

MOCK TEST PAPER – 2
INTERMEDIATE (NEW): GROUP – I
PAPER – 3: COST MANAGEMENT ACCOUNTING
SUGGESTED ANSWERS/HINTS

1. (a) Working notes:

1. (i) Number of units sold at 80% capacity

$$= \frac{\text{Turnover}}{\text{Selling price p.u.}} = \frac{\text{Rs. } 8,00,000}{\text{Rs. } 25} = 32,000 \text{ units.}$$

(ii) Number of units sold at 100% capacity

$$\frac{\text{Rs. } 32,000 \text{ units}}{80} \times 100 = 40,000 \text{ units}$$

2. Component of fixed cost included in semi-variable cost of 32,000 units.

Fixed cost = {Total semi-variable cost – Total variable cost }

$$\begin{aligned} &= \text{Rs. } 1,80,000 - 32,000 \text{ units} \times \text{Rs. } 3.75 \\ &= \text{Rs. } 1,80,000 - \text{Rs. } 1,20,000 \\ &= \text{Rs. } 60,000 \end{aligned}$$

3. (i) Total fixed cost at 80% capacity

$$\begin{aligned} &= \text{Fixed cost} + \text{Component of fixed cost included in semi-variable cost} \\ &\quad (\text{Refer to working note 2}) \end{aligned}$$

$$= \text{Rs. } 90,000 + \text{Rs. } 60,000 = \text{Rs. } 1,50,000$$

(ii) **Total fixed cost beyond 80% capacity**

$$\begin{aligned} &= \text{Total fixed cost at 80% capacity} + \text{Additional fixed cost to be incurred} \\ &= \text{Rs. } 1,50,000 + \text{Rs. } 20,000 = \text{Rs. } 1,70,000 \end{aligned}$$

4. **Variable cost and contribution per unit**

Variable cost per unit = Material cost + Labour cost + Variable cost component in semi variable cost = $\text{Rs. } 7.50 + \text{Rs. } 6.25 + \text{Rs. } 3.75 = \text{Rs. } 17.50$

$$\begin{aligned} \text{Contribution per unit} &= \text{Selling price per unit} - \text{Variable cost per unit} \\ &= \text{Rs. } 25 - \text{Rs. } 17.50 = \text{Rs. } 7.50 \end{aligned}$$

5. **Profit at 80% capacity level**

$$\begin{aligned} &= \text{Sales revenue} - \text{Variable cost} - \text{Fixed cost} \\ &= \text{Rs. } 8,00,000 - \text{Rs. } 5,60,000 (32,000 \text{ units} \times \text{Rs. } 17.50) - \text{Rs. } 1,50,000 \\ &= \text{Rs. } 90,000 \end{aligned}$$

(i) **Activity level at Break-Even Point**

$$\text{Break-even point (units)} = \frac{\text{Fixed cost}}{\text{Contribution per unit}} = \frac{\text{Rs. } 1,50,000}{\text{Rs. } 7.50} = 20,000 \text{ units}$$

(Refer to working notes 3 & 4)

$$\text{Activity level at BEP} = \frac{\text{Break - Even point (units)}}{\text{No. of units at 100% capacity level}} \times 100$$

(Refer to working note 1(ii))

$$= \frac{20,000 \text{ units}}{40,000 \text{ units}} \times 100 = 50\%$$

(ii) Number of units to be sold to earn a net income of 8% of sales

Let S be the number of units sold to earn a net income of 8% of sales.

Mathematically it means that : (Sales revenue of S units)

$$= \text{Variable cost of } S \text{ units} + \text{Fixed cost} + \text{Net income}$$

$$\text{Or, } \text{Rs.}25S = \text{Rs.}17.5S + \text{Rs.}1,50,000 + \frac{8}{100} \times (\text{Rs.}25S)$$

$$\text{Or, } \text{Rs.}25S = \text{Rs.}17.5S + \text{Rs.}1,50,000 + \text{Rs.}2S$$

$$\text{Or, } S = (\text{Rs.}1,50,000/\text{Rs.}5.5) \text{ units}$$

$$\text{Or, } S = 27,273 \text{ units.}$$

(iii) Activity level needed to earn a profit of Rs. 95,000

The profit at 80% capacity level, is Rs. 90,000 which is less than the desired profit of Rs. 95,000, therefore the needed activity level would be more than 80%. Thus the fixed cost to be taken to determine the activity level needed should be Rs.1,70,000 (Refer to Working Note 3 (ii))

Units to be sold to earn a profit of Rs.95,000

$$= \frac{\text{Fixed cost} + \text{Desired profit}}{\text{Contribution per unit}}$$

$$= \frac{\text{Rs.}1,70,000 + \text{Rs.}95,000}{\text{Rs.}7.5}$$

$$= 35,333.33 \text{ units}$$

Activity level needed to earn a profit of Rs.95,000

$$= \frac{35,333.33 \text{ units}}{40,000 \text{ units}} \times 100 = 88.33\%$$

$$\text{(b) (i) Variable overhead absorption rat} = \frac{\text{Difference in Total Overheads}}{\text{Difference in levels in terms of machine hours}}$$

$$= \frac{\text{Rs.}3,47,625 - \text{Rs.}3,38,875}{15,500 \text{ hours} - 14,500 \text{ hours}} = \text{Rs.}8.75 \text{ per machine hour.}$$

(ii) Calculation of Total fixed overheads:

	(Rs.)
Total overheads at 14,500 hours	3,38,875
Less: Variable overheads (Rs. 8.75 × 14,500)	(1,26,875)
Total fixed overheads	2,12,000

(iii) Calculation of Budgeted level of activity in machine hours:

Let budgeted level of activity = X

$$\text{Then, } \frac{(\text{Rs. } 8.75X + \text{Rs. } 2,12,000)}{X} = \text{Rs. } 22$$

$$8.75X + \text{Rs. } 2,12,000 = 22X$$

$$13.25X = 2,12,000$$

$$X = 16,000$$

Thus, budgeted level of activity = 16,000 machine hours.

(iv) Calculation of Under / Over absorption of overheads:

	(Rs.)
Actual overheads	3,22,000
Absorbed overheads (14,970 hours \times Rs. 22 per hour)	3,29,340
Over-absorption (3,29,340 – 3,22,000)	7,340

(v) Departmental absorption rates provide costs which are more precise than those provided by the use of blanket absorption rates. Departmental absorption rates facilitate variance analysis and cost control. The application of these rates make the task of stock and work-in-process (WIP) valuation easier and more precise. However, the setting up and monitoring of these rates can be time consuming and expensive.

(c) Output by experienced workers in 50,000 hours = $\frac{50,000}{10} = 5,000$ units

$$\therefore \text{Output by new recruits} = 60\% \text{ of } 5,000 = 3,000 \text{ units}$$

$$\text{Less of output} = 5,000 - 3,000 = 2,000 \text{ units}$$

$$\text{Total loss of output} = 10,000 + 2,000 = 12,000 \text{ units}$$

$$\text{Contribution per unit} = 20\% \text{ of } 180 = \text{Rs. } 36$$

$$\text{Total contribution cost} = 36 \times 12,000 = \text{Rs. } 4,32,000$$

$$\text{Cost of repairing defective units} = 3,000 \times 0.2 \times 25 = \text{Rs. } 15,000$$

Profit forgone due to labour turnover

	(Rs.)
Loss of Contribution	4,32,000
Cost of repairing defective units	15,000
Recruitment cost	1,56,340
Training cost	1,13,180
Settlement cost of workers leaving	1,83,480
Profit forgone in 20X8-X9	9,00,000

(d) (i) Optimum run size or Economic Batch Quantity (EBQ) = $\sqrt{\frac{2 \times D \times S}{C}}$

Where, D = Annual demand i.e. 1.15% of 8,00,00,000 = 9,20,000 units

S = Set-up cost per run = Rs. 3,50,000

$$\begin{aligned}
 C &= \text{Inventory holding cost per unit per annum} \\
 &= \text{Rs.} 150 \times 12 \text{ months} = \text{Rs.} 1,800
 \end{aligned}$$

$$\text{EBQ} = \sqrt{\frac{2 \times 9,20,000 \text{ units} \times \text{Rs.} 3,50,000}{\text{Rs.} 1,800}} = 18,915 \text{ units}$$

(ii) Calculation of Total Cost of set-up and inventory holding

	Batch size	No. of set-ups	Set-up Cost (Rs.)	Inventory holding cost (Rs.)	Total Cost (Rs.)
A	40,000 units	23 $\left(\frac{9,20,000}{40,000} \right)$	80,50,000 $(23 \times \text{Rs.} 3,50,000)$	3,60,00,000 $\left(\frac{40,000 \times \text{Rs.} 1,800}{2} \right)$	4,40,50,000
B	18,915 units	49 $\left(\frac{9,20,000}{18,915} \right)$	1,71,50,000 $(49 \times \text{Rs.} 3,50,000)$	1,70,23,500 $\left(\frac{18,915 \times \text{Rs.} 1,800}{2} \right)$	3,41,73,500
Extra Cost (A - B)					98,76,500

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

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

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

Limestone	=	Rs. 565 ($523 \times 65\% - 340$)	
	=	Rs. 565 ($339.95 - 340$)	= 28.25 (A)
Silica	=	Rs. 4,800 ($523 \times 20\% - 105$)	
	=	Rs. 4,800 ($104.6 - 105$)	= 1,920 (A)
Alumina	=	Rs. 32,100 ($523 \times 5\% - 25$)	

	=	Rs. 32,100 (26.15 - 25)	= 36,915 (F)
Iron ore	=	Rs. 1,800 (523 × 5% - 30)	
	=	Rs. 1,800 (26.15 - 30)	= 6,930 (A)
Others	=	Rs. 2,400 (523 × 5% - 23)	
	=	Rs. 2,400 (26.15 - 23)	= 7,560 (F)
			<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)
Silica	=	Rs. 4,800 (500 × 20% - 523 × 20%)	
	=	Rs. 4,800 (100 - 104.6)	= 22,080 (A)
Alumina	=	Rs. 32,100 (500 × 5% - 523 × 5%)	
	=	Rs. 32,100 (25 - 26.15)	= 36,915 (A)
Iron ore	=	Rs. 1,800 (500 × 5% - 523 × 5%)	
	=	Rs. 1,800 (25 - 26.15)	= 2,070 (A)
Others	=	Rs. 2,400 (500 × 5% - 523 × 5%)	
	=	Rs. 2,400 (25 - 26.15)	<u>= 2,760 (A)</u>
			<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)
Silica	=	Rs. 4,800 × (500 × 20%) - Rs. 5,09,250	
	=	Rs. 4,80,000 - Rs. 5,09,250	= 29,250 (A)
Alumina	=	Rs. 32,100 (500 × 5%) – Rs. 8,12,500	
	=	Rs. 8,02,500 – Rs. 8,12,500	= 10,000 (A)
Iron ore	=	Rs. 1,800 (500 × 5%) – Rs. 53,400	
	=	Rs. 45,000 – Rs. 53,400	= 8,400 (A)
Others	=	Rs. 2,400 (500 × 5%) – Rs. 51,750	
	=	Rs. 60,000 – Rs. 51,750	<u>= 8,250 (F)</u>
			<u>46,175 (A)</u>

(b) In case of escalation clause in a contract, a contractor is paid for the any increase in price of materials and rate of labours which are beyond the control of the contractor. Any increase in the cost due to inefficiencies in usage of the materials and labours are not admissible. Thus any increase in cost due to usage in excess of standard quantity or hours are not paid.

(i) **Statement showing Additional claim due to Escalation clause.**

	Standard Qty / Hours	Std. Rate (Rs.)	Actual Rate (Rs.)	Variation in Rate (Rs.)	Escalation claim (Rs.)
	(a)	(b)	(c)	(d) = (c-b)	(e) = (a × d)
Material:					

A	3,000	1,000	1,100	+100	+3,00,000
B	2,400	800	700	-100	-2,40,000
C	500	4,000	3,900	-100	-50,000
D	100	30,000	31,500	+1,500	+1,50,000
Material escalation claim					1,60,000
Labour:					
L ₁	60,000	15	18	+3	+1,80,000
L ₂	40,000	30	35	+5	+2,00,000
Labour escalation claim					3,80,000

Statement showing Final Contract Price

	(Rs.)	(Rs.)
Agreed contract price		1,50,00,000
Add: Agreed escalation claim:		
Material Cost	1,60,000	
Labour Cost	3,80,000	5,40,000
Final Contract Price		1,55,40,000

(ii) Contract Account

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Particulars	(Rs.)	Particulars	(Rs.)
To Material:		By Contractee's A/c	1,55,40,000
A - (3,400 × Rs. 1,100)	37,40,000		
B - (2,300 × Rs. 700)	16,10,000		
C - (600 × Rs. 3,900)	23,40,000		
D - (90 × Rs. 31,500)	28,35,000	1,05,25,000	
To Labour:			
L ₁ - (56,000 × Rs.18)	10,08,000		
L ₂ - (38,000 × Rs.35)	13,30,000	23,38,000	
To Other expenses		13,45,000	
To Estimated Profit		13,32,000	
		1,55,40,000	1,55,40,000

3. (a) (i) Statement of Equivalent Production (FIFO Method)

Input		Output		Equivalent Production					
				Materials		Labour		Production Overhead	
Details	Units	Details	Units	%	Units	%	Units	%	Units
Opening Stock	600	From opening stock	600	-	-	40	240	40	240
		- From fresh materials	8,300	100	8,300	100	8,300	100	8,300
		Closing W-I-P	700	100	700	70	490	70	490
Fresh inputs	9,200	Normal loss	392	-	-	-	-	-	-

			9,992		9,000		9,030		9,030
		Less: Abnormal Gain	(192)	100	(192)	100	(192)	100	(192)
	9,800		9,800		8,808		8,838		8,838

(ii) Statement of Cost per equivalent units

Elements	(Rs.)	Cost	Equivalent units (EU)	Cost per EU (Rs.)
Material Cost	55,20,000			
Less: Scrap realisation 392 units @ Rs. 60/- p.u.	(2,3520)	54,96,480	8,808	624.03
Labour cost		18,60,000	8,838	210.45
Production OH Cost		8,63,000	8,838	97.65
Total Cost		82,19,480		932.13

(iii) Cost of Abnormal Gain – 192 Units

	(Rs.)	(Rs.)
Material cost of 192 units @ Rs. 624.03 p.u.	1,19,813.76	
Labour cost of 192 units @ Rs. 210.45 p.u.	40,406.40	
Production OH cost of 192 units @ Rs. 97.65 p.u.	18,748.80	1,78,968.96

Cost of closing WIP – 700 Units

Material cost of 700 equivalent units @ Rs. 624.03 p.u.	4,36,821.00	
Labour cost of 490 equivalent units @ Rs. 210.45 p.u.	1,03,120.50	
Production OH cost of 490 equivalent @ Rs. 97.65 p.u.	47,848.50	5,87,790.00

Cost of 8,900 units transferred to next process

(i) Cost of opening W-I-P Stock b/f – 600 units 4,20,000.00

(ii) Cost incurred on opening W-I-P stock

Material cost —

Labour cost 240 equivalent units @ Rs. 210.45 p.u. 50,508.00

Production OH cost 240 equivalent units @ Rs 97.65 p.u. 23,436.00

4,93,944.00

(iii) Cost of 8,300 completed units

8,300 units @ Rs. 932.13 p.u. 77,36,679.00

Total cost [(i) + (ii) + (iii))] 86,50,623.00

(b) Statement Showing “Budgeted Cost per unit of the Product”

Activity	Activity Cost (Budgeted) (Rs.)	Activity Driver	No. of Units of Activity Driver (Budget)	Activity Rate (Rs.)	Deposits	Loans	Credit Cards
ATM Services	8,00,000	No. of ATM Transaction	2,00,000	4.00	6,00,000	---	2,00,000
Computer Processing	10,00,000	No. of Computer Transaction	20,00,000	0.50	7,50,000	1,00,000	1,50,000
Issuing Statements	20,00,000	No. of Statements	5,00,000	4.00	14,00,000	2,00,000	4,00,000
Customer Inquiries	3,60,000	Telephone Minutes	7,20,000	0.50	1,80,000	90,000	90,000
Budgeted Cost	41,60,000				29,30,000	3,90,000	8,40,000
Units of Product (as estimated in the budget period)					58,600	13,000	14,000
Budgeted Cost per unit of the product					50	30	60

Working Note

Activity	Budgeted Cost (Rs.)	Remark
ATM Services:		
(a) Machine Maintenance	4,00,000	- All fixed, no change.
(b) Rents	2,00,000	- Fully fixed, no change.
(c) Currency Replenishment Cost	2,00,000	- Doubled during budget period.
Total	8,00,000	
Computer Processing		
	2,50,000	- Rs.2,50,000 (half of Rs.5,00,000) is fixed and no change is expected.
	7,50,000	- Rs.2,50,000 (variable portion) is expected to increase to three times the current level.
Total	10,00,000	
Issuing Statements		
	18,00,000	- Existing.
	2,00,000	- 2 lakh statements are expected to be increased in budgeted period. For every increase of one lakh statement, one lakh rupees is the budgeted increase.
Total	20,00,000	
Computer Inquiries		
	3,60,000	- Estimated to increase by 80% during the budget period. (Rs.2,00,000 x 180%)
Total	3,60,000	

4. (a) (i) **Preparation of Production Budget (in units)**

	October	November	December	January
Demand for the month (Nos.)	40,000	35,000	45,000	60,000
Add: 20% of next month's demand	7,000	9,000	12,000	13,000
Less: Opening Stock	(9,500)	(7,000)	(9,000)	(12,000)
Vehicles to be produced	37,500	37,000	48,000	61,000

(ii) **Preparation of Purchase budget for Part-X**

	October	November	December
Production for the month (Nos.)	37,500	37,000	48,000
Add: 40% of next month's production	14,800 (40% of 37,000)	19,200 (40% of 48,000)	24,400 (40% of 61,000)
	52,300	56,200	72,400
No. of units required for production	2,09,200 (52300 × 4 units)	2,24,800 (56200 × 4 units)	2,89,600 (72,400 × 4 units)
Less: Opening Stock	(48,000) (14800 × 4 units)	(59,200) (19200 × 4 units)	(76,800)
No. of units to be purchased	1,61,200	1,65,600	2,12,800

(iii) **Budgeted Gross Profit for the Quarter October to December**

	October	November	December	Total
Sales in nos.	40,000	35,000	45,000	1,20,000
Net Selling Price per unit*	7,28,535	7,28,535	7,28,535	
Sales Revenue (Rs. in lakh)	2,91,414	2,54,987.25	3,27,840.75	8,74,242
Less: Cost of Sales (Rs. in lakh) (Sales unit × Cost per unit)	2,28,560	1,99,990.00	2,57,130.00	6,85,680
Gross Profit (Rs. in lakh)	62,854	54,997.25	70,710.75	1,88,562

* Net Selling price unit = Rs. 8,57,100 – 15% commission on Rs. 8,57,100
= Rs.7,28,535.

(b) **Statement of Reconciliation**

Sl. No.	Particulars	Amount (Rs.)	Amount (Rs.)
	Net loss as per Cost Accounts		(35,400)
	Additions		
1.	Factory O/H over recovered	1,35,000	
2.	Dividend Received	20,000	
3.	Bank Interest received	13,600	
4.	Difference in Value of Opening Stock (1,65,000 – 1,45,000)	20,000	
5.	Difference in Value of Closing Stock	6,500	

	(1,32,000 – 1,25,500)		
6.	Notional Rent of own Premises	60,000	2,55,100
	Deductions		
1.	Administration O/H under recovered	25,500	
2.	Depreciation under charged	26,000	
3.	Loss due to obsolescence	16,800	
4.	Income tax Provided	43,600	
5.	Goodwill written-off	25,000	
6.	Provision for doubtful debts	15,000	(1,51,900)
	Net Profit as per Financial A/c.		67,800

5. (a) School Contract Account

Particulars	Amount (Rs.)	Particulars	Amount (Rs.)
To Plant	2,40,000	By Material returned	47,000
To Hire of plant	77,000	By Plant c/d	1,65,000
To Materials	6,62,000	By Materials c/d	50,000
To Direct wages	9,60,000	By WIP c/d:	
Add: Accrued <u>40,000</u>	10,00,000	Value of work certified	24,00,000
To Wages related costs	1,32,000	Cost of work not certified	1,80,000
To Direct expenses	34,000		
To Supervisory staff:			
Direct 90,000			
Indirect <u>20,000</u>	1,10,000		
To Regional office expenses	50,000		
To Head office expenses	30,000		
To Surveyors' fees	27,000		
To Notional profit c/d	4,80,000		
	28,42,000		28,42,000

(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.

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

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

$$= \sqrt{\frac{2 \times 34,400 \text{ kg.} \times \text{Rs.720}}{\text{Rs.125} \times 13.76\%}} = \sqrt{\frac{2 \times 34,400 \text{ kg.} \times \text{Rs.720}}{\text{Rs.17.2}}} = 1,697 \text{ kg.}$$

(iii) Re- Order level:

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

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

$$= \left\{ \left(\frac{36,400 \text{ kg.}}{364 \text{ days}} + 20 \text{ kg.} \right) \times 8 \text{ days} \right\} = 960 \text{ kg.}$$

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

$$\text{Average Consumption per day} = 100 \text{ kg.}$$

$$\text{Hence, Maximum Consumption per day} = 100 \text{ kg.} + 20 \text{ kg.} = 120 \text{ kg.}$$

So, Minimum consumption per day will be

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

$$\text{Or, } 100 \text{ kg.} = \frac{\text{Min.consumption} + 120 \text{ kg.}}{2}$$

$$\text{Or, } \text{Min.consumption} = 200 \text{ kg.} - 120 \text{ kg.} = 80 \text{ kg.}$$

(a) Re-order Quantity:

$$\text{EOQ} - 200 \text{ kg.} = 1,697 \text{ kg.} - 200 \text{ kg.} = 1,497 \text{ kg.}$$

(b) Maximum Stock level:

$$\begin{aligned} &= \text{Re-order level} + \text{Re-order Quantity} - (\text{Min. consumption per day} \times \text{Min. lead time}) \\ &= 960 \text{ kg.} + 1,497 \text{ kg.} - (80 \text{ kg.} \times 4 \text{ days}) \\ &= 2,457 \text{ kg.} - 320 \text{ kg.} = 2,137 \text{ kg.} \end{aligned}$$

(c) Minimum Stock level:

$$\begin{aligned} &= \text{Re-order level} - (\text{Average consumption per day} \times \text{Average lead time}) \\ &= 960 \text{ kg.} - (100 \text{ kg.} \times 6 \text{ days}) = 360 \text{ kg.} \end{aligned}$$

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

		When purchasing the ROQ	When purchasing the EOQ
I	Order quantity	1,497 kg.	1,697 kg.
II	No. of orders a year	$\frac{34,400 \text{ kg.}}{1,497 \text{ kg.}} = 22.9 \text{ or } 23 \text{ orders}$	$\frac{34,400 \text{ kg.}}{1,697 \text{ kg.}} = 20.27 \text{ or } 21 \text{ orders}$
III	Ordering Cost	$23 \text{ orders} \times \text{Rs. 720} = \text{Rs.16,560}$	$21 \text{ orders} \times \text{Rs. 720} = \text{Rs.15,120}$

IV	Average Inventory	$\frac{1,497 \text{ kg.}}{2} = 748.5 \text{ kg.}$	$\frac{1,697 \text{ kg.}}{2} = 848.5 \text{ kg.}$
V	Carrying Cost	$748.5 \text{ kg.} \times \text{Rs. } 17.2 = \text{Rs. } 12,874.2$	$848.5 \text{ kg.} \times \text{Rs. } 17.2 = \text{Rs. } 14,594.2$
VI	Total Cost	Rs. 29,434.20	Rs. 29,714.20

Cost saved by not ordering EOQ = Rs. 29,714.20 - Rs. 29,434.20 = Rs.280.

6. (a) **Accounting treatment of idle time wages & overtime wages in cost accounts:** Normal idle time is treated as a part of the cost of production. Thus, in the case of direct workers, an allowance for normal idle time is built into the labour cost rates. In the case of indirect workers, normal idle time is spread over all the products or jobs through the process of absorption of factory overheads.

Under Cost Accounting, the overtime premium is treated as follows:

If overtime is resorted to at the desire of the customer, then the overtime premium may be charged to the job directly.

If overtime is required to cope with general production program or for meeting urgent orders, the overtime premium should be treated as overhead cost of particular department or cost center which works overtime.

Overtime worked on account of abnormal conditions should be charged to costing Profit & Loss Account.

If overtime is worked in a department due to the fault of another department the overtime premium should be charged to the latter department.

(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 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.

(c) Expenses other than direct material cost and direct employee cost, which are incurred to manufacture a product or for provision of service and can be directly traced in an economically feasible manner to a cost object. The following costs are examples for direct expenses:

- (a) Royalty paid/ payable for production or provision of service;
- (b) Hire charges paid for hiring specific equipment;
- (c) Cost for product/ service specific design or drawing;
- (d) Cost of product/ service specific software;

- (e) Other expenses which are directly related with the production of goods or provision of service.
- (d) **Product costs** are those costs that are identified with the goods purchased or produced for resale. In a manufacturing organisation they are attached to the product and that are included in the inventory valuation for finished goods, or for incomplete goods. Product cost is also known as inventoriable cost. Under absorption costing method it includes direct material, direct labour, direct expenses, directly attributable costs (variable and non-variable) and other production (manufacturing) overheads. Under marginal costing method Product Costs includes all variable production costs and the all fixed costs are deducted from the contribution.
- Periods costs** are the costs, which are not assigned to the products but are charged as expense against revenue of the period in which they are incurred. General Administration, marketing, sales and distributor overheads are recognized as period costs.