Mock Test Paper - Series I: March 2026

Date of Paper: 23rd March 2026

Time of Paper: 10 AM – 1 PM

INTERMEDIATE: GROUP – II

PAPER – 4: COST AND MANAGEMENT ACCOUNTING

Suggested Answers/ Solution

PART I – Case Scenario based MCQs

Case Scenario 1

1. (A) 5,100

Equivalent Production (FIFO Method)

Input Details	Units	Output Particulars	Units	Equivalent Production					
				Material		Labour		Overheads	
				%	Units	%	Units	%	Units
Opening WIP	1,000	From Opening WIP	1,000	-	-	40	400	40	400
Fresh inputs	6,000	From fresh units	3,500	100	3,500	100	3,500	100	3,500
		Normal loss	900	-		-		-	
		Closing WIP	1,600	100	1,600	60	960	60	960
	7,000		7,000		5,100		4,860		4,860

2. (A) ₹ 65

Cost per Equivalent Units (EU):

Element	Total cost (₹)	Equivalent units (EU)	Cost per EU (₹)
Value of raw material introduced	3,00,000		
Less: Scrap value of normal loss	(4,200)		
Total value of raw material	2,95,800	5,100	2,95,800/5,100 = **₹ 58**
Labour	3,15,900	4,860	3,15,900/4,860 = **₹ 65**
Overheads	1,74,960	4,860	1,74,960/4,860 = **₹ 36**

3. (C) ₹ 40,800 A and ₹24,300 A respectively

Material Cost Variance for Equivalent units

Actual Material Cost = 2,95,800 (3,00,000 – 4,200)

Standard Price = ₹ 50

Equivalent units of Material = 5,100

Standard cost = 5,100 × 5 = ₹ 2,55,000

Material Cost Variance = Standard Cost – Actual Cost

= (2,55,000 – 2,95,800)

= ₹40,800 Adverse

Labour Cost Variance for Equivalent units

Actual cost of labour on completed units = ₹ 3,15,900

Standard rate per unit = ₹ 60

Standard cost = 4,860 × 60 = ₹ 2,91,600

Labour Cost Variance = Standard Cost – Actual Cost

= (₹ 2,91,600 - ₹ 3,15,900)

= ₹ 24,300 (A)

4. (D) ₹ 6,30,000

Standard Cost per Unit

Material: = 50

Labour: 3 hrs × 20 = 60

Overhead Costs = 30

Total Standard Cost = ₹140 per unit

Standard Cost of 4,500 Units

= 4,500 × 140

= ₹6,30,000

5. (C) ₹7,00,900

Completion of Opening WIP

Labour: 400 × 65 = 26,000

OH: 400 × 36 = 14,400

Add: opening cost: = 1,04,000

= **₹ 1,44,400**

Started & Completed (3,500 units)

Material = 3,500 × 58 = 2,03,000

Labour = 3,500 × 65 = 2,27,500

OH = 3,500 × 36 = 1,26,000

= **₹ 5,56,500**

Total Cost of 4,500 Units

= 1,44,400 + 5,56,500

= **₹ 7,00,900**

Case Scenario 2

6. (B) ₹ 62,42,000

7. (B) ₹ 85,62,000

8. (D) ₹ 94,68,400

9. (C) ₹ 1,05,48,000

10. (A) ₹ 1,30,98,000

Working Note:

Calculation of Cost of Production of A Ltd. for the period.....

Particulars	Amount (₹)
Raw materials purchased	64,00,000
Add: Opening stock	2,88,000
Less: Closing stock	(4,46,000)
Material consumed	**62,42,000.00**

Wages paid	23,20,000.00
Prime cost	**85,62,000.00**
Repair and maintenance cost of plant & machinery	9,80,500.00
Insurance premium paid for inventories	26,000.00
Insurance premium paid for plant & machinery	96,000.00
Gross Work Cost	**96,64,500.00**
Add: Opening value of W-I-P	4,06,000.00
Less: Closing value of W-I-P	(6,02,100)
Work Cost	**94,68,400.00**
Quality control cost	86,000.00
Research & development cost	92,600.00
Administrative overheads related with factory and production	9,00,000.00
Less: Amount realised by selling scrap	(9,200)
Add: Primary packing cost	10,200.00
Cost of Production	**1,05,48,000.00**
Administrative overheads (Other)	11,60,000.00
Salary paid to Director (Technical)	8,90,000
Television programme sponsorship cost	5,00,000
Cost of Sales	**1,30,98,000.00**

11. (B) ₹ 6,36,000

Calculation of Direct Expenses:

	Particulars	Amount (₹)
(i)	Product blueprint cost	1,90,000
(ii)	Paid for power & fuel	3,00,000
(iii)	Wages paid to factory workers	NIL
(iv)	Hire charges paid for machinery used	50,000
(v)	Commission paid to marketing manager	NIL
(vi)	Salary to office attendants	NIL
(vii)	Fee paid to technician hired in factory	96,000
(viii)	Administrative overheads	NIL
		6,36,000

Notes:

a. Wages paid to factory workers is direct employee cost.

b. Commission paid to marketing manager come under selling expenses.

c. Salary to office attendants is classified under office and administration cost.

d. Administrative overhead is indirect expense.

12. (B) 83.33%

$$\text{Activity Ratio} = \frac{\text{Standard Hours}}{\text{Budgeted Hours}} \times 100$$

$$= 83.33\%$$

13. (A) ₹ 0.0017

Cost per rupee of insured value

= Total Cost/ Total Insured Value

= 1.6 cr/920 cr = ₹ 0.0017

14. (B) BetaTab - ₹ 23,33,985, Folick - ₹ 28,07,478 and TegriCap - ₹ 11,08,537

Calculation of total production of BetaTab, Folick and TegriCap

Products	Quantity sold (tons)	Quantity of closing inventories (tons)	Total production
(1)	(2)	(3)	(4) = [(2) + (3)]
BetaTab	372	360	732
Folick	1,054	120	1,174
TegriCap	1,472	50	1,522

Calculation of Net Realisable Value (at split-off point)

	Products			Total (₹)
	BetaTab	Folick	TegriCap	
Total Production (tons) (A)	732	1,174	1,522	
Selling price per ton (₹) (B)	7,500	5,625	3,750	

Final sales value of total production (₹) [(A) x (B)]	54,90,000	66,03,750	57,07,500	1,78,01,250
Less: Additional cost (₹)	-	-	(31,00,000)	(31,00,000)
Net realisable value (₹) (at split-off point)	54,90,000	66,03,750	26,07,500	1,47,01,250

Joint cost allocated using Net Realisable Value (at split-off point):

$$\frac{\text{Total Joint cost}}{\text{Total Net Realisable Value}} \times \text{Net Realisable Value of each product}$$

BetaTab $= \left(\frac{₹\ 62,50,000}{₹\ 1,47,01,250}\right) \times ₹\ 54,90,000$

$= ₹\ 23,33,985$

Folick $= \left(\frac{₹\ 62,50,000}{₹\ 1,47,01,250}\right) \times ₹\ 66,03,750$

$= ₹\ 28,07,478$

TegriCap $= \left(\frac{₹\ 62,50,000}{₹\ 1,47,01,250}\right) \times ₹\ 26,07,500$

$= ₹\ 11,08,537$

15. (C) 800 frames

EBQ For frames manufacturing

$$EBQ = \sqrt{\frac{2DS}{C}}$$

Where, D = Annual demand for the product = 1,200 X 12 = 14,400 frames

S = Setting up cost per batch = ₹ 7,200

C = Carrying cost per unit of production = 10% of ₹ 3,240 = ₹ 324

$$EBQ = \sqrt{\frac{2 \times 14,400 \times 7,200}{324}} = 800 \text{ frames}$$

PART II – Descriptive Question

1. (a) Calculation of total cost of Job A and Job B

	Job A	Job B
Particulars	**Amount (in ₹)**	**Amount (in ₹)**
Direct Material Cost (Given)	5,000	7,500
Labour Cost (see working note)	2,900	1,400
Overheads	375 (21 hrs + 4 hrs x ₹15 per hour)	210 (14 hrs x ₹ 15 per hour)
Total	8,275	9,110

Working Note:

Normal time worked = (8 hrs – ½ hr – ½ hr) x 5day = 35 Hrs

Normal hourly wages earned

= (₹ 500 Basic + ₹ 200 D.A) x 5 days /35 Hrs

= ₹ 100 per hour

Overtime Wages = 2 x 100 per hour = ₹ 200 per hour

Cost of wages for Job A: = (35 hrs x 100 x 60%) + 4 hrs x 200

= ₹ 2,100 + ₹ 800

= ₹ 2,900

Cost of Wages of Job B: = (35 hrs x 100 x 40%)

= ₹ 1,400

(b) **Memorandum Reconciliation Account**

Debit	Amount (₹)	Credit	Amount (₹)
Net loss as per costing books	6,40,000	Transfer fee recorded in financial books	23,000
Goodwill written off not recorded in cost books	38,000	Interest on investment not included in costs	3,00,000
Under valuation of opening stock in cost accounts	32,000	Depreciation overcharge in cost books	1,00,000

Income tax not provided in costs	1,20,000	Under valuation of closing stock (finished goods) in cost accounts	76,000
Net profit as per financial books	45,000	Notional rent charges in cost books	3,20,000
		Factory overheads over recovered in cost books	56,000
Total	**8,75,000**	**Total**	**8,75,000**

(c) Weighted Average or Absolute basis – MT – Kilometer:

= (30 MT × 230 Kms) + (18 MT × 240 Kms) + (20 MT × 280 Kms)

= 6,900 + 4,320 + 5,600 = **16,820 MT - Kilometer**

Simple Average or Commercial basis – MT – Kilometer:

= [{(30 + 18 + 20) / 3} MT × {(230 + 240 + 280) Kms}]

= 22.667 MT × 750 Kms = **17,000 MT – Kilometer (approx.)**

2. (a) (i) Standard input (kgs.) of Material- B:

Material usage variance = Std. Rate (Std. Quantity – Actual Quantity)

₹ 300 Adverse = ₹ 15 (SQ – 70)

Or, -300 = 15 SQ – 1,050

Or, SQ = 50 kgs.

(ii) Actual Input (kgs) of Material- A:

Let the actual input in for Material-A is X kgs.

Material Mix Variance = Std. Price (Actual Quantity in Std. mix – Actual Quantity)

Or, Material Mix Variance (A+B) = Material Mix Variance for Material - A + Material Mix Variance for Material -B

$$\text{Or, } -45 = [₹12\{(\frac{X+70}{2})-X\}]+[₹15\{(\frac{X+70}{2})-70\}]$$

$$\text{Or, } -45 = [₹12\{\frac{X+70-2X}{2}\}]+[₹15\{\frac{X+70-140}{2}\}]$$

$$\text{Or, } -45 = [₹12\{\frac{70-X}{2}\}]+[₹15\{\frac{X-70}{2}\}]$$

$$\text{Or, } -45 = [-6X+420]+[\frac{15X-1,050}{2}]$$

$$\text{Or, } -45 = [\frac{-12X+840+15X-1,050}{2}]$$

$$\text{Or, } -90 = 3X-210$$

$$\text{Or, } X = \frac{120}{3} = 40 \text{ kgs.}$$

(iii) (a) Material Price Variance of A = Actual Quantity (Std. Rate – Actual Rate)

= 40 kg. (12 – 15) = ₹ 120 Adverse

(b) Material Price Variance of B = 70 kg. (15 – 20) = ₹ 350 Adverse

(iv) Material usage variance of A

= Std. Rate (Std. Quantity – Actual Quantity)

= 12 (50 – 40) = ₹ 120 Favourable

(v) (a) Material Cost variance of A = Std. Cost – Actual Cost

= (50 kgs. × ₹ 12) – (40 kgs. × ₹ 15)

= 600 – 600 = Nil

(b) Material Cost variance of B

= (50 kgs. × ₹ 15) – (70 kgs. × ₹ 20)

= 750 – 1,400 = ₹ 650 Adverse

(b) **Expense Budget of M/s Pentax Ltd.**

Particulars	20,000 Units (₹)	15,000 Units (₹)	18,000 Units (₹)
Direct Material	10,00,000 (20,000 x 50)	7,50,000 (15,000 x 50)	9,00,000 (18,000 x 50)
Direct Labour	4,00,000 (20,000 x 20)	3,00,000 (15,000 x 20)	3,60,000 (18,000 x 20)

Variable Overhead	3,00,000 (20,000 x 15)	2,25,000 (15,000 x 15)	2,70,000 (18,000 x 15)
Direct Expenses	1,20,000 (20,000 x 6)	90,000 (15,000 x 6)	1,08,000 (18,000 x 6)
Selling Expenses (Variable)*	2,40,000 (20,000 x 12)	1,80,000 (15,000 x 12)	2,16,000 (18,000 x 12)
Selling Expenses (Fixed)* (3 x 20,000)	60,000	60,000	60,000
Factory Expenses (Fixed) (7 x 20,000)	1,40,000	1,40,000	1,40,000
Administration Expenses (Fixed) (4 x 20,000)	80,000	80,000	80,000
Distribution Expenses (Variable)**	2,04,000 (10.20 x 20,000)	1,53,000 (10.20 x 15,000)	1,83,600 (10.20 x 18,000)
Distribution Expenses (Fixed)** (1.80 x 20,000)	36,000	36,000	36,000
	25,80,000	20,14,000	23,53,600

*Selling Expenses: Fixed cost per unit = ₹ 15 x 20% = ₹ 3

Fixed Cost = ₹ 3 x 20,000 units = ₹ 60,000

Variable Cost Per unit = ₹ 15 – ₹ 3 = ₹ 12

**Distribution Expenses: Fixed cost per unit = ₹ 12 x 15% = ₹ 1.80

Fixed Cost = ₹ 1.80 x 20,000 units = ₹ 36,000

Variable cost per unit = ₹ 12 – ₹ 1.80 = ₹ 10.20

3. (a) (i) Inventory Turnover Ratio (X) = Material Consumed / Average Stock

6 = Material Consumed / 59,400

Material consumed (X) = 3,56,400 kg. (59,400 x 6)

Material Y = Material Consumed / Average Stock

8 = Material Consumed / 1,00,800

Material Consumed	= 8,06,400 kg. (1,00,800 x 8)
Average Stock	$= \frac{\text{Opening stock + Closing Stock}}{2}$

Let opening stock is assumed to A Kg.

Closing stock will be	= A+10,800
Material X	$= \frac{A+A+10,800}{2}$ = 59,400 Kgs
2A	= 1,08,000
A	= 54,000 Kg.
Opening Stock X	= 54,000 Kg.
Closing Stock X	= 54,000 + 10,800 = 64,800 Kgs.
Material Y	$= \frac{A+A+28,800}{2}$ = 1,00,800 Kgs.
2A	=1,72,800
A	= 86,400 = Opening Stock Y
Closing Stock Y	= 86,400 + 28,800 = 1,15,200 Kg.
Purchases	= Material Consumed + Closing Stock - Opening Stock
Material X	= 3,56,400 + 64,800-54,000
	= 3,67,200 Kgs.
Material Y	= 8,06,400 + 1,15,200 -86,400
	= 8,35,200 Kgs.

(ii) Number of days for which the average inventory is held:

Number of Days in a year/ Inventory turnover ratio

Material X	= 360/6 = 60 days
Material Y	= 360/8 = 45 days

(iii) Comments:

Material Y is fast moving than that of Material X because it was held for 45 days against 60 days of X material.

(b) Overhead Distribution Statement

	Production Departments		Service Departments	
	Machine Shops	Packing	General Plant	Stores
Allocated Overheads:	(₹)	(₹)	(₹)	(₹)
Indirect labour	8,000	6,000	4,000	11,000
Maintenance Material	3,400	1,600	2,100	2,800
Misc. supplies	1,500	2,900	900	600
Supervisor's salary	--	--	16,000	--
Cost & payroll salary	--	--	80,000	--
Total allocated overheads	12,900	10,500	1,03,000	14,400
Add: Apportioned Overheads (As per Schedule below)	1,84,350	70,125	22,775	73,150
	1,97,250	80,625	1,25,775	87,550

Schedule of Apportionment of Overheads

Item of Cost	Basis	Production Departments		Service Departments	
		Machine Shops (₹)	Packing (₹)	General Plant (₹)	Stores (₹)
Power	HP hours (7 : 1 : - : 2)	54,600	7,800	--	15,600
Rent	Floor space (5 : 2 : 1 : 4)	30,000	12,000	6,000	24,000
Fuel & Heat	Radiator sec. (3 : 6 : 2 : 4)	12,000	24,000	8,000	16,000
Insurance	Investment (10 : 3 : 1 : 2)	7,500	2,250	750	1,500
Taxes	Investment (10 : 3 : 1 : 2)	5,250	1,575	525	1,050
Depreciation	Investment (10 : 3 : 1 : 2)	75,000	22,500	7,500	15,000
		1,84,350	70,125	22,775	73,150

(b) Re-distribution of Overheads of Service Departments to Production Departments:

Let, the total overheads of General Plant = 'a' and the total overheads of Stores = 'b'

a = 1,25,775 + 0.3b .....(i)

b = 87,550 + 0.2a .....(ii)

Putting the value of 'b' in equation no. (i)

a = 1,25,775 + 0.3 (87,550 + 0.2a)

Or a = 1,25,775 + 26,265 + 0.06a

Or 0.94a = 1,52,040 Or a = 1,61,745 (appx.)

Putting the value of a = 1,61,745 in equation no. (ii) to get the value of 'b'

b = 87,550 + 0.2 × 1,61,745 = 1,19,899

Secondary Distribution Summary

Particulars	Total (₹)	Machine Shops (₹)	Packing (₹)
Allocated and Apportioned overheads as per Primary distribution	2,77,875	1,97,250.00	80,625.00
- General Plant	1,61,745	80,872.50 $(1,61,745 \times \frac{5}{10})$	48,523.50 $(1,61,745 \times \frac{3}{10})$
- Stores	1,19,899	59,949.50 (1,19,899 × 50%)	23,979.80 (1,19,899 × 20%)
		3,38,072.00	1,53,128.30

4. (a) Statement of Contribution Margin on Accepting the Special Order of 3,000 Medallions

Particulars	₹
Sales Revenue (3,000 medallions x ₹ 125 per medallion)	3,75,000
Less: Variable Costs	
• Direct Materials (3,000 medallions x ₹ 38 per medallion*)	1,14,000

• Direct Labour (3,000 medallions x ₹ 44 per medallion*)	1,32,000
• Setups, Quality Control, Handling (30 batches x ₹ 550 per batch)	16,500
Contribution Margin	**1,12,500**

*Rates derived from regular cost data:

→ Direct Materials = ₹3,42,000 / 9,000 units = ₹38/unit

→ Direct Labour = ₹3,96,000 / 9,000 units = ₹44/unit

Decision – When Capacity Is 12,000 Medallions:

The plant has 3,000 units of unused capacity (12,000 – 9,000), and the special order fits within this limit. Since fixed costs will not increase and the order provides a positive contribution margin of ₹ 1,12,500, MintCraft Pvt. Ltd. should accept the special order, as it will increase operating profit.

Statement of Contribution Margin Loss Due to Capacity Constraint (When Capacity = 10,000 Medallions):

Particulars	₹
Gain in Contribution Margin from Special Order	1,12,500
Less: Loss of Contribution Margin on 2,000 Medallions of Regular Sales (W.N.1 & W.N.2)	(1,74,000)
Net Loss in Contribution Margin	(61,500)

Decision – When Capacity Is 10,000 Medallions:

Accepting the special order means MintCraft must reduce 2,000 medallions from its regular, higher-priced domestic sales. The loss in contribution from regular sales exceeds the gain from the special order, resulting in a net contribution loss of ₹ 61,500. Therefore, the special order should not be accepted under capacity constraint.

Working Notes:

W.N. 1: Contribution Margin on Current 9,000 Medallions

Particulars	₹
Sales Revenue (9,000 x ₹ 180)	16,20,000

Less: Variable Costs	
• Direct Materials (9,000 x ₹38)	3,42,000
• Direct Labour (9,000 x ₹44)	3,96,000
• Setup, Handling, QC (180 batches x ₹550)	99,000
Contribution Margin	**7,83,000**

W.N. 2: Contribution Margin on 7,000 Medallions (after reducing 2,000 units)

Particulars	₹
Sales Revenue (7,000 x ₹180)	12,60,000
Less: Variable Costs	
• Direct Materials (7,000 x ₹38)	2,66,000
• Direct Labour (7,000 x ₹44)	3,08,000
• Setup, Handling, QC (140 batches x ₹550)	77,000
Contribution Margin	**6,09,000**

Loss of Contribution Margin = ₹ 7,83,000 – ₹ 6,09,000 = ₹ 1,74,000

(b) (a) Calculation of Base Chemicals Input During the Month:

Quantities Entering Process	Litres	Quantities Leaving Process	Litres
Opening WIP	1,200	Transfer to Finished Goods	5,000
Base Chemicals Input (Bal. Fig.)	5,550	Process Losses	1,500
		Closing WIP	250
Total Input	6,750	Total Output	6,750

(b) Calculation of Normal Loss and Abnormal Loss/Gain

- **Normal Loss** = 6% of Total Input
- = 6% of 6,750 = 405 litres
- **Actual Loss** = 1,500 litres
- **Abnormal Loss** = 1,500 – 405 = 1,095 litres (Abnormal Loss)

(c) Calculation of Values of Base Chemicals, Labour, and Overheads Added

Cost Element	Rate per Litre (₹)	Equivalent Units (Ltr)	Total Cost (₹)
Base Chemicals	21	5,145	1,08,045
Mixing Labour	6	5,570	33,420
Utilities Overheads	8	5,665	45,320
Subtotal			1,86,785
Add: Scrap value of Normal Loss (405 x 12)			4,860
Total Cost Added to Process			1,91,645

Workings: Statement of Equivalent Units (Litres)

Input Details	Units	Output details	Units	Equivalent Production					
				Material		Labour		Overheads	
				Units	(%)	Units	(%)	Units	(%)
Opening WIP	1,200	Units completed:							
Units introduced	5,550	- Opening WIP	1,200	--	--	600	50	720	60
		- Fresh inputs	3,800	3,800	100	3,800	100	3,800	100
		Normal loss	405	--	--	--	--	--	--
		Abnormal loss	1,095	1,095	100	1,095	100	1,095	100
		Closing WIP	250	250	100	75	30	50	20
	6,750		6,750	5,145		5,570		5,665	

(d) Working Note:

Particulars	Equivalent Units (EU)	Cost per EU (₹)	Amount (₹)	Amount (₹)
(i) Opening W-I-P completed during the period				
Labour	600	6	3,600	
Overheads	720	8	5,760	9,360
Add: Cost of W-I-P at beginning	--	--	--	36,000

	Complete cost of 1,200 litres of opening W-I-P	1,200			45,360
(ii)	Cost of units introduced and completely processed units	3,800	35	1,33,000	1,33,000
Cost of 5,000 completed units (i) + (ii)		5,000			1,78,360
(iii)	Abnormal Loss	1095	35	38,325	38,325
(iv)	Closing W-I-P				
	Material	250	21	5,250	
	Labour	75	6	450	
	Overheads	50	8	400	6,100

Calculate of Cost of material added:

Base chemical:	1,08,045
Add: Realisable value of Scrap:	4,200
Cost of material added	1,12,905

Process Account for the Month

Particulars	Litres	Amount (₹)	Particulars	Litres	Amount (₹)
To Opening WIP	1,200	36,000	By Finished Goods (Output)	5,000	1,78,360
To Base Chemicals	5,550	1,12,905	By Normal Loss (405 x 12)	405	4,860
To Mixing Labour	—	33,420	By Abnormal Loss (1,095 x 35)	1,095	38,325
To Utilities Overheads	—	45,320	By Closing WIP	250	6,100
Total	**6,750**	**2,27,645**	**Total**	**6,750**	**2,27,645**

5. (a) (i) Absorption Costing System

Operating Income -

Particulars	Lemon	Grapes	Papaya	Total
Revenue	79,350	2,10,060	1,20,990	4,10,400
Less: Cost of Goods Sold	60,000	1,50,000	90,000	3,00,000
Less: Store Support Cost (2:5:3)	18,000	45,000	27,000	90,000

Operating Income	1,350	15,060	3,990	20,400
Operating Income (%)	1.70	7.17	3.30	4.97

(ii) ABC System

Overhead Allocation Rate -

Activity	Total Costs (₹)	Quantity of Cost Allocation Base	Overhead Allocation Rate (₹)
Ordering	15,600	156 Purchase Orders	100.00
Delivery	25,200	315 Delivering Orders	80.00
Shelf Stocking	17,280	864 Self Stocking Hours	20.00
Customer Support	30,720	1,53,600 Items Sold	0.20

Store Support Cost -

Particulars	Cost Driver	Lemon	Grapes	Papaya	Total
Bottle Returns	Direct	1,200	0	0	1,200
Ordering	Purchase Orders	3,600	8,400	3,600	15,600
Delivery	Deliveries	2,400	17,520	5,280	25,200
Self -Stocking	Hours of time	1,080	10,800	5,400	17,280
Customer Support	Items Sold	2,520	22,080	6,120	30,720
Grand Total		10,800	58,800	20,400	90,000

Operating Income -

Particulars	Lemon	Grapes	Papaya	Total
Revenue	79,350	2,10,060	1,20,990	410,400
Less: Cost of Goods Sold	60,000	1,50,000	90,000	300,000
Less: Store Support Cost	10,800	58,800	20,400	90,000
Operating Income	8,550	1,260	10,590	20,400
Operating Income (%)	10.78	0.60	8.75	4.97

(b) Zero-based Budgeting (ZBB) is defined as a method of budgeting which requires each cost element to be specifically justified, though the activities to which the budget relates are not being undertaken for the first time. The cost of each activity has to be justified and without justification, the budget allowance is zero.

ZBB involves the following stages:

(i) Identification and description of Decision packages

(ii) Evaluation of Decision packages

(iii) Ranking (Prioritisation) of the Decision packages

(iv) Allocation of resources

6. (a)

Sr. No.	Particulars	Type of Responsibility Centre
(i)	Decentralised branches of an organisation	Profit Centre
(ii)	Public sector undertaking of Central Government	Investment Centre
(iii)	Customer support department of an e-commerce company	Cost Centre
(iv)	Restaurant unit in a hotel	Profit Centre
(v)	Reservation department of airlines	Revenue Centre

(b) (i) Two types of costs which are associated with employee turnover are:

(a) Preventive Costs: The cost incurred to prevent employee turnover or keep it as lowest as possible. Cost incurred for prevention of employee turnover includes the following:

(i) Cost of medical benefit provided to the employees;

(ii) Cost incurred on employees' welfare like pension etc.

(iii) Cost on other benefits with an objective to retain employees.

(b) Replacement Costs: These are the costs which arise due to employee turnover. If employees leave soon after they acquire the necessary training and experience of good work, additional costs will have to be incurred on new workers, *i.e.,* cost of recruitment, training and induction, abnormal breakage and scrap and extra wages and overheads due to the inefficiency of new workers.

(ii) The important factors which must be taken into consideration for increasing employee productivity are as follows:

1. Employing only those workers who possess the right type of skill.

2. Placing a right type of person to a right job.

3. Taking appropriate measures to avoid the situation of excess or shortage of employees.

4. Carrying out work study for fixation of wages and for the simplification and standardisation of work.

(c) (i) **Explanation of the impact of batch size on setup and holding costs:** If the size is higher, the set up cost may decline due to lesser number of set ups required; but units in inventory will go up leading to higher holding costs. If the lot size is lower, lower inventory holding costs are accomplished but only with higher set up costs.

(ii) **Determination and importance of EBQ:** Economic batch quantity is the size of a batch where total cost of set-up and holding costs are at minimum. This relationship is such that with the higher batch size, holding cost shows a tendency to increase whereas set-up costs show a declining trend. The point where both the cost lines intersect each other represents the lowest cost combination. The economic batch size or Economic Batch Quantity may be determined by calculating the total cost for a series of possible batch sizes and checking which batch size gives the minimum cost. Alternatively, a formula can be derived which is similar to determination of Economic Order Quantity (EOQ). The objective here being to determine the production lot (batch size) that optimizes on both set up and inventory holding costs.

OR

(c) Cost-Volume-Profit (CVP) analysis is a managerial tool showing the relationship between various ingredients of profit planning viz., cost, selling price and volume of activity. As the name suggests, cost volume profit (CVP) analysis is the analysis of three variables, cost, volume and profit. Such an analysis explores the relationship between costs, revenue, activity levels and the resulting profit. It aims at measuring variations in cost and volume.

An understanding of CVP analysis is extremely useful to management in budgeting and profit planning.

It elucidates the impact of the following on the net profit:

(i) Changes in selling prices,

(ii) Changes in volume of sales,

(iii) Changes in variable cost,

(iv) Changes in fixed cost.