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**SUGGESTED SOLUTION**

**INTERMEDIATE M'19 EXAM**

**SUBJECT- COSTING**

**Test Code - PIN 5055**

**BRANCH - () (Date :)**

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**ANSWER-1****ANSWER-A**

$$(i) \text{ Re - order quantity} = \sqrt{\frac{2AO}{C \times i}}$$

$$= \sqrt{\frac{2 \times 7500 \times 12 \times 500}{60 \times 10}}$$

$$= 3,873 \text{ units}$$

(ii) Re-order level

$$= \text{Maximum re-order period} \times \text{Maximum usage}$$

$$= 8 \text{ weeks} \times 750 \text{ units per week}$$

$$= 6,000 \text{ units}$$

(iii) Minimum stock level

$$= \text{Re-order level} - \{\text{Normal usage} \times \text{Average reorder period}\}$$

$$= 6,000 - (500 \times 6.5)$$

$$= 2,750 \text{ units}$$

(iv) Maximum stock level

$$= \text{Re-order level} + \text{Re-order quantity} - (\text{Minimum usage} \times \text{Minimum re-order period})$$

$$= 6,000 + 3,873 - (5 \times 250)$$

$$= 8,623 \text{ units}$$

(v) Average stock level

$$= \frac{1}{2} (\text{Minimum stock level} + \text{Maximum stock level})$$

$$= \frac{1}{2} (2,750 + 8,623)$$

$$= 5,687 \text{ units}$$

**(5\*2 = 10 MARKS)**

**ANSWER-B**

**Table showing Labour Cost per Article**

Method of Payment	Hours worked	Weekly earnings	Number articles produced	of labour	cost per article
Existing time rate	49	Rs. 8,425.00	120		Rs. 70.21
Straight piece rate system	40	Rs. 8,640.00	135		Rs. 64.00

Rowan Premium System	40	Rs. 9,007.41	135	Rs. 66.72
Halsey Premium System	40	Rs. 8,600.00	135	Rs. 63.70

(2 MARKS)

**Working Notes:**

(8 MARKS)

**Existing time rate**

Weekly wages	40 hrs @ Rs. 160/hr	= Rs. 6,400
	9 hrs @ Rs. 225/hr	= Rs. <u>2,025</u>
		<b>8425</b>

**Piece Rate System**

Basic time: 5 hour for 15 articles.

Cost of 15 articles at hourly rate of Rs. 160/hr = 800

Add 20% = 160

960

Rate per article = Rs. 960 / 15 = Rs. 64

Earnings for the week = 135 articles × Rs. 64 = Rs. 8,640.

**Rowan Premium System**

Basic Time : 5 hours for 15 articles

Add : 50% to time

7.5 hours for 15 articles

Or 30 minutes per article

Time allowed for 135 articles = 67.5 hours

Actual time taken for 135 articles = 40 hours

$$\text{Earnings} = (\text{HW} \times \text{RH}) + \left[ \frac{\text{TA} - \text{HW}}{\text{TA}} \times \text{HW} \times \text{RH} \right]$$

$$= (40 \text{ hours} \times \text{Rs. } 160) + \left[ \frac{67.5 - 40}{67.5} \times 40 \times \text{Rs. } 160 \right] = \text{Rs. } 9,007.41$$

**Halsey Premium System**

$$\begin{aligned} \text{Earnings} &= HW \times RH + \frac{50}{100} (TA - HW) \times RH \\ &= 40 \times \text{Rs. } 160 + \frac{1}{2} (67.5 - 40) \times \text{Rs. } 160 = \text{Rs. } 8600 \end{aligned}$$

**ANSWER-2**

**ANSWER-A**

- (i) Statement showing total cost of each product assuming absorption of overheads on Machine Hour Rate Basis.

Particulars	A	B	C	D	Total
Output (units)	100	110	120	150	480
Direct material (Rs.)	30	40	35	45	150
Direct Labour (Rs.)	25	30	30	40	125
Direct labour- Machine hrs	5	4	3	4	
Overhead @ Rs. 30/- per Machine hr	150	120	90	120	480
Total cost per unit (Rs.)	205	190	155	205	755
Total cost (Rs.)	20,500	20,900	18,600	30,750	90,750

$$\text{Overhead Rate} = \frac{\text{Total overhead costs}}{\text{Total MHrs.}} = \frac{\text{Rs. } 57,000}{1,900} = \text{Rs. } 30 \text{ per unit}$$

<u>Total Overheads</u>	Rs.		
Factory works expenses	22,500	Factory exp per unit	22,500 / 1,900 = Rs. 11.84
Stores receiving cost	8,100	Stores receiving cost	8100 / 100 = Rs. 81
Machine set up costs	12,200	Machine set-up cost	12,200 / 48 = Rs. 254.1
Costs relating to quality control	4,600	Cost relating to QC	4,600/48 =Rs. 95.83

Expense relating to material	9,600	Material handling &	9,600 / 96
handling & dispatch Total		dispatch	= Rs. 100/-
	57,000/-		

(5 MARKS)

**Statement showing total cost of each product assuming activity based costing.**

Particulars	A	B	C	D	Total
Output (Units)	100	110	120	150	480
No. of production runs	10	11	12	15	48
No. of stores requisition	25	25	25	25	100
No. of sales orders	20	22	24	30	96
Unit costs - Direct material (Rs.)	30.00	40.00	35.00	45.00	
Unit costs - Direct labour (Rs.)	25.00	30.00	30.00	40.00	
Unit costs - Factory works expenses (Rs.)	59.20	47.36	35.52	47.36	
Unit costs - Stores receiving cost (Rs.)	20.25	18.41	16.88	13.50	
Unit costs - Machine set-up cost (Rs.)	25.42	25.42	25.42	25.42	
Unit costs – QC (Rs.)	9.58	9.58	9.58	9.58	
Unit costs – Material Handling (Rs.)	20.00	20.00	20.00	20.00	
Unit cost (Rs.)	189.45	190.77	172.40	200.86	
Total cost (Rs.)	18,945	20,984.7	20,688.00	30,129	

**Statement showing differences (in Rs.)**

Particulars	A	B	C	D
Unit cost MHR	205	190	155	205
Unit cost ABC	189.45	190.77	172.40	200.86
Unit cost - difference	15.55	-0.77	-17.40	4.14

Total cost MHR	20,500	20,900	18,600	30,750
Total cost ABC	18,945	20,985	20,688	30,128

The difference is that A consumes comparatively more of Machine hours.

The use of activity based costing gives different product costs than what were arrived at by utilising traditional costing. It can be argued that Product costs using ABC are more precise as overheads have been identified with specific activities.

(5 MARKS)

### ANSWER-B

(i) Process I account

(7 MARKS)

Particulars	Qty in kg	Rate /kg Rs.	Amt. Rs.	Particulars	Qty in Kg	Rate/ kg Rs.	Amt Rs.
To Material input	40,000	16.50	6,60,000	By Product L sales	4,000	19.25	77,000
To Direct labour			4,40,000	By Normal loss	2,000	(-) 16.50	(-) 33,000
To Variable overheads			1,76,000	By Abnormal loss*	400	44	17,600
				By Joint product J (Refer to working note 2)	19,200		7,21,171
				By Joint product K (Refer to working note 2)	14,400		7,57,229
	40,000		15,40,000		40,000		15,40,000

\*Valuation of abnormal loss per kg = Rs. 15,40,000 – Rs. 77,000 + Rs.33,000

(Using physical measure method) 40,000 Kgs. × 0.85

= Rs. 14,96,000 / 34,000 kgs.

= Rs. 44 per kg.

(i) Toxic waste account

Particulars	Qty in kg	Rate / kg Rs.	Amount Rs.	Particulars	Qty in kg	Rate / kg Rs.	Amount Rs.
To Process I A/c	2,000	16.50	(-) 33,000	By Balance		16.50	(-) 33,000

Process II account

Particulars	Qty in kg	Rate/kg Rs.	Amount Rs.	Particulars	Qty in kg	Rate/kg Rs.	Amount Rs.
To Process I A/c (Product K)	14,400	52.585	7,57,236	By Product K <sub>2</sub> account	13,200		11,73,924
To Variable overheads		16.50	2,37,600	By Closing WIP (Refer to working note 3)	1,200		84,912
To Fixed overheads			2,64,000				
			12,58,836				12,58,836

Working notes:

Calculation of joint cost of the output:

= Rs.15,40,000 – Rs.77,000 – Rs.(-) 33,000 – Rs.17,600

= Rs. 14,78,400

1. Allocation of joint cost over joint products J & K

(By using final sales value method)

Products	Quantity (Kgs)	Sales Value Rs.	Joint Cost Rs.
J	19,200	10,56,000 (19,200 kgs × Rs. 55)	7,21,171
K	14,400	11,08,800 (14,400 kgs × Rs. 77)	7,57,229
Total		21,64,800	14,78,400

**2. Valuation of 1,200 Kgs. Of Closing WIP :**

Material I	100% complete	Rs.
	(1,200 kgs × Rs. 52.5858)	63,103
Fixed & variable overheads	$\left(\frac{Rs. 5,01,600}{13,800 \text{ units}}\right) \times 600 \text{ units}$	21,809
Total valuation of 1,200 kgs of closing WIP		84,912

**(ii) Comment on the method used by the JKL Ltd : (1.5 MARKS)**

(To attribute the pre-separation costs to joint products)

For attributing the joint costs over joint products J and K , JKLF Ltd., used the basis of final sales value. This is one of the popular method used in the industry.

Other methods can also be used for the purpose. Some of these are as follows:

- ◆ Physical Measure Method (if both the products are equally complex).
- ◆ Constant Gross Margin Percentage method.
- ◆ Net Realizable Value Method.

**(iii) Advise to the management of JKL Ltd.: (1.5 MARKS)**

	Rs.
Incremental sales revenue per kg. from further processing	29.70
Less: Incremental variable cost per kg. of further processing	16.50
Incremental contribution per kg from further processing	13.20
At an output of 14,400 kgs the incremental contribution is:	1,90,080
Less : Avoidable fixed cost (60% × Rs. 2,64,000)	1,58,400
Net benefit (Rs.)	31,680

Break-even point = Avoidable fixed costs / Incremental contribution per kg.

= Rs. 1,58,600/ Rs. 13.20 = 12000 kgs.

Hence further processing should be undertaken if output is expected to exceed 12,000 kgs. per week.



**ANSWER-3****ANSWER-A****Contract Account for the year ending March 31, 2006**

		Rs.			Rs.
To Materials issued		7,76,250	By work – in – progress certified	22,50,000	
To Labour	5,17,500		Uncertified	25,000	22,75,000
Add : Outstanding	12,500		Plant returned to		
Less : Prepaid		4,92,500	Store on 30.09.2005		87,500
To Plant	37,500	4,00,000	(1,00,000 – 25% × 1/2)		
To Expenses	2,25,000		By Plant at site		2,25,000
Add : Outstanding	25,000		(3,00,000 – 25%)		
Less : Prepaid	15,000	2,35,000	By Materials at site		82,500
To National Profit c/d		7,66,250			
		26,70,000			26,70,000
To Profit and loss A/c			By Notional Profit		7,66,250
$10,21,125 \times \frac{22,50,000}{49,21,875} \times \frac{18,75,000}{22,50,000}$		3,89,000	b/d		
To WIP (Reserve)		3,77,250			
		7,66,250			7,66,250

**(5 MARKS)****Contract Account (for entire life period April 1, 2005 to September 30, 2006)**

	Rs.		Rs.
To Materials issued (7,76,250 + 12,99,375)	20,75,625	By Contractee A/c.	49,21,875
To Labour (5,17,500 – 37,500 + 12,500 + 6,18,750 + 37,500 – 12,500 + 5,750)	11,42,000	By Materials at site	42,500
To Plant	4,00,000	By Plant returned on September 30, 2005 (1,00,000 – 12,500)	87,500
To Expenses	6,10,000	By Plant returned on September 30, 2006	3,00,000
(2,25,000 + 25,000 – 15,000 + 3,75,000 – 25,000 + 15,000 + 10,000)		Depreciation for 2005 – 2006 @ 25%	75,000
To Estimated profit on contract	10,21,125		2,25,000
		Depreciation 2006 – 2007 (1/2)	28,125
			1,96,875

	52,48,750		52,48,750
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(5 MARKS)

**ANSWER-B**

**(a) Preparation of Production Budget (in nos.)**

	October	November	December	January
Demand for the month (Nos.)	4,000	3,500	4,500	6,000
	700	900	1,200	1,300
<i>Add: 20% of next month's demand</i>	(950)	(700)	(900)	(1,200)
<i>Less: Opening Stock Vehicles to be produced</i>	3,750	3,700	4,800	6,100

(2 MARKS)

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

	October	November	December
Production for the month (Nos.)	3,750	3,700	4,800
	1,480	1,920	2,440
<i>Add: 40% of next month's production</i>	(40% of 3,700)	(40% of 4,800)	(40% of 6,100)
	5,230	5,620	7,240
	20,920	22,480	28,960
No. of units required for production	(5,230 × 4 units)	(5,620 × 4 units)	(7,240 × 4 units)
<i>Less: Opening Stock</i>	(4,800)	(5,920)	(7,680)
		(1,480 × 4 units)	(1,920 × 4 units)
No. of units to be purchased	16,120	16,560	21,280

(4 MARKS)

(c) Budgeted Gross Profit for the Quarter October to December

	October	November	December	Total
Sales in nos.	4,000	3,500	4,500	12,000
Net Selling Price per unit*	Rs. 3,46,150	Rs. 3,46,150	Rs. 3,46,150	
Sales Revenue (Rs. in lakh)	13,846	12,115.25	15,576.75	41,538
Less: Cost of Sales (Rs. in lakh) (Sales unit × Cost per unit)	11,428	9,999.50	12,856.50	34,284
Gross Profit (Rs. in lakh)	2,418	2,115.75	2,720.25	7,254

\* Net Selling price unit = Rs. 3,95,600 – 12.5% commission on Rs. 3,95,600 = Rs. 3,46,150

(4 MARKS)

**ANSWER-4**

**ANSWER-A**

Break- even point (in units) is 50% of sales i.e. 12,000 units.

Hence, Break- even point (in sales value) is 12,000 units × Rs. 200 = Rs. 24,00,000

(i) We know that Break even sales =  $\frac{\text{Fixed cost}}{P/V\text{ratio}}$

$$\text{or Rs. 24,00,000} = \frac{\text{Fixed cost}}{25\%}$$

$$\text{or Fixed Cost} = \text{Rs. 24,00,000} \times 25\% = \text{Rs. 6,00,000}$$

So Fixed Cost for the year is Rs. 6,00,000

(ii) Contribution for the year = (24,000 units × Rs. 200) × 25% = Rs.

12,00,000 Profit for the year = Contribution – Fixed Cost

$$= \text{Rs. 12,00,000} - \text{Rs. 6,00,000} = \text{Rs. 6,00,000}$$

(iii) Target net profit is Rs. 11,00,000

Hence, Target contribution = Target Profit + Fixed Cost

$$= \text{Rs. 11,00,000} + \text{Rs. 6,00,000} = \text{Rs. 17,00,000}$$

Contribution per unit = 25% of Rs. 200 = Rs. 50 per unit

$$\text{No. of units} = \frac{\text{Rs.17000}}{50 \text{ per unit}} = 34000 \text{ unit}$$

So, 34,000 units to be sold to earn a target net profit of Rs. 11,00,000 for a year.

- (iv) Net desired total Sales (Number of unit x Selling price) be X , then desired profit is 25% on Cost or 20% on Sales i.e. 0.2 X

$$\text{Desired Sales} = \frac{\text{Fixed cost} + \text{Desired profit}}{P/V \text{ratio}}$$

$$X = 600000 + 0.2X / 25\%$$

$$\text{or, } 0.25 X = 6,00,000 + 0.2 X$$

$$\text{or, } 0.05 X = 6,00,000 \text{ or, } X = \text{Rs. } 1,20,00,000$$

$$\text{No. of units to be sold} = 12000000 / 200 = 60000 \text{ units}$$

- (i) If Break- even point is to be brought down by 4,000 units then Break-even point will be 12000 units – 4000 units = 8000 units

Fixed Cost = Rs. 6,00,000

$$\text{Required Contribution per unit} = 600000 / 8000 \text{ unit} = \text{Rs. } 75$$

$$\text{Selling Price} = \text{Contribution per unit} / P/V \text{ratio} = 75 / 25\% = \text{Rs. } 300 \text{ per unit}$$

Hence, selling price per unit shall be Rs. 300 if Breakeven point is to be brought down by 4,000 units.

**(10 MARKS)**

## ANSWER-B

### EPS Public School

Statement showing the expenses of operating a single bus and the fleet of 25 buses for a year

Particulars	Per bus per annum Fleet of 25 buses per	
	(Rs.)	annum (Rs.)
Running costs : (A)		
Diesel	56,832	14,20,800
(Refer to working note 1 )		
Repairs & maintenance costs : (B)	16,400	4,10,000

Fixed charges :		
Driver's salary	60,000	15,00,000
Cleaners salary	7,200	1,80,000
Licence fee, taxes etc.	2,300	57,500
Insurance	15,600	3,90,000
Depreciation	93,750	23,43,750
Total fixed charges : ( C )	1,78,850	44,71,250
Total expenses: ( A + B + C )	2,52,082	63,02,050

(3 MARKS)

(ii) **Average cost per student per month in respect of students coming from a distance of :**

- (a) 4 kms. From the school  
(Rs. 2,52,082 / 354 students × 12 months) Rs. 59.34  
(Refer to working note 2)
- (b) 8 kms from the school Rs. 118.68  
(Rs. 59.34 × 2)
- (c) 16 kms from the school Rs. 237.36  
(Rs. 59.34 × 4)

**Working notes :**

1. Calculation of diesel cost per bus :

No. of trips made by a bus each day	: 4
Distance travelled in one trip both ways (16 kms × 2 trips)	: 32 kms
Distance travelled per day by a bus (32 kms × 4 shifts)	: 128 kms
Distance travelled during a month (128 kms × 24 days)	: 3,072 kms
Distance travelled per year (3,072 kms × 10 months)	: 30,720 kms
No. of litres of diesel required per bus per year (30,720 kms / 10 km)	: 3,072 litres
Cost of diesel per bus per year (3,072 litres × Rs. 18.50)	: Rs. 56,832

## 2. Calculation of number of students per bus :

Bus capacity of 2 trips	: 120 students
1/4 <sup>th</sup> fare students (15% × 120 students)	: 18 students
½ fare 30% students (equivalent to 1/4 <sup>th</sup> fare students)	: 72 students
Full fare 55% students (equivalent to 1/4 <sup>th</sup> fare students)	: 264 students
Total 1/4 <sup>th</sup> fare students	: 354 students

(7 MARKS)

ANSWER-5

ANSWER-A

### Stores Ledger Control A/c

Particulars	Rs.	Particulars	Rs.
To Balance b/d	9,000	By Work in Process	48,000
To General Ledger	48,000	By Overhead Control	6,000
Adjustment A/c		By A/c Overhead Control	1,800*
To Work in Process A/c	24,000	(Deficiency ) A/c	
		By Balance c/d	25,200
	81,000		81,000

\*Deficiency assumed as normal (alternatively can be treated as abnormal loss)

(2 MARKS)

### Work in Progress Control A/c

Particulars	Rs.	Particulars	Rs.
To Balance b/d	18,000	By Stores Ledger Control a/c	24,000
To Stores Ledger Control	48,000	By Costing P/L a/c	1,20,000
A/c		(Balancing figures being Cost of finished goods)	
To Wages Control A/c	18,000	Balance c/d	
To Overheads Control a/c	72,000	By	12,000
	1,56,000		1,56,000

(3 MARKS)

**Overheads Control A/c**

Particulars	Rs.	Particulars	Rs.
To Stores Ledger Control A/c	6,000	By Work in Process A/c	72,000
To Stores Ledger Control A/c	1,800	By Balance c/d	13,800
To Wages Control A/c (21,000-18000)	3,000	(Under absorption)	
To General Ledger Adjustment A/c	75,000		
	85,800		85,800

(3.5 MARKS)

**Costing Profit & Loss A/c**

Particulars	Rs.	Particulars	Rs.
To Work in progress	1,20,000	By General ledger Adjustment A/c (Sales) (1,20,000+12,000)	1,32,000
To General Ledger Adjustment A/c (Profit)	12,000		
	1,32,000		1,32,000

(1.5 MARKS)

**ANSWER-B**

**Material Variances:**

(i) Material Cost Variance

$$\begin{aligned} &= (SQ \times SP) - (AQ \times AP) \\ &= (2,160 \times 4 \times 10) - (22,800 \times 4.40) \\ &= \text{Rs.}86,400 - \text{Rs.}1,00,320 = 13,920 \text{ (A)} \end{aligned}$$

(ii) Material Price Variance

$$\begin{aligned} &= AQ (SP - AP) \\ &= 22,800 \text{ Kg} (4 - 4.40) = 9,120 \text{ (A)} \end{aligned}$$

(iii) Material Usage Variance  
 $= SP (SQ - AQ)$   
 $= 4 (21,600 - 22,800) = 4,800 (A)$

**Verification:-**

$$MCV = MPV + MUV$$

$$13,920 (A) = 9,120 (A) + 4,800 (A)$$

**Labour Variances:**

(i) Labour Cost Variance  
 $= (SH \times SR) - (AH \times AR)$   
 $= (2,160 \times 2.50 \times 4) - (29,700)$   
 $= 21,600 - 29,700 = 8,100 (A)$

(ii) Labour Rate Variance  
 $= AH (SR - AR)$   
 $= 5,940 (4 - 5) = 5,940 (A)$

(iii) Labour Efficiency Variance  
 $= SR (SH - AH)$   
 $= 4 (5,400 - 5,940) = 2,160 (A)$

**Verification:-**

$$LCV = LRV + LEV$$

$$8,100 (A) = 5,940 (A) + 2,160 (A)$$

$$SH = 2,160 \text{ Units} \times 2.50 \text{ Hours} = 5,400 \text{ Hrs.}$$

**(10 MARKS)**

**ANSWER-6**

**ANSWER-A**

**The advantages of zero-based budgeting are as follows:**

- It provides a systematic approach for the evaluation of different activities and rank them in order of preference for the allocation of scarce resources.
- It ensures that the various functions undertaken by the organization are critical for the achievement of its objectives and are being performed in the best possible way.
- It provides an opportunity to the management to allocate resources for various activities only after having a thorough cost-benefit-analysis. The chances of arbitrary cuts and enhancement are thus avoided.



- The areas of wasteful expenditure can be easily identified and eliminated.
- Departmental budgets are closely linked with corporation objectives.
- The technique can also be used for the introduction and implementation of the system of 'management by objective.' Thus, it cannot only be used for fulfillment of the objectives of traditional budgeting but it can also be used for a variety of other purposes.

(5 MARKS)

### 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 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.

(5\*1 = 5 MARKS)

### ANSWER-C

The essential features, which a good cost and management accounting system should possess, are as follows:

- Informative and simple:** Cost and management accounting system should be tailor-made, practical, simple and capable of meeting the requirements of a business concern. The system of costing should not sacrifice the utility by introducing meticulous and unnecessary details.
- Accurate and authentic:** The data to be used by the cost and management accounting system should be accurate and authenticated; otherwise it may distort the output of the system and a wrong decision may be taken.
- Uniformity and consistency:** There should be uniformity and consistency in classification, treatment and reporting of cost data and related information. This is required for benchmarking and comparability of the results of the system for both horizontal and

vertical analysis.

- (iv) **Integrated and inclusive:** The cost and management accounting system should be integrated with other systems like financial accounting, taxation, statistics and operational research etc. to have a complete overview and clarity in results.
- (v) **Flexible and adaptive:** The cost and management accounting system should be flexible enough to make necessary amendments and modification in the system to incorporate changes in technological, reporting, regulatory and other requirements.
- (vi) **Trust on the system:** Management should have trust on the system and its output. For this, an active role of management is required for the development of such a system that reflect a strong conviction in using information for decision making

(5 MARKS)

### ANSWER-D

#### Statement of Cost and Profit per unit of each batch

	Jan. 20X8	Feb. 20X8	March. 20X8	Total
a) Batch Output (Nos.)	1,250	1,500	1,000	3,750
b) Sales Value (@ ` 15 per unit)	(`) 18,750	(`) 22,500	(`) 15,000	(`) 56,250
<b>Cost</b>				
Material	6,250	9,000	5,000	20,250
Wages	2,500	3,000	2,000	7,500
Overheads	3,750	3,000	3,000	9,750
c) Total	12,500	15,000	10,000	37,500
d) Profit per batch (b) – (c)	6,250	7,500	5,000	18,750
e) Cost per unit (c) ÷ (a)	10	10	10	
f) Profit per unit (d) ÷ (a)	5	5	5	

Overall Position of the Order for 3,000 Units

Sales value (3,000 units × ` 15)	`45,000
Less: Total cost (3,000 units × ` 10)	<u>30,000</u>
<b>Profit</b>	<u>15,000</u>

Calculation of overhead per hour:

	Jan. 20X8	Feb. 20X8	March 20X8
(i) Labour hours:			
= $\frac{\text{Labour Cost}}{\text{Labour rates per hour}}$	= $\frac{\text{Rs. 2,500}}{2} = 1,250$	$\frac{\text{Rs. 3,000}}{2} = 1,500$	$\frac{\text{Rs. 2,000}}{2} = 1,000$
(ii) Overhead per hour :			
= $\frac{\text{Total Overheads}}{\text{Total labour hour}}$	$\frac{\text{Rs. 12,000}}{4,000} = \text{Rs. 3}$	$\frac{\text{Rs. 9,000}}{4,500} = \text{Rs. 2}$	$\frac{\text{Rs. 15,000}}{5,000} = \text{Rs. 3}$
(iii) Overhead for batch (i) × (ii)	Rs. 3,750	Rs. 3,000	Rs. 3,000

(5 MARKS)