37,880	**}{1/2 M}**
Recruitment and Selection cost	1,40,000	**}{1/2 M}**
Training and Induction costs	1,61,950	**}{1/2 M}**
Cost of Rectification (1500 units x Rs.40)	60,000	**}{1/2 M}**
Profit foregone	**14,12,830**	

Workings:

(i) Computation of productive hours

Actual hours worked (given)	5,00,000
Less: Unproductive training hours	24,000
Actual productive hours	4,76,000 **}{1 M}**

(ii) Productive hours lost:

Loss of potential productive hours+ Unproductive training hours
= 95,000 + 24,000 = 1,19,000 hours **}{1 M}**

(iii) Loss of contribution due to unproductive hours:

$= \frac{\text{Sales value}}{\text{Actual productive hours}} \times \text{Total unproductive hours}$

$= \frac{₹\ 2,16,80,000}{4,76,000\ hrs} \times 1,19,000$ hours = ₹ 54,20,000 **}{1 M}**

Contribution lost for 1,19,000 hours = ₹ 54,20,000 x 15%
= ₹ 8,13,000 **}{1 M}**

OR

The above question can also be solved in alternative way after taking proper assumptions

Computation of profit forgone on account of employee turnover

	(Rs.)
Contribution foregone (as calculated above)	6,49,034
Settlement cost due to leaving	2,37,880
Recruitment and Selection cost	1,40,000
Training and Induction costs	1,61,950
Cost of Rectification (1500 units x Rs.40)	60,000
Profit foregone	**12,48,864**

{2 M}

Workings:

(i) Computation of productive hours

Actual hours worked (given)	5,00,000
Less: Unproductive training hours	24,000
Actual productive hours	4,76,000 **}{1 M}**

(ii) Productive hours lost:
Loss of potential productive hours
= 95,000 hours **}{1 M}**

(iii) Loss of contribution due to unproductive hours :

$$= \frac{\text{Sales value}}{\text{Actual productive hours}} \times \text{Total unproductive hours}$$

$$= \frac{₹\ 2,16,80,000}{4,76,000\ hrs} \times 95,000 \text{ hours} = ₹\ 43,26,891$$ **}{1 M}**

Contribution lost for 95,000 hours = ₹ 43,26,891 x 15%
= ₹ 6,49,034 (approx.) **}{1 M}**

Answer 4:

(a) Cost sheet for the year ended 31st March, 2023.

Units produced - 14,000 units
Units sold - 14,153 units

Particulars	Amount (Rs.)	
Raw materials purchased	43,50,000	
Add: Freight Inward	1,20,000	
Add: Opening value of raw materials	2,28,000	
Less: Closing value of raw materials	(3,05,000)	
	43,93,000	
Less: Sale of scrap of material	(7,000)	
Materials consumed	43,86,000	**}{1 M}**
Direct Wages (12,56,000 + 1,50,000)	14,06,000	**}{1/2 M}**
Prime Cost	57,92,000	**}{1/2 M}**
Factory overheads (20% of Prime Cost)	11,58,400	**}{1/2 M}**
Add: Opening value of W-I-P	1,92,500	
Less: Closing value of W-I-P	(1,40,700)	
Factory Cost	70,02,200	**}{1/2 M}**
Add: Administrative overheads	1,73,000	
Cost of Production	71,75,200	**}{1 M}**
Add: Value of opening finished stock	6,08,500	
Less: Value of closing finished stock [Rs. 500(71,75,200/14,350) × 767] (1,320 + 14,350 – 14,903 = 767 units)	(3,83,500)	**}{1 M}**

Cost of Goods Sold	74,00,200 }{1/2 M}
Distribution expenses (Rs.16 × 14,903 units)	2,38,448 }{1/2 M}
Cost of Sales	76,38,648 }{1/2 M}
Profit (Balancing figure)	9,90,189 }{1/2 M}
Sales (Rs. 579 × 14,903 units)	86,28,837 }{1 M}

Answer:

(b) (i) Expense Budget at 60%, 70% & 90% level

	60% (12,000 units) ←		70% (14,000 units) ←		90% (18,000 units) ← }{1/4 M}	
	Per unit (Rs.)	**Amount (Rs.)**	**Per unit (Rs.)**	**Amount (Rs.)**	**Per unit (Rs.)**	**Amount (Rs.)**
Sales **(A)**	400	48,00,000	388	54,32,000	384	69,12,000
Variable Costs:		}{1/4 M}		}{1/4 M}		}{1/4 M}
Direct Material	200	24,00,000	208	29,12,000	210	37,80,000
Direct Wages	60	7,20,000	60	8,40,000	60	10,80,000
Variable Factory Overheads	30	3,60,000	30	4,20,000	30	5,40,000
Variable Administrative & Selling Overheads	16	1,92,000	16	2,24,000	16	2,88,000
Total Variable Cost **(B)**	306	36,72,000 }{1/4 M}	314	43,96,000 }{1/4 M}	316	56,88,000 }{1/4 M}
Contribution **(C)=(A–B)**	94	11,28,000 }{1/2 M}	74	10,36,000 }{1/2 M}	68	12,24,000 }{1/2 M}
Fixed Costs:						
Fixed Factory Overheads (50%)	--	3,60,000	--	3,60,000	--	3,60,000
Fixed Administrative & Selling Overheads (60%)	--	2,88,000	--	2,88,000	--	2,88,000
Adverting Cost	--	--	--	--	--	20,000
Total Fixed Costs **(D)**	--	6,48,000 }{1/4 M}	--	6,48,000 }{1/4 M}	--	6,68,000 }{1/4 M}
Profit **(C – D)**	--	4,80,000 }{1/2 M}	--	3,88,000 }{1/2 M}	--	5,56,000 }{1/2 M}

(ii) Comment: Increase of production capacity to 90% is likely to increase the profit to maximum of Rs. 5,56,000 due to increase in contribution while fixed cost is slightly increased due to in advertising cost. At 70% capacity, profit is reduced to minimum of Rs. 3,88,00 due to decrease in selling price by 3% along with increase in raw material cost by 4% resulting in decrease of contribution. Therefore, it is recommended that factory should operate at 90% capacity. }{1/2 M}

Answer 5:

(a) (i) Statement of cost allocation to each product from each activity

	Product			
	A (Rs.)	**B (Rs.)**	**C (Rs.)**	**Total (Rs.)**
Power (Refer to working note)	10,00,000 }{1/2 M} (10,000 kWh × Rs. 100)	20,00,000 }{1/2 M} (20,000 kWh × Rs. 100)	15,00,000 }{1/2 M} (15,000 kWh × Rs. 100)	45,00,000
Quality Inspections (Refer to working note)	31,50,000 }{1/2 M} (3,500 inspections × Rs. 900)	22,50,000 }{1/2 M} (2,500 inspections × Rs. 900)	27,00,000 }{1/2 M} (3,000 inspections × Rs. 900)	81,00,000

Working Note:

Rate per unit of cost driver:

Power : (Rs. 60,00,000 ÷ 60,000 kWh) = Rs.100/kWh }{1 M}

Quality Inspection : (Rs. 90,00,000 ÷ 10,000 inspections) = Rs.900 per inspection }{1 M}

(ii) Calculation of cost of unused capacity for each activity:

	(Rs.)	
Power (Rs.60,00,000 – Rs.45,00,000)	15,00,000	{1 M}
Quality Inspections (Rs.90,00,000 – Rs.81,00,000)	9,00,000	{1 M}
Total cost of unused capacity	24,00,000	{1 M}

Answer:

(b) (i) Statement of Reconciliation of profit as obtained under Cost and Financial Accounts

		(Rs.)	(Rs.)	
	Profit as per Cost Records		**5,40,400**	
Add:	Administrative Overhead over absorbed	24,000		{1/2 M}
	Interest & Dividend Received	65,200		{1/2 M}
	Notional rent of own premises	60,000		{1/2 M}
	Stores adjustments (credited in financial books)	7,500		{1/2 M}
	Depreciation over charged in cost accounts	40,000	1,96,700	
		{1/2 M}	7,37,100	
Less:	Factory overheads under absorbed	84,800		{1/2 M}
	Interest paid on bank borrowings	50,000		{1/2 M}
	Losses on sale of fixed assets and investments	48,000		{1/2 M}
	Donations and subscriptions	18,800		{1/2 M}
	Over-valuation of closing stock of finished goods in cost accounts	1,25,000		{1/2 M}
	Income tax	1,50,000	(4,76,600)	
	Profit as per Financial Records	{1/2 M}	**2,60,500**	

(ii) Circumstances where reconciliation statement can be avoided:

When the Cost and Financial Accounts are integrated - there is no need to have a separate reconciliation statement between the two sets of accounts. Integration means that the same set of accounts fulfill the requirement of both i.e., Cost and Financial Accounts. {1/2 M}

Answer 6:

(a) Cost Estimate for Job

Direct Materials		**Rs.**	**Rs.**	
(i)	25 kg @ Rs. 17.20 per kg	430		
(ii)	15 kg @ Rs. 21 per kg	315	745.00	{1/2 M}
Direct Labour				
	Machine shop (30 hrs. @ Rs. 5.25)	157.50		
	Assembly shop (42 hrs. @ Rs. 4.80)	201.60	359.10	{1/2 M}
	Prime Cost		1104.10	{1 M}
Works Overhead				
	Machine shop (30 hours @ Rs. 7.35) {1/2 M}{	220.50		
	Assembly shop (42 hours @ Rs. 5.18) {1/2 M}{	217.56	438.06	
	Works Cost		1542.16	{1/2 M}
Administration overhead (20% of works cost)			308.43	{1/2 M}
	Cost of Production		1850.59	
Selling and distribution cost (30.84% of works cost)			475.60	{1/2 M}
Total Estimated Cost			2326.19	{1/2 M}

Answer:

(b)

	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 improvise them continuously	{1 M}
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.	{1 M}
3.	In case of cost control, emphasis is on past and present	3.	In case of cost reduction, it is on present and future.	{1 M}
4.	Cost control is a preventive function	4.	Cost reduction is a corrective function. It operates even when an efficient cost control system exists.	{1 M}
5.	Cost control ends when targets are achieved.	5.	Cost reduction has no visible end and is a continuous process.	{1 M}

Answer:

(c) Classification of Cost according to nature

(i) Fixed Cost : Cost which does not change according to production.
(ii) Variable Cost : Cost which change according to production.
(iii) Semi Variable Cost : Cost contain both fixed and variable cost. {2 M}

Classification of Cost according to controllability

(i) Controllable Cost : Cost that can be control in a particular cost center where it is incurred.
(ii) Uncontrollable Cost : Uncontrollability is a relative term. Practically there is no uncontrollable cost. {2 M}

OR

Answer:

(c) Buttermilk is a by-product of butter and treatment of by-product in cost accounting is as follows.

(i) When they are of small total value, the amount realized from their sale may be dealt as follows: {2 M}
- Sales value of the by-product may be credited to Profit and Loss Account and no credit be given in Cost Accounting. The credit to Profit and 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 the by-products are of considerable total value: Where by- products are of considerable total value, they may be regarded as joint products rather than as by- products. To determine exact cost of by-products the costs incurred upto the point of separation, should be apportioned over by-products and joint products by using a logical basis. {1 M}

(iii) When they require further processing: In this case, the net realisable value of the by-product at the split-off point may be arrived at by subtracting the further processing cost from realisable value of by-product. If the value is small, it may be treated as discussed in (i) above. {1 M}

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