

Mock Test Paper - Series II: April, 2025

Date of Paper: 3rd April, 2025

Time of Paper: 10 A.M. – 1 P.M.

INTERMEDIATE: GROUP – II
PAPER – 4: COST AND MANAGEMENT ACCOUNTING
ANSWERS

Part 1

1. (c) ₹ 92,00,000

Quarter 1:

	Amount (₹)
Sales	80,00,000
(-) COGS	(38,00,000)
(-) Operating expenses	(12,50,000)
(-) Non-operating expenses	<u>(13,00,000)</u>
EBIT of 1ST Quarter	<u>16,50,000</u>

Let's assume no. of units sold in 1st quarter = X

EBIT per unit of 1st quarter = $38.857 + 8.285 = ₹ 47.142$

Then, $16,50,000/X = 47.142$

X = 35,000 units

Number of units sold in 2nd Qtr. = $35,000 + 35,000 \times 0.25 = 43,750$ units

Selling price in Qtr 1 = $80,00,000/35,000 = ₹ 228.571$

Selling price in Qtr 2 = ₹ 210.285

Sales in Qtr 2 = $210.285 \times 43,750 = ₹ 92,00,000$

2. (a) ₹ 49,40,000 & ₹ 1,10,000

COGS is 100% variable

VC per unit of operating expenses = 30% of COGS per unit

COGS per unit = $38,00,000/35,000 = ₹ 108.571$

$$\begin{aligned} \text{VC per unit of operating expenses} &= 30\% \times 108.571 = ₹ 32.571 \\ \text{VC in operating expenses} &= 32.571 \times 35,000 = 11,40,000 \\ \text{Fixed cost in operating expenses} &= 12,50,000 - 11,40,000 = ₹ 1,10,000 \\ \text{Total Variable Cost} &= 11,40,000 + 38,00,000 = ₹ 49,40,000 \\ \text{Total fixed cost} &= ₹ 1,10,000 \end{aligned}$$

3. (d) **Non-operating expenses increased by ₹ 11,50,000**

$$\begin{aligned} \text{EBIT in Qtr 2} &= 38.857 \times 43,750 = ₹ 17,00,000 \\ \text{Non operating expenses in 2}^{\text{nd}} \text{ Qtr} &= \text{Revenue} - \text{VC} - \text{FC} - \text{EBIT} \\ &= 92,00,000 - 49,40,000 - 1,10,000 - 17,00,000 \\ &= ₹ 24,50,000 \\ \text{Non operating expenses in 1}^{\text{st}} \text{ Qtr} &= ₹ 13,00,000 \\ \text{NOE increased by} &= 11,50,000 \end{aligned}$$

4. (a) **₹ 4,65,000**

$$\begin{aligned} \text{EBIT of 1}^{\text{st}} \text{ Qtr} &= ₹ 16,50,000 \\ \text{EBT of 1}^{\text{st}} \text{ Qtr} &= \text{EBIT} - \text{Int} = 16,50,000 - 1,50,000 = ₹ 15,00,000 \\ \text{Tax Provision for 1}^{\text{st}} \text{ Qtr} &= ₹ 4,50,000 \\ \text{Tax rate} &= 4,50,000 / 15,00,000 = 30\% \\ \text{EBT for 2}^{\text{nd}} \text{ Qtr} &= 17,00,000 - 1,50,000 = ₹ 15,50,000 \\ \text{Tax provision for 2}^{\text{nd}} \text{ Qtr} &= 15,50,000 \times 30\% = ₹ 4,65,000 \end{aligned}$$

5. (c) **₹ 41,50,000**

$$\begin{aligned} \text{Profit in 2}^{\text{nd}} \text{ Qtr as per Marginal Costing} \\ &= \text{Sales} - \text{VC} - \text{FC} \\ &= 92,00,000 - 49,40,000 - 1,10,000 = ₹ 41,50,000 \end{aligned}$$

6. (b) **₹ 29,250**

$$\begin{aligned} \text{Fixed Costs per Trip per Bus} \\ &= \frac{\text{Total Fixed Costs}}{\text{Number of Buses} \times \text{Number of Trips}} \\ &= ₹ 13,00,000 / (10 \times 20) = ₹ 6,500 \end{aligned}$$

Semi-Variable Costs (Repairs & Maintenance) per Trip per Bus

$$= \frac{\text{Total Semi – Variable Costs}}{\text{Number of Buses} \times \text{Number of Trips}}$$

$$= ₹ 1,50,000 / (10 \times 20) = ₹ 750$$

Variable Costs per Trip per Bus

$$= (\text{Fuel} + \text{Lubricants and Oils}) \times \text{Distance per Trip} + \text{Wages}$$

$$= (₹ 35 + ₹ 5) \times (150 \text{ kms} \times 2) + ₹ 10,000 = ₹ 22,000$$

$$\text{Total Cost per Trip per Bus} = ₹ 6,500 + ₹ 750 + ₹ 22,000 = ₹ 29,250$$

Total Fixed Costs:

- Insurance: ₹ 2,00,000
- License Fees: ₹ 50,000
- Salaries to Driver and Conductor: ₹ 5,00,000
- Garage Rent: ₹ 1,00,000
- Depreciation: ₹ 3,00,000
- Administration Expenses: ₹ 1,50,000
- **Total Fixed Costs: ₹ 13,00,000**

Repairs & Maintenance calculation

- Let x be the fixed portion of the semi-variable costs.
- Let y be the variable cost per trip.

Formulate Equations from Given Data:

- April: $x + 18y = 1,40,000$
- May: $x + 22y = 1,60,000$

Solve for y:

- Subtract the April equation from the May equation:
- $(x+22y) - (x+18y) = 1,60,000 - 1,40,000$
- $y = 5,000$
- Using the April equation:
- $x + 18 \times (5,000) = 1,40,000$

- $x = 50,000$

Calculate Semi-Variable Costs for 20 Trips:

- Semi-variable costs = $x + 20y$
- Semi-variable costs = $50,000 + 20 \times 5,000 = 1,50,000$

7. (d) **₹ 5,85,000**

Fixed Costs per Bus per Month = ₹ 13,00,000 / 10 = ₹ 1,30,000

Semi-Variable Costs per Bus per Month = ₹ 1,50,000 / 10 = ₹ 15,000

Variable Costs per Trip = (Fuel + Lubricants and Oils) x Distance per Trip + Wages

= (₹ 35 + ₹ 5) x 300 + ₹ 10,000 = ₹ 22,000

Variable Costs for 20 trips = ₹ 4,40,000

Total Cost per Bus per Month = ₹ 1,30,000 + ₹ 15,000 + ₹ 4,40,000 = ₹ 5,85,000

8. (c) **₹ 80,00,000**

Monthly Revenue = Number of Buses x Number of Trips x Average Occupancy Rate x Ticket Price

= $10 \times 20 \times 50 \times 80\% \times ₹ 1,000 = ₹ 80,00,000$

9. (c) **47 passengers**

No. of Passengers per trip to recover total cost = Total Cost per Trip / Ticket Price

= ₹ 29,250 / ₹ 635 = 46.03 passengers per trip \approx 47 passengers per trip

10. (a) **₹ 2.438**

Total Passenger-Kilometers = 10 buses x 20 trips x 40 passengers (50 x 80%) x 150 km x 2

= 24,00,000 passenger-kms

Cost per Passenger-Kilometer = Total Monthly Cost / Total Passenger-Kilometers

= ₹ 29,250 x (10x20) / 24,00,000

= ₹ 58,50,000/24,00,000

= ₹ 2.438 per passenger-kilometer

11. (a) **400 (A) and 2,600 (F)**

Variable overhead cost variance: Standard Variable overheads - Actual variable overheads

$$8,000/2,500 \times 3,000 - 10,000 = 400A$$

Fixed overhead cost variance: Standard fixed overheads - Actual fixed overheads

$$12,000/2,500 \times 3,000 - 11,800 = 2,600F$$

12. (a) **58,000 under-absorbed**

Particulars	Amount (₹)
Absorption rate	15
Actual hours	60,000
Absorbed Overheads	9,00,000
Actual overheads (11,00,000 - 26,000)	10,74,000
Under absorption	1,74,000
1/3 of 1,74,000	58,000

13. (c) **1,852**

Calculation of fare per passenger nautical mile:

$$\frac{55,56,000}{18.52 \times 100 \times 2 \times 30}$$

= 50 per passenger nautical mile

$$\text{Fare for round trip} = 50 \times 18.52 \times 2 = 1,852$$

14. (b) **2,800 units**

Equivalent Units = Units Completed + (Units in Process x Degree of Completion)

$$\text{Equivalent Units for Labour} = 2,500 + (500 \times 0.60)$$

$$= 2,800 \text{ units}$$

15. (c) **₹ 2 per unit**

$$\text{Number of runs for X} = \frac{\text{Total production of X}}{\text{Batch size of X}} = 50,000/2,000 = 25 \text{ runs}$$

$$\text{Number of runs for Y} = \frac{\text{Total production of Y}}{\text{Batch size of Y}} = 50,000/5,000 = 10 \text{ runs}$$

$$\text{Set-up cost per run} = \frac{\text{Total set-up cost}}{\text{Total Runs}} = 3,50,000/35 = ₹ 10,000 \text{ per run}$$

$$\text{Set-up cost per unit of Y} = \frac{\text{set-up cost per run}}{\text{Batch size of Y}} = 10,000/5,000 = ₹ 2 \text{ per unit}$$

Part II – Descriptive Question

1. (a) (i) **Calculation of optimum purchase order size or Economic Order Quantity (EOQ):**

$$\text{EOQ} = \sqrt{\frac{2 \times A \times O}{C \times i}}$$

Where, A = Annual requirement for inventory = 1,000 units × 12 months = 12,000 units

O = Ordering cost = ₹ 540

C = Cost per unit = ₹ 60

C × i = Carrying cost per unit per annum = 20% × ₹ 60 = ₹ 12

$$\text{EOQ} = \sqrt{\frac{2 \times 12,000 \text{ units} \times ₹ 540}{₹ 12}} = \sqrt{\frac{1,29,60,000}{12}} = 1,039.23 \text{ or } 1,039 \text{ units.}$$

- (ii)

Order Size (in units)	1,500	2,000	4,000	6,000	8,000
No. of order	8	6	3	2	1.5*
Cost per order (₹)	540	540	540	540	540
Average inventory	750	1,000	2,000	3,000	4,000
Cost per unit (₹)	60.00	59.80	59.50	58.90	58.40
Carrying cost per unit @ 20% (₹)	12.00	11.96	11.90	11.78	11.68
(a) Ordering Cost (₹)	4,320	3,240	1,620	1,080	810
(b) Carrying cost (₹)	9,000	11,960	23,800	35,340	46,720
(c) Material cost (₹)	7,20,000	7,17,600	7,14,000	7,06,800	7,00,800
Total Cost {(a) + (b) + (c)} (₹)	7,33,320	7,32,800	7,39,420	7,43,220	7,48,330

*(This may also be taken as 2 orders)

At order level of 2,000 units, the total cost to the company is least.

(iii) **Calculation of amount of loss due to bank's inability to process more than five fund transfer requests:**

No. of orders	5
Purchase quantity per order (12,000 units ÷ 5)	2,400 units
Cost per unit	₹ 59.80
(a) Ordering Cost (₹ 540 × 5 orders)	₹ 2,700
(b) Carrying Cost (20% of ₹ 59.80 × 1,200 units)	₹ 14,352
(c) Material Cost (₹ 59.80 × 12,000 units)	₹ 7,17,600
Total Cost {(a) + (b) + (c)}	₹ 7,34,652
Minimum cost at 2,000 units order level	₹ 7,32,800
Loss	₹ 1,852

(b) Projected weekly output	-	38,400 units
No of units per man hour	-	6 units
No of Manhours needed	-	6,400 hours
No of hours available	-	4,800 hours
Overtime needed	-	1,600 hours
Therefore, total wages during overtime:		
Normal Wages (6,400 x 20)	-	1,28,000
Overtime premium (1,600 x 10)	-	16,000
Total Wages	-	1,44,000
Upon introduction of incentive scheme		
No of units per man hour	-	8 units
No of manhours needed	-	4,800 hours
Time saved (OT saved)	-	1,600 hours

Halsey Scheme Incentive

= 50% of time saved × Time rate

= 1,600 hours x 20 per hour x 50% = 16,000

Total Labour Cost = 96,000 + 16,000 = 1,12,000

Rowan Scheme Incentive

$$= \frac{\text{Time taken}}{\text{Time allowed}} \times \text{Time saved} \times \text{hourly rate}$$

$$= (1,600/6,400) \times 4,800 \times 20 = 24,000$$

$$\text{Total Labour Cost} = 96,000 + 24,000 = 1,20,000$$

Statement of profitability

Particulars	Overtime	Halsey	Rowan
Sales @ ₹ 22	8,44,800	8,44,800	8,44,800
Less: Direct costs	6,14,400	6,14,400	6,14,400
Less: Labour	1,44,000	1,12,000	1,20,000
Less: Variable Overhead	6,400	4,800	4,800
Less: Fixed Overhead	18,000	18,000	18,000
Profit	62,000	95,600	87,600

(c) Statement of Overhead costs

Particulars	Computation	Amount (₹)
Depreciation	$(19,05,000 - 1,05,000)/12$	1,50,000
Operator's wages	$(₹ 3,630 \times 4 \text{ Operators} \times 54 \text{ Weeks} \times 115\%) / 8 \text{ Machines}$	1,12,711.5
Maintenance Cost	Given – ₹ 37,500	37,500
Electricity	$(2,592 \text{ hours} - 392 \text{ hours}) \times 16 \times ₹ 4.5$	1,58,400
General Overhead allocated	$(75,000 \times 110\%/8 \text{ machines})$	10,312.5
Performance Chemical	$(₹ 600/6 \text{ days}) \times 324$	32,400
Total Overheads		5,01,324

Computation of Machine Hour Rate

When set up time is productive,

Effective machine hours = 2,592 hours – 300 hours maintenance = 2,292 hours

Hence Machine hour rate = $5,01,324/2,292 = ₹ 218.73$

When set up time is unproductive,

Effective machine hours = 2,592 hours – 300 hours maintenance – 92 hours set up = 2,200 hours.

Machine hour rate = $5,01,324/2,200 = ₹ 227.87$ per hour

2. (a)	Prime cost	= 11,93,250
	Direct Labour	= 6,66,750
	Direct Material consumed (Prime cost – Direct Labour)	= 5,26,500
	Opening Raw Material (RM)	= 1,20,000
	Purchase of RM	= 7,50,000
	Closing RM (Op RM + Purchases – Materials Consumed)	= 3,43,500
	Sales	22,50,000
	Less: Gross profit @ 30%	6,75,000
	Cost of Sales	15,75,000
	Cost of goods available for sales	16,67,325
	Hence Closing Finished goods (FG)	92,325 (16,67,325 – 15,75,000)
	Opening Finished goods	1,13,250
	Cost of Production (Cost of Sales + Closing FG – Opening FG)	=15,54,075
	Conversion costs = Labour + Production Overhead	
	Overhead = 40% and hence labour = 60%	
	Hence total conversion cost = $6,66,750/60\% = 11,11,250$	
	Hence POH (Total conversion – Labour cost) = 4,44,500	
	Works Cost	= 16,37,750
	Opening Work in progress (WIP)	= 60,000
	Closing Work in progress (Work Cost + Opening WIP – Closing WIP)	= 1,43,675

(b) (i) Costing Profit and Loss Account for the year ended 31st March 2024:

Particulars	Amount (₹)	Particulars	Amount (₹)
Material consumed	14,16,000	Sales (30,000 units)	30,00,000
Direct wages	7,42,000		
Prime Cost	21,58,000		
Works overheads (20% of Prime cost)	4,31,600		
	25,89,600		
Less: Work in progress	(54,000)		
Factory cost	25,35,600		
Administration overheads (₹ 5 × 32,000 units)	1,60,000		
Cost of production of goods produced	26,95,600		
Less: Finished stock	(1,68,475)		
Cost of production of goods sold	25,27,125		
Selling and distribution overheads (₹ 6 × 30,000 unit)	1,80,000		
Cost of sales	27,07,125		
Profit (balancing figure)	2,92,875		
	30,00,000		30,00,000

(ii) Statement reconciling the profit as per costing profit and loss account with the profit as per financial accounts

Particulars	Amount (₹)	Amount (₹)
Profit as per cost records		2,92,875
Add: Overheads over-absorbed:		
- Works overheads (₹ 4,31,600 – ₹ 4,26,000)	5,600	
- Administration OH (₹ 1,60,000 – ₹ 1,50,000)	10,000	
- Selling and Distribution (₹ 1,80,000 – ₹ 1,65,000)	15,000	30,600
Less: Closing stock overvalued (₹ 1,68,475 – ₹ 1,67,500)		(975)
Profit as per financial accounts		3,22,500

*It is assumed that there is no opening stock

$$\begin{aligned} \text{No. of units produced} &= \text{Number of units sold} + \text{Finished stock} \\ &= 30,000 + 2,000 = 32,000 \text{ units.} \end{aligned}$$

3. (a) Actual Cost of Material (Actual Quantity x Actual Price) = 25,740

$$\begin{aligned} \text{Material Cost Variance} &= \text{Price Variance} + \text{Usage Variance} \\ &= 1,170A + 750F = 420A \end{aligned}$$

$$\begin{aligned} \text{Standard Cost of Materials (Standard Quantity x Standard Price)} \\ &= \text{Actual cost} \pm \text{Cost variance} \\ &= 25,740 - 1170 + 750 = 25,320 \end{aligned}$$

$$\text{SQ} \times \text{SP} = 25,320, \text{ SP} = 3 \text{ per unit hence } \mathbf{SQ = 8,440}$$

$$\text{AQ} \times \text{SP} = (\text{SQ} \times \text{SP}) + \text{Usage Variance} = 25,320 - 750 = 24,570$$

$$\mathbf{\text{Hence AQ of Material} = 8,190}$$

$$\text{AQ} \times \text{AP} = 25,740$$

$$\mathbf{\text{Hence AP of Material} = ₹ 3.142}$$

$$\text{Actual Wages paid (AH} \times \text{AR)} = 65,368$$

$$\begin{aligned} \text{Wage cost variance} &= \text{Wage efficiency variance} + \text{Wage rate variance} \\ &= 1352 F - 800 A = 552 F \end{aligned}$$

$$\begin{aligned} \text{SH} \times \text{SR} &= \text{Actual Wages paid} \pm \text{Wage cost variance} \\ &= 65,368 + 552 = 65,920 \end{aligned}$$

$$\mathbf{SH = 4,120 \text{ hours}}$$

$$\text{AH} \times \text{SR} = \text{SH} \times \text{SR} \pm \text{Efficiency variance} = 66,720$$

$$\mathbf{AH \text{ thereon} = 4,170 \text{ hours}}$$

$$\text{AH} \times \text{AR} = 65,368$$

$$\mathbf{AR = 15.676}$$

$$\text{SH} \times \text{SR (Absorbed Overheads)} = 4,120 \times 20 = 82,400$$

$$\mathbf{\text{Actual Output} = 4,120/10 = 412 \text{ units}}$$

$$\begin{aligned} \text{OH Cost variance} &= \text{Volume Variance} + \text{Expenditure Variance} \\ &= 1,400 F + 900 F \end{aligned}$$

	= 2,300 F
Actual FOH	= 82,400 – 2,300 = 80,100
Budgeted FOH	= Actual FOH ± Expenditure Variance
Budgeted FOH	= 80,100 + 900 = 81,000
BO x SR = BFOH	= 81,000/200 = 405 units
Budgeted Units	= 405 units
(SH x SR – AH x SR)	= 82,400 – (4,170 x 20) = 1,000A
OH Efficiency Variance	= 1,000A
AH x SR – BFOH	= 83,400 – 81,000
OH Capacity Variance	= 2,400 F

(b) **Treatment of various items of Cost in Cost Sheet/Statement**

- (i) **Abnormal costs:** Any abnormal cost, where it is material and quantifiable, shall not form part of cost of production or acquisition or supply of goods or provision of service. Examples of abnormal costs are:
- Cost pertaining to or arising out of a pandemic e.g. COVID-19
 - Cost associated with employees due to sudden lockdown.
- (ii) **Subsidy/Grant/Incentives:** Any such type of payment received/receivable are reduced from the cost objects to which such amount pertains.
- (iii) **Penalty, fine, damages, and demurrage:** These types of expenses are not form part of cost.
- (iv) **Interest and other finance costs:** Interest, including any payment in the nature of interest for use of non-equity funds and incidental cost that an entity incurs in arranging those funds. Interest and finance charges are not included in cost of production. Interest and Financing Charges shall be presented in the cost statement as a separate item of cost of sales.

4. (a) (i) **Production Statement**

For the year ended 31st March, 2025

	Amount (₹)
Direct materials	18,00,000
Direct wages	15,00,000

	Prime Cost	33,00,000
Factory overheads		9,00,000
	Cost of Production	42,00,000
Administration overheads		8,40,000
Selling and distribution overheads		10,50,000
	Cost of Sales	60,90,000
Profit		12,18,000
	Sales value	73,08,000

Calculation of Rates:

- Percentage of factory overheads to direct wages

$$= \frac{₹9,00,000}{₹15,00,000} \times 100 = 60\%$$
- Percentage of administration overheads to Cost of production

$$= \frac{₹8,40,000}{₹42,00,000} \times 100 = 20\%$$
- Selling and distribution overheads = ₹ 10,50,000 × 115%
= ₹ 12,07,500
Selling and distribution overhead % to Cost of production

$$= \frac{₹12,07,500}{₹42,00,000} \times 100 = 28.75\%$$
- Percentage of profit to sales = $\frac{₹12,18,000}{₹73,08,000} \times 100 = 16.67\%$ or, 1/6

(ii) **Calculation of price for the job received in 2025-26**

	Amount (₹)
Direct materials	4,80,000
Direct wages	3,00,000
Prime Cost	7,80,000
Factory overheads (60% of ₹ 3,00,000)	1,80,000
Cost of Production	9,60,000
Administration overheads (20% of ₹ 9,60,000)	1,92,000

Selling and distribution overheads (28.75% of ₹ 9,60,000)	2,76,000
Cost of Sales	14,28,000
Profit (1/5 of ₹ 14,28,000)	2,85,600
Sales value	17,13,600

(b) The total production overheads are ₹ 26,00,000:

Product A: 10,000 × ₹ 30 = ₹ 3,00,000

Product B: 20,000 × ₹ 40 = ₹ 8,00,000

Product C: 30,000 × ₹ 50 = ₹ 15,00,000

On the basis of ABC analysis this amount will be apportioned as follows:

Statement Showing "Activity Based Production Cost"

Activity Cost Pool	Cost Driver	Ratio	Total Amount (₹)	A (₹)	B (₹)	C (₹)
Stores Receiving	Purchase Requisition	6:9:10	2,96,000	71,040	1,06,560	1,18,400
Inspection	Production Runs	5:7:8	8,94,000	2,23,500	3,12,900	3,57,600
Dispatch	Orders Executed	6:9:10	2,10,000	50,400	75,600	84,000
Machine Setups	Setups	12:13:15	12,00,000	3,60,000	3,90,000	4,50,000
Total Activity Cost			7,04,940	8,85,060	10,10,000	
Quantity Sold			10,000	20,000	30,000	
Unit Cost (Overheads)			70.49	44.25	33.67	
Add: Conversion Cost			80	80	90	
Total			150.49	124.25	123.67	

(c) Idle capacity costs can be treated in product costing, in the following ways:

(a) If the idle capacity cost is due to unavoidable reasons such as repairs, maintenance, changeover of job etc., a supplementary overhead rate may be used to recover the idle capacity cost. In this case, the costs are charged to the production capacity utilised.

(b) If the idle capacity cost is due to avoidable reasons such as faulty planning, power failure etc.; the cost should be charged to costing profit and loss account.

- (c) If the idle capacity cost is due to seasonal factors, then, the cost should be charged to the cost of production by inflating overhead rates.

5 (a) (i) **Statement showing the apportionment of joint costs to joint products**

	Products			Total
	A	B	C	
Output sold Kg.: (I)	44,000	40,000	20,000	
Selling price per kg. at split off (₹): (II)	20	22	10	
Sales value at split off (₹): (I) x (II)	8,80,000	8,80,000	2,00,000	19,60,000
Joint costs (costs incurred in department P (₹) (apportioned on the basis of sales value at the point of split off) i.e. (22:22:5) (Working Note 1)	8,80,000	8,80,000	2,00,000	19,60,000

(ii) **Statement showing product-wise and total profit for the month under reference (as per the company's current processing policy)**

	Products			Total
	A	B	C	
Output (kg.) : (a)	44,000	40,000	20,000	
Selling price per kg. after further processing (₹): (b)	32	24	16	
Sales value after further processing (₹): (c) = {(a) x (b)}	14,08,000	9,60,000	3,20,000	26,88,000
Joint costs (₹): (d)	8,80,000	8,80,000	2,00,000	19,60,000
Further processing costs (₹): (e) (Working Note 2)	1,72,800	1,15,200	64,800	3,52,800
Total costs (₹): (f) = [(d) + (e)]	10,52,800	9,95,200	2,64,800	23,12,800
Profit/ (Loss) (₹): [(c)– (f)]	3,55,200	(35,200)	55,200	3,75,200

(iii) **Processing decision to improve the profitability of the company.**

44,000 units of product A and 20,000 units of product C should be further processed because the incremental sales revenue generated after further processing is more than the further processing costs incurred. 40,000 units of product B should be sold at the point-of-split off because the incremental revenue generated after further processing is less than the further processing costs.

(iv) **The product wise and total profit arising from the recommendation in (iii) above is as follows:**

Product	A	B	C	Total
Profit (₹)	3,55,200	-	55,200	4,10,400

Working Notes:

1. Statement of department-wise costs

	P	Q	R	S
	(₹)	(₹)	(₹)	(₹)
Raw materials	12,68,800			
Wages	3,84,000	96,000	64,000	36,000
Overheads (Apportioned on the basis of departmental direct wages i.e. 96:24:16:9)	3,07,200	76,800	51,200	28,800
Total Cost	19,60,000	1,72,800	1,15,200	64,800

2. Joint costs and further processing costs

- (i) Costs incurred in the department P are joint costs of products A, B and C and are equal to ₹ 19,60,000.
- (ii) Costs incurred in the departments Q, R and S are further processing costs of products A, B and C respectively. Further processing costs of products A, B and C thus are ₹ 1,72,800; ₹ 1,15,200 and ₹ 64,800 respectively.

(b) Cash Budget

Particulars	July (₹)	August (₹)	September (₹)
Cash sales	6,75,000	7,20,000	8,10,000

Receipts from credit sales (WN1)	22,05,000	22,77,000	22,86,000
Total receipts (A)	28,80,000	29,97,000	30,96,000
Payment for purchases (WN2)	(16,20,000)	(17,55,000)	(18,00,000)
Other operating costs paid	(10,98,000)	(11,07,000)	(11,07,000)
Pallet jacks		(2,25,000)	(2,25,000)
Total payments (B)	(27,18,000)	(30,87,000)	(31,32,000)
Net cash (A - B)	1,62,000	(90,000)	(36,000)
Opening balance	1,35,000	2,97,000	2,07,000
Closing balance	2,97,000	2,07,000	1,71,000

Working Notes:

(WN1) Credit sales - receipts

Particulars	Total Sales (₹)	July (₹)	August (₹)	September (₹)
April	22,50,000	1,80,000	-	-
May	22,50,000	2,25,000	1,80,000	-
June	22,50,000	18,00,000	2,25,000	1,80,000
July	23,40,000	-	18,72,000	2,34,000
August	23,40,000	-	-	18,72,000
Total		22,05,000	22,77,000	22,86,000

(WN2) Credit purchases – payments

Particulars	Total purchases (₹)	July (₹)	August (₹)	September (₹)
May	16,20,000	4,05,000	-	-
June	16,20,000	12,15,000	4,05,000	-
July	18,00,000	-	13,50,000	4,50,000
August	18,00,000	-	-	13,50,000
Total		16,20,000	17,55,000	18,00,000

6. (a) Before installation of a system of cost accounting in a manufacturing organisation the under mentioned factors should be studied:

- (a) **Objective:** The objective of costing system, for example whether it is being introduced for fixing prices or for insisting a system of cost control.

- (b) **Nature of Business or Industry:** The Industry in which business is operating. Every business industry has its own peculiar feature and costing objectives. According to its cost information requirement cost accounting methods are followed. For example Indian Oil Corporation Ltd. has to maintain process wise cost accounts to find out cost incurred on a particular process say in crude refinement process etc.
- (c) **Organisational Hierarchy:** Costing system should fulfill the requirement of different level of management. Top management is concerned with the corporate strategy, strategic level management is concerned with marketing strategy, product diversification, product pricing etc. Operational level management needs the information on standard quantity to be consumed, report on idle time etc.
- (d) **Knowing the product:** Nature of product determines the type of costing system to be implemented. The product which has by-products requires costing system which account for by-products as well. In case of perishable or short self- life, marginal costing method is required to know the contribution and minimum price at which it can be sold.
- (e) **Knowing the production process:** A good costing system can never be established without the complete knowledge of the production process. Cost apportionment can be done on the most appropriate and scientific basis if a cost accountant can identify degree of effort or resources consumed in a particular process. This also includes some basic technical know-how and process peculiarity.
- (f) **Information synchronisation:** Establishment of a department or a system requires substantial amount of organisational resources. While drafting a costing system, information needs of various other departments should be taken into account. For example in a typical business organisation accounts department needs to submit monthly stock statement to its lender bank, quantity wise stock details at the time filing returns to tax authorities etc.
- (g) **Method of maintenance of cost records:** The manner in which Cost and Financial accounts could be inter-locked into a single integral accounting system and in which results of separate sets of accounts, cost and financial, could be reconciled by means of control accounts.
- (h) **Statutory compliances and audit:** Records are to be maintained to comply with statutory requirements, standards to be followed (Cost Accounting Standards and Accounting Standards).

(i) **Information Attributes:** Information generated from the Costing system should possess all the attributes of an information i.e. complete, accurate, timeliness, confidentiality etc. This also meets the requirements of management information system.

(b) **Difference between Bill of Materials and Material Requisition Note**

Bill of Materials	Material Requisition Note
1. It is the document prepared by the engineering or planning dept.	1. It is prepared by the production or other consuming department.
2. It is a complete schedule of component parts and raw materials required for a particular job or work order.	2. It is a document asking Store-keeper to issue materials to the consuming department.
3. It often serves the purpose of a material requisition as it shows the complete schedule of materials required for a particular job i.e. it can replace material requisition.	3. It cannot replace a bill of materials.
4. It can be used for the purpose of quotations.	4. It is useful in arriving historical cost only.
5. It helps in keeping a quantitative control on materials drawn through material requisition.	5. It shows the material actually drawn from stores.

(c) **Idle Time - The time during which no production is carried-out because the worker remains idle but are paid.** In other words, it is the difference between the time paid and the time booked. *Idle time can be normal or abnormal.* The time for which employees are paid includes holidays, paid leaves, allowable rest or off time etc.

Causes	Treatment
1. The time lost between factory gate and the place of work, 2. The interval between one job and another,	It is treated as a part of cost of production. Thus, in the case of direct workers an allowance for normal idle time is considered setting of standard hours or standard rate. In case of indirect workers, normal idle time is considered for the computation of overhead rate

3. Idle time may also arise due to abnormal factors like lack of coordination	<i>Abnormal idle time</i> cost is not included as a part of production cost and is shown as a separate item in the Costing Profit and Loss Account.
4. Power failure, Break-down of machines	

OR

(c) **Objectives of Budgetary Control System**

1. **Portraying with precision the overall aims of the business** and determining targets of performance for each section or department of the business.
2. **Laying down the responsibilities** of each of the executives and other personnel so that everyone knows what is expected of him and how he will be judged. Budgetary control is one of the few ways in which an objective assessment of executives or department is possible.
3. **Providing a basis for the comparison** of actual performance with the predetermined targets and investigation of deviation, if any, of actual performance and expenses from the budgeted figures. This naturally helps in adopting corrective measures.
4. **Ensuring optimum use of available resources** to maximise profit or production, subject to the limiting factors. Since budgets cannot be properly drawn up without considering all aspects, usually there is good co-ordination when a system of budgetary control operates.
5. **Co-ordinating various activities** of the business, and centralising control and yet enabling management to decentralise responsibility and delegate authority in the overall interest of the business.
6. **Engendering a spirit of careful forethought**, assessment of what is possible and an attempt at it. It leads to dynamism without being reckless. Of course, much depends on the objectives of the firm and the dynamism of its management.
7. **Providing a basis for revision** of current and future policies.
8. **Drawing up long range plans** with a fair measure of accuracy.
9. **Providing a yardstick** against which actual results can be compared.