



J.K. SHAH[®]
TEST SERIES
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SUGGESTED SOLUTION

IPCC NOVEMBER 2018 EXAM

COSTING

Test Code -

BRANCH - (MUMBAI-3) (GM-1) (Date : 01.07.2018)

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Solution-1-A :

(i) Overheads application base: Direct labour hours

	Equipment Y (Rs.)	Equipment Z (Rs.)
Direct material cost	300	450
Direct labour cost	450	600
Overheads*	186.38	248.50
	936.38	1,298.50

*Pre-determined rate = Budgeted overheads =

$$\frac{\text{Budgeted overheads}}{\text{Budgeted direct labour hours}} = \frac{\text{Rs.12,42,500}}{20,000 \text{ hours}} = \text{Rs.62.125}$$

(ii) Estimation of Cost-Driver rate

Activity	Overhead cost (Rs.)	Cost-driver level	Cost driver rate (Rs.)
Order processing	2,10,000	600 Orders processed	350
Machine processing	8,75,000	50,000 Machine hours	17.50
Inspection	1,57,500	15,000 Inspection hours	10.50

	Equipment Y (Rs.)	Equipment Z (Rs.)
Direct material cost	300	450
Direct labour cost	450	600
Prime Cost	750	1,050
Overhead Cost		
Order processing 350 : 250	1,22,500	87,500
Machine processing 23,000 : 27,000	4,02,500	4,72,500
Inspection 4,000 : 11,000	42,000	1,15,500
Total overhead cost	5,67,000	6,75,500

Per unit cost	Rs.	Rs.
5,67,000 / 2,500	226.80	216.16
6,75,500 / 3,125		
Unit manufacturing cost	976.80	1,266.16

(iii)

	Equipment Y (Rs.)	Equipment Z (Rs.)

Unit manufacturing cost—using direct labour hours as an application base	936.38	1,298.50
Unit manufacturing cost—using activity based costing	976.80	1,266.16
Cost distortion	(-) 40.42	+ 32.34

Low volume product Y is under-costed and high volume product Z is over costed using direct labour hours for overhead absorption.

Answer-1 :B

Before computing the comprehensive machine hour rate, it is necessary to find out the total machine hours utilized and total wages paid to the operators.

Computation of total machine hours utilized :

Normal available hours p.m. per operator		208 hours
Less: Unutilised hours due to:		
Absenteeism	18hours	
Leave	20	
Idle time	<u>10</u>	<u>48</u>
Total hours utilized p.m. per operator		<u>160</u>
Total hours utilized for 6 months for 6 operators = 160 x 6 x 6 or		5,760 hrs.

It is given in the question that the machines cannot work without an operator wholly engaged on it. Therefore, hours utilized for 6 operators, i.e., 5,760 hrs. represents the total machine hours. Total wages to 6 operators for 6 months :

Average rate of wages per hour = Rs. 20 ÷ 8 hrs. = Rs. 2.50

Normal hours for which wages are to be paid = 208 - 18 or 190 hrs.

Wages for 6 months for 6 operators @ Rs. 2.50/hr = 190 x 6 x 6 x 2.50 or Rs. 17,100.

Computation of Comprehensive Machine Hour Rate for the Machine Shop

Operators' wages (as above)	Rs. 17,100
Production Bonus	2,565
Power consumed	8,050
Supervision and indirect labour	3,300
Lighting and electricity	1,200
Repairs and maintenance (3% of Rs. 8 lakhs) ÷ 2	12,000
Insurance (given for 12 months: reduced to 50% for 6 months)	20,000
Depreciation for 6 months	40,000
Other sundry works expenses for 6 months	6,000
General management expenses for 6 months	<u>27,265</u>
Total overheads for 6 months	<u>1,37,480</u>

Comprehensive Machine Hour Rate = 1,37,480 ÷ 5760 hrs = Rs.23.87 per hour.

Answer-2 :A

Consumption of raw material has to be worked out as follows :

Cost of goods sold	Rs. 56,000
Less : Selling expenses	3,400
	<u>52,600</u>
Less : General and administration expenses	2,600

	50,000
Add : Closing Stock of Finished Goods	18,000
	68,000
Less : Opening Stock of Finished Goods	14,000
	54,000
Add : Closing Stock of Work-in-progress	12,000
	66,000
Less : Opening Stock of Work-in-progress	8,000
	58,000
Less : Factory overheads (16,000 x 100/160)	10,000
Prime Cost	48,000
Less : Direct labour	16,000
Raw Material consumed	32,000

Statement of Cost and Profit

Opening stock of raw materials	8,000
Add : Purchase of raw materials (balancing figure)	32,000
	40,600
Less : Closing stock of raw materials	8,600
Raw Material consumed	32,000
Add ; Direct Labour post	16,000
Prime Cost	48,000
Add : Factory Overheads	10,000
	58,000
Add : Opening Stock of Work-in-progress	8,000
	66,000
Less : Closing Stock of Work-in-progress	12,000
	54,000
Add : General and Administration Expenses	2,600
	56,600
Add : Opening Stock of Finished Goods	14,000
	70,600
Less ; Closing Stock of Finished Goods	18,000
	52,600
Add : Selling Expenses	3,400
	56,000
Sales	75,000
Profit	19,000

Answer-2 :B 1

Decrease in stock = 760 units - 320 units = 440 units

Difference in profit = 440 units x Rs. 5 = Rs. 2,200

Stock decreased. Therefore the absorption profit would be lower as overheads are released from stock.

Absorption Costing Profit = Rs. 78,000 - Rs. 2,200 = Rs. 75,800.

Answer-2 :B 2

Charge to P & L A/c for fixed cost in Marginal Costing (Manufacturing) Rs.1,80,000

Charge to P & L A/c for fixed cost in Absorption Costing (Rs. 1,80,000 ÷ 1,00,000) x 80,000 1,44,000
36,000

If marginal costing is used, fixed cost will be charged to profit and loss account for the period and profit will be relatively lower by Rs. 36,000. Charge for selling and adm. cost will be the same under both the methods.

Answer-3 A :

This cost of placing an order, when component is purchased, is not given. This can be found out by EOQ formula.

$$EOQ = \sqrt{\frac{2 \times \text{Annual consumption} \times \text{Cost of placing an order}}{\text{Cost of carrying one unit of inventory for one year}}}$$

Suppose cost of placing an order is x .

Substituting the available information

$$2,000 = \sqrt{\frac{2 \times 20,000 \times x}{0.25}} \text{ or } x = \text{Rs.}25$$

Cost of placing an order = Rs. 25

$$\begin{aligned} \text{Average stock level} &= \text{Minimum stock level} + 1/2 \text{ EOQ} = 400 + 1/2 (2,000) \\ &= 1,400 \text{ units} \end{aligned}$$

Comparison of annual costs

Make		Buy	
(i) Storage cost 1,400 x 0.25	Rs.350	Purchase Cost : 20,000 x 9	1,80,000
(ii) Ordering cost (20,000 ÷ 2,000) x 25	250		
(iii) Material cost 20,000 x 2	40,000		
(iv) Labour cost 20,000 x 6	1,20,000		
(v) Rental charges Rs. 200 x 12	2,400		
	1,63,000		1,80,000

Conclusion : The company should make the component till it has some alternative use for existing capacity. If it is possible to find an alternative use for existing capacity so that opportunity cost exceeds Rs. 17,000, i.e., Rs. 1,80,000 - Rs. 1,63,000, buying will become better than manufacturing. Labour cost has been presumed to be variable cost. Fixed cost being sunk cost is not relevant for decision making.

Answer-3 B :**(i) Computation of overhead absorption rate**

(as per the current policy of the company)

Department	Budgeted Factory Overhead	Budgeted Direct Wages
Machinery	Rs. 3,60,000	Rs. 80,000

Assembly	1,40,000	3,50,000
Packing	1,25,000	70,000
	6,25,000	5,00,000

$$\begin{aligned} \text{Overhead absorption rate} &= \frac{\text{Budgeted Factory Overheads}}{\text{Budgeted Direct Wages}} \times 100 \\ &= \frac{\text{Rs.6,25,000}}{5,00,000} \times 100 = 125\% \text{ of Direct Wages} \end{aligned}$$

Selling Price of the Job No. CW—7083	
Direct Material (Rs. 1200 + Rs. 600 + Rs. 300)	Rs.2,100.00
Direct Wages (Rs. 240 + Rs. 360 + Rs. 60)	660.00
Factory Overheads (125% or Rs. 660)	<u>825.00</u>
Total Factory Cost	3,585.00
Add: Mark-up (30% of Rs. 3585)	<u>1,075.50</u>
Selling Price	<u>4,660.50</u>

(ii) Methods available for absorbing factory overheads and their overhead recovery rates in different departments

- In machining department, machine usage is predominant. The overhead recovery rate based on machine hours should be calculated for this department as follows :

$$\begin{aligned} \text{Machine Hour Rate} &= \frac{\text{Budgeted Factory Overheads}}{\text{Budgeted Machine Hours}} \\ &= \text{Rs. } 3,60,000 \div 80,000 = \text{Rs. } 4.50 \text{ per hour} \end{aligned}$$

- In Assembly department, labour hour is predominant. The overhead recovery rate based on labour hours should be calculated for this department as follows :

$$\begin{aligned} \text{Machine Labour Hour Rate} &= \frac{\text{Budgeted Factory Overheads}}{\text{Budgeted Direct Labour Hours}} \\ &= \text{Rs. } 1,40,000 \div 1,00,000 = \text{Rs. } 1.40 \text{ per hour} \end{aligned}$$

- Packing Department— Labour is predominant factor in this department. Hence Direct Labour Hour method should be used in this department as follows :

$$\begin{aligned} \text{Machine Labour Hour Rate} &= \frac{\text{Budgeted Factory Overheads}}{\text{Budgeted Labour Hours}} \\ &= \text{Rs. } 1,25,000 \div 50,000 = \text{Rs. } 2.50 \text{ per hour} \end{aligned}$$

Selling Price of the Job No. CW 7083	
Direct Material	Rs. 2,100.00
Direct Wages	660.00
Factory Overheads(*Refertooverhead summary statement below)	<u>1078.00</u>
Factory Cost	3,838.00
Add : Mark-up (30%of Rs.3,838)	<u>1,151.40</u>
Selling Price	4,989,40

*** Overhead Summary Statement**

Deptt.	Basis	Hours	Rate/Hour	Overhead Rs.
Machining	Machine hour	180	4.50	810.00

Assembly	Direct labour hour	120	1.40	168.00
Packing	Direct labour hour	40	2.50	100.00
				1,078.00

(iv) **Departmentwise statement of total under or over recovery of overheads :**

(a) Under Current Policy

	Department			
	Machining	Assembly	Packing	Total
	Rs.	Rs.	Rs.	Rs.
Direct Wages (Actual)	96,000	2,70,000	90,000	
Overheads recovered @ 125% of Direct Wages	1,20,000	3,37,500	1,12,500	5,70,000
Actual Overhead	3,90,000	84,000	1,35,000	6,09,000
(Under)/Over-recovery of overheads	(2,70,000)	2,53,500	(22,500)	(39,000)

(b) As per method suggested

	Department			
	Machining	Assembly	Packing	Total
Basis	96,000 Machine hrs.	90,000 labour hrs.	60,000 labour hrs	
Rate/hour (Rs.)	4.50	1.40	2.50	
Overhead Recovered (A)	4,32,000	1,26,000	1,50,000	7,08,000
Actual Overhead (B)	3,90,000	84,000 ,	1,35,000	8,09,000
Under/Over recovery (A-B)	42,000	42,000	15,000	99,000

Answer-4 :A

Working Notes

- (i) Total estimated costs for the year ending 31-3-1996
- | | |
|------------------------------------------------|------------------|
| Salary | Rs, 2,75,000 |
| Repairs to Buildings | 1,30,500 |
| Laundry and Linen | 40,000 |
| Interior and Tapestry | 87,500 |
| Miscellaneous Expenses | 95,400 |
| Depreciation: | |
| Buildings Rs. 80,00,000 x 0.05=Rs4,00,000 | |
| Furniture Rs. 20,00,000 x0.15= <u>3,00,000</u> | <u>7,00,000</u> |
| Total Costs | <u>13,28,400</u> |
- (ii) Number of room-days available in a year :
- (a) Season's occupancy for 6 months: $(0.80 \times 50 \times 30 \times 6) = 7,200$ room-days
- (b) Off-season's occupancy for 6 months: $(0.40 \times 50 \times 30 \times 6) = \underline{3,600}$ room-days
- Total room-days in the year 10,800
- (iii) Attendants' salary $10,800 \times \text{Rs. } 5 = \text{Rs. } 54,000$
- (iv) Lighting Bill:
- | | |
|-------------------------------------------------------------------------------------|------------|
| -During season at full rate $7,200 \text{ days} \times (\text{Rs. } 120 \div 30) =$ | Rs. 28,800 |
|-------------------------------------------------------------------------------------|------------|

-During off-season at full rate (0.40 x 50 x 30 x 2) x (Rs. 120 ÷ 30) =	4,800
-During off-season at concessional rate (0.40 x 50 x 30 x 4) x (Rs. 30 ÷ 30)	<u>2,400</u>
	<u>36,000</u>

(A) Total Estimated Costs:	
(i) Estimated expenses as per (i) above	Rs.13,28,400
(ii) Attendants' cost	54,000
(iii) Lighting	<u>36,000</u>
	<u>14,18,400</u>
(B) Total room-days to be charged	
Season	7,200
Off-season (50% x 3,600)	<u>1,800</u>
	<u>9,000</u>
(C) Cost per room-day = Rs. 14,18,400 ÷ 9,000	Rs.157.60
Add: Profit Margin 20% of rent or 25% of cost	<u>39.40</u>
Room rent	<u>197.00</u>

During season rent of Rs. 197.00 per day is to be charged.

During off-season rent of Rs. 98.50 (i.e. Rs.197 ÷ 2) is to be charged.

Notes:

- First total cost to be recovered should be collected.
- Distinction between room-days available and room-days charged should be understood, i.e., room-days on which half rent is to be charged should be expressed in terms of full room-days.

Answer-4 B

Dr. Integral Ledger Cr.
Store Control A/c.

	Rs.		Rs.
To Balance b/d	1,00,000	By Work in progress A/c	2,00,000
To Creditors A/c	1,60,000	By Inventory Adj. A/c	8,000
		By Balance c/d	52,000
	2,60,000		2,60,000
To Balance b/d	52,000		

Dr. Work in Progress A/c Cr.

	Rs.		Rs.
To stores Control A/c	2,00,000	By Finished Stock A/c	3,82,000
To Wages Control A/c	1,86,000	By Balance c/d	1,90,000
To Production Overhead A/c	1,86,000		
	5,72,000		5,72,000
To Balance b/d	1,90,000		

Dr. Finished Goods A/c Cr.

	Rs.		Rs.
To Work in progress A/c	3,82,000	By Cost of Sales A/c	3,82,000
	3,82,000		3,82,000

Dr.		Wages Control A/c		Cr.	
	Rs.			Rs.	
To Bank	1,90,000	By W.I.P.A/c.		1,86,000	
		By Balance c/d		4,000	
	1,90,000			1,90,000	
To Balance b/d	4,000				

Dr.		Production Overhead A/c.		Cr.	
	Rs.			Rs.	
To Bank	1,75,000	By work in progress A/c		1,86,000	
To Balance c/d	11,000				
	1,86,000			1,86,000	

Dr.		Selling and Distribution Expenses A/c.		Cr.	
	Rs.			Rs.	
To Bank	20,000	By Cost of Sales A/c		20,000	
	20,000			20,000	

Dr.		Cost of Sales A/c.		Cr.	
	Rs.			Rs.	
To Finished Stock A/c.	3,82,000	By Balance c/d		4,02,000	
To Selling & Distribution Overhead A/c					
To Balance b/d	20,000				
	4,02,000			4,02,000	

Dr.		Sales A/c.		Cr.	
	Rs.			Rs.	
To Balance c/d	5,72,000	By Debtors A/c		5,72,000	
	5,72,000			5,72,000	
		By Balance b/d		5,72,000	

Dr.		Share Capital A/c.		Cr.	
	Rs.			Rs.	
		By Balance b/d		2,00,000	
				2,00,000	

Dr.		Reserve A/c.		Cr.	
	Rs.			Rs.	
		By Balance b/d		50,000	
				50,000	

Dr.		Plant and Machinery A/c.		Cr.	
	Rs.			Rs.	
To Balance b/d	2,50,000				

	2,50,000		
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Dr.	Sundry Debtors A/c.		Cr.
	Rs.		Rs.
To Balance b/d	40,000	By Bank A/c	6,00,000
To Sales	5,72,000	By Balance c/d	12,000
	6,12,000		6,12,000

Dr.	Sundry Creditors A/c.		Cr.
	Rs.		Rs.
To Bank	1,70,000	By Balance b/d	60,000
To Balance c/d	50,000	By Stores Control A/c	1,60,000
	2,20,000		2,20,000
		By Balance b/d	50,000

Dr.	Bank Account		Cr.
	Rs.		Rs.
To Sundry Debtor's A/c	6,00,000	By Balance b/d	80,000
To Balance c/d	35,000	By Wages Control A/c	1,90,000
		By Production Control A/c	1,75,000
		By Selling & Dist.Exp. Control A/c	20,000
		By Sundry Creditor's A/c	1,70,000
	6,35,000		6,35,000
		By Balance b/d	35,000

Dr.	Inventory Adjustment A/c		Cr.
	Rs.		Rs.
To Store Ledger Control A/c	8,000	By Balance c/d	8,000
	8,000		8,000
To Balance b/d	8,000		

Dr.	Trial Balance as on 31st December, 2002		Cr.
	Dr. Rs.	Cr. Rs.	
1. Share Capital		2,00,000	
2. Reserve Account		50,000	
3. Sundry Debtors	12,000	-	
4. Sundry Creditors		50,000	
5. Plant and Machinery Account	2,50,000	-	
6. Bank Account		35,000	
7. Stores Ledger Control Account	52,000	-	
8. Work in progress Account	1,90,000		
9. Wages Control Account	4,000		
10. Production Overhead Account		11,000	
11. Inventory Adjustment Account	8,000		

12. Cost of Sales Account	4,02,000	
13. Sales Account		5,72,000
	9,18,000	9,18,000

Dr. Profit and Loss Account for the year ended 31.12.2002 Cr.

	Rs.		Rs.
To Cost of Sales A/c	4,02,000	By Sales A/c	5,72,000
To Inventory Adjustment A/c	8,000	By Production Overhead A/c	11,000
To Wages Control A/c	4,000		
To Net Profit	1,69,000		
	5,83,000		5,83,000

Dr. Balance Sheet as at 31st December, 2002 Cr.

Liabilities	Rs.	Assets	Rs.
Share Capital	2,00,000	Plant and Machinery	2,50,000
Reserve	50,000	Stock of :	
Profit	<u>1,69,000</u>	Finished goods	52,000
Sundry Creditors	50,000	W.I.P.	<u>1,90,000</u>
Bank Overdraft	35,000	Sundry Debtors	12,000
	5,04,000		5,04,000

Answer-5 :A

(a) (i) Economic Order Quantity $= \sqrt{\frac{2ab}{CS}}$

$$= \sqrt{\frac{2 \times 24,000 \times 1.20}{10 \times 10\%}} = \sqrt{57,600} = 240 \text{ packets}$$

(ii) Cost of ordering and carrying :

Per order Rs. 1.20

EOQ 240 packets

Per annum 24,000 packets

For 1 order of 240 packets, cost is Rs. 1.20.

For 24,000 packets, cost will be = (1.20 x 24,000)/240 = Rs. 120

Carrying cost is 10% of Rs. 10 = Re. 1 per packet

Average inventory = 240/2 x 10% of Rs. 10

= 120 x Re. 1 = Rs. 120

Total ordering and carrying cost = Rs. 120 + Rs. 120 = Rs. 240.

(b) Number of orders $= \frac{\text{Annual usage}}{\text{EOQ}}$

$$= \frac{24,000}{240} = 100 \text{ orders per year}$$

Consumption per day $= \frac{2,000}{30 \text{ days}}$ packets per month = 66.66 packets

Present supply on hand : 200 packets

66.66 packets last for = 1 day

200 packets will last for = $200 \div 66.66 = 3$ days

Existing supply lasts for 3 days. Lead time is also 3 days. Hence, next order is to be placed immediately.

Answer-5 :B

Dr.		Raw Material Control Account		Cr.	
	Rs.				Rs.
To Balance b/d	48,836	By WIP Control A/c			17,000
To Nominal Ledger Control A/c	22,422	By Nominal Ledger Control A/c			1,000
		By Nominal Ledger Control A/c			1,300
		By Balance c/d			51,958
	71,258				71,258
To Balance b/d	51,958				

Dr.		Work in Progress Control A/c		Cr.	
	Rs.				Rs.
To Balance b/d	14,745	By Finished Stock Control A/c			36,834
To Nominal Ledger Control A/c	11,786	By Nominal Ledger Control A/c			1,800
To Raw Material Control A/c	17,000	By Balance c/d			23,267
To Nominal Ledger Control A/c	18,370				
	61,901				61,901
To Balance b/d	23,267				

Dr.		Finished Stock Account		Cr.	
	Rs.				Rs.
To Balance b/d	21,980	By Nominal Ledger Control A/c			42,000
To WIP Control A/c	36,834	By Balance c/d			19,814
To Nominal Ledger Control A/c	3,000				
	61,814				61,814
To Balance b/d	19,814				

Dr.		Nominal Ledger Control Account		Cr.	
	Rs.				Rs.
To Raw Material Control A/c	1,000	By Balance b/d			85,561
To Raw Material Control A/c	1,300	By Raw Material Control A/c			22,422
To Finished Stock Control A/c	42,000	By WIP Control A/c			11,786
To WIP Control A/c	1,800	By WIP Control A/c			18,370
To Balance c/d	95,039	By Finished Stock Control A/c			3,000
	1,41,139				1,41,139
		By Balance b/d			95,039

Answer-6-A

Stores Ledger of AT Ltd., for the month of September, 20X1 (FIFO Method)

Date	RECEIPT						ISSUE			BALANCE	
	GNR No. MRR No.	Qty. Units	Rate Rs.	Amount Rs.	Requisition No.	Qty. Units	Rate Rs.	Amount Rs.	Qty. Units	Rate Rs.	Amount Rs.
1	2	3	4	5	6	7	8	9	10	11	12
1.9.x1	-	-	-	-	-	-	-	-	25	6.50	162.50
4.9.x1	-	-	-	-	85	8	6.50	52	17	6.50	110.50
6.9.x1	26	50	5.75	287.50	-	-	-	-	17 50	6.50 5.75	398.00
7.9.x1	-	-	-	-	97	12	6.50	78	5 50	6.50 5.75	320.00
10.9.x1	-	-	-	-	Nil	10	5.75	57.50	5 40	6.50 5.75	262.00
12.9.X1	-	-	-	-	108	5 10	6.50 5.75	90	30	5.75	172.50
13.9.X1	-	-	-	-	110	20	5.75	115	10	5.75	57.50
15.9.X1	33	25	6.10	152.50	-	-	-	-	10 25	5.75 6.10	210.00
17.9.X1	-	-	-	-	121	10	5.75	57.50	25	6.10	152.50
19.9.X1	38	10	5.75	57.50	-	-	-	-	25 10 5	6.10 5.75 5.75	210.00
20.9.X1	4	5	5.75	28.75	-	-	-	-	25 10	6.10 7.75	258.75
26.9.X1	-	-	-	-	146	5 5	5.75 6.10	59.25	20 10	6.10 5.75	179.50
30.9.X1	-	-	-	-	Shortage	2	6.10	12.20	18 10	6.10 5.75	167.30

Answer-6 B :

Working Notes:

- Depreciation per annum:
$$= \frac{\text{Purchase Price} - \text{Scrap Value}}{\text{Estimated life}}$$

$$= \frac{\text{Rs.4,00,000} - \text{Rs.10,000}}{5 \text{ years}} = \text{Rs.78,000}$$
- Total distance travelled by mini-bus in 25 days:

$$= \text{Length of the route (two -sides)} \times \text{No. of trips per day} \times \text{No. of days}$$

$$= 60 \text{ km} \times 6 \text{ trips} \times 25 \text{ days} = 9,000 \text{ km}$$
- Total Passenger-Km:

$$= \text{Total distance travelled by mini-bus in 25 days} \times \text{No. of seats}$$

$$= 9,000 \text{ km} \times 20 \text{ seats} = 1,80,000 \text{ passenger-km}$$

Statement suggesting fare per passenger-km

	Cost per annum Rs.	Cost per month Rs.
Fixed expenses:		
Insurance	15,000	
Garage rent	9,000	

Road tax	3,000	
Administrative charges	5,000	
Depreciation	78,000	
Interest on loan	10,000	
	1,20,000	10,000
Running expenses:		
Repair and maintenance	15,000	1,250
Replacement of tyre-tube	3,600	300
Diesel and oil cost (9,000 km × Rs. 5)	-	45,000
Driver and conductor's salary	-	5,000
Total cost (per month)		61,550.00
Add: Profit 20% of total revenue or 25% of total cost		15,387.50
Total revenue		76,937.50

Rate per passenger-km Rs. $76,937.50/1,80,000$ passenger km = 0.42743 i.e., = 0.43 i.e., 43 paise