SUGGESTED SOLUTION

INTERMEDIATE M'19 EXAM

SUBJECT- COSTING

Test Code - CIM 8020

Date: 12.08.2018

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ANSWER-1

Operating cost statement of 'RP' Resort (P) Limited

Particulars	Cost per annum (Rs. in lakhs)
Staff Salaries	680.00
Room Attendant's Wages (refer W.N-3)	286.20
Lighting, Heating & Power	300.00
Repairs, Maintenance & Renovation	180.00
Linen	30.00
Laundry charges	24.00
Interior Decoration	75.00
Sundries	30.28
Depreciation (refer W.N- 4):	
- Building	45.00
- Furniture & Fixture	9.00
- Air Conditioners	7.50
Total cost for the year	1,666.98

(4 Marks)

Computation of profit:

Let Rs. x be the rent for deluxe from.

Equivalent deluxe room days are 90,720 (refer W.N- 2)

Total takings = Rs. 90,720x

Profit is 25% of total takings.

Profit = 25% of Rs. 90,720x = Rs. 22,680x

Total takings = Total Cost + Profit

Rs. 90,720x = Rs.16,66,98,000 + Rs.22,680x

Rs. 90,720x - Rs.22,680x = Rs.16,66,98,000

Rs. 68,040x = Rs.16,66,98,000

X = Rs. 166698000
Rs. 68040

= Rs.2450 **(2 Marks)**

Rent to be charged for Deluxe room	Rs. 2,450
Rent to be charged for Super deluxe room = Rent of deluxe room × 2 = Rs. 2,450 × 2	Rs. 4,900
Rent to be charged for Luxury suite = Rent of Super Deluxe room × 1.5 = Rs. 4,900 × 1.5	Rs. 7,350

Working Notes:

1. Computation of Room Occupancy

Type of Room	No. of rooms x no. of days x occupancy %	Room days
Deluxe Room	100 rooms x 360 days x 90% occupancy	32,400
Super Deluxe Room	60 rooms x 360 days x 75% occupancy	16,200
Luxury Suite	40 x 360 days x 60% occupancy	8,640
	Total	57,240

2. Computation of equivalent deluxe room days:

Rent of 'super deluxe' room is to be fixed at 2 times of 'deluxe room' and luxury suite' is 3 times of 'deluxe room'. Therefore equivalent room days would be:

Type of Room	Room days	Equivalent deluxe room days
Deluxe Room	32,400 x 1	32,400
Super Deluxe Room	16,200 x 2	32,400
Luxury Suite	8,640 x 3	25,920
	Total	90,720

3. Computation of room attendant's wages:

Room occupancy days × Rs. 500 per day

= 57,240 days × Rs. 500 = Rs. 286.20 lakhs

4. Computation of Depreciation per annum:

Particulars	Cost (Rs.)	Rate of Depreciation	Depreciation (Rs.)
Building	900,00,000	5%	45,00,000
Furniture & Fixtures	90,00,000	10%	9,00,000
Air Conditioners	75,00,000	10%	7,50,000

(1*4= 4 Marks)

ANSWER-2

ANSWER-A

(i) Calculation of Economic Order Quantity:

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

$$= \sqrt{\frac{2 \times (60{,}000\ Packs \times 12\ months) \times\ Rs.240}{Rs.228 \times 10\%}}$$

= 3,893.3 packs or 3,893 packs **(1 Mark)**

(ii) Number of orders per year

$$= \frac{Annual\ requirements}{E.O.Q}$$

$$= \frac{7{,}20{,}000 \text{ packs}}{3{,}893 \text{ packs}}$$

= 184.9 or 185 orders a year **(1 Mark)**

(iii) Ordering and storage costs

	(Rs.)
Ordering costs :– 185 orders × Rs. 240	44,400.00
Storage cost :– ½ (3,893 packs × 10% of Rs.228)	44,380.20
Total cost of ordering & storage	88,780.20

(1 Mark)

(iv) Timing of next order

(a) Day's requirement served by each order.

Number of days requirements supply = $\frac{No.of\ working\ days}{No.of\ order\ in\ a\ year}$

= $\frac{360\ days}{185\ orders}$

= 1.94 days

This implies that each order of 3,893 packs supplies for requirements of 1.94 days only.

(b) Days requirement covered by inventory

= $\frac{Units\ in\ inventory}{EOQ}$ × ($Day's\ requirement$ served by an order)

= $\frac{10033\ Packs}{3893\ Packs}$ × 1.94 $days$

= 5 days requirement

(c) Time interval for placing next order

Inventory left for day's requirement – Average lead time of delivery

5 days – 5 days = 0 days

This means that next order for the replenishment of supplies has to be placed immediately.

(2 Marks)

ANSWER-B

(i) Minimum stock of A

Re-order level – (Average rate of consumption × Average time required to obtain fresh delivery)

= 8,000 – (200 × 10 × 2) = 4,000 kgs. **(1 Marks)**

(ii) Maximum stock of B

Re-order level + Re-order quantity – (Minimum consumption × Minimum delivery period)

= 4,750 + 5,000 – (175 × 4 × 3)

= 9,750 – 2,100 = 7,650 kgs. **(1 Marks)**

(iii) Re-order level of C

Maximum delivery period × Maximum usage

= 4 × 225 × 6 = 5,400 kgs.

OR

Re-order level of C

= Minimum stock of C + [Average rate of consumption × Average time required to obtain fresh delivery]

= 2,000 + [(200 × 6) × 3] kgs.

= 5,600 kgs. **(1 Marks)**

(iv) Average stock level of A

= Minimum stock level of A + ½ Re-order quantity of A

= 4,000 + ½ × 10,000 = 4,000 + 5,000 = 9,000 kgs.

OR

Average Stock level of A

$$\frac{\text{Minimum stock level of A + Maximum stock level of A}}{2} \text{ (Refer to working note)}$$

$$\frac{4,000 + 16,250}{2} = 10,125 \text{ kgs.}$$ **(1 Marks)**

Working note:

Maximum stock of A = ROL+ ROQ – (Minimum consumption × Minimum re-order period)

= 8,000 + 10,000 – [(175 × 10) × 1]

=16,250 kgs. **(1 Marks)**

ANSWER-3

(5 Marks)

Particulars		Rs.	Particulars		Rs.
To Materials issued		90,000	By Material sold		18,125
To wages paid	75,000		By plant sold		2,875
Add : Outstanding	6,250	81,250	By plant at site c/d		7,750
To plant		25,000	By Material at site c/d		4,250
To sundry expenses	7,250		By work – in – Progress c/d		
Less : Prepaid	625	6,625	Work certified	2,18,750	
To Establishment charges		14,625	(Rs. 1,75,000 ÷ 80%)		
To costing P & L A/c.		3,125	Work uncertified	27,375	2,46,125
(Rs. 18,125 – Rs. 15,000)					
To Notional Profit (Profit for the year)		58,500			
		2,79,125			**2,79,125**

Calculation of Estimated Profit **(5 Marks)**

			Rs.	Rs.
1)	Material consumed	(90,000 + 3,125 – 18,125)	75,000	
	Add: Further consumption		85,750	1,60,750
2)	Wages:		81,250	
	Add : Further cost	(87,325 – 6,250)	81,075	
	Add : Outstanding		8,300	1,70,625
3)	Plant used	(25,000 – 2,875)	22,125	
	Add: Further plant introduced		31,250	
	Less : Closing balance of plant		(3,750)	49,625
4)	Establishment charges		14,625	
	Add : Further charges for nine months	(14,625× 9/12)	10,969	25,594
5)	Sundry expenses		7,250	
	Add : Further expenses		6,875	14,125
6)	Reserve for contingencies			10,800
	Estimated profit	(balancing figure)		68,481
	Contract price			5,00,000

ANSWER-4

Working Notes:

1. The material received as replacement from vendor is treated as fresh supply.
2. In the absence of information the price of the material received from within on 20-9-X1 has been taken as the price of the earlier issue made on 17-9- X1. In FIFO method physical flow of the material is irrelevant for pricing the issues.
3. The issue of material on 26-9-X1 is made out of the material received from within.
4. The entries for transfer of material from one job and department to other on 22-9-X1 and 29-9-X1 are book entries for adjusting the cost of respective jobs and as such they have not been shown in the stores ledger account.
5. The material found short as a result of stock taking has been written off. **(3 Marks)**

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

Receipt							Issue			Balance	
Date	**GRN No.**	**Qty.**	**Rate**	**Amt.**	**Requisi**	**Qty.**	**Rate**	**Amt.**	**Qty.**	**Rate**	**Amt.**
	MRP No.	**Units**	**(Rs.)**	**(Rs.)**	**Tion No.**	**Units.**	**(Rs.)**	**Rs.**	**Units**	**(Rs.)**	**(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	172.5
13 – 9 – X1	-	-	-	-	110	20	5.75	115	10	5.75	57.5
15 – 9 - X1	33	25	6.10	152.50	-	-	-	-	10 25	5.75 6.10	210.00
17 – 9 – X1					121	10	5.75	57.5	25	6.10	152.5
19 – 9 – X1	38	10	5.75	57.5	-	-	-	-	25 10 5	6.10 5.75 5.75	210
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	167.3

(7 Marks)

ANSWER-5

Working Notes:

Total Distance (in km.) covered per month **(1 Marks)**

Bus route	Km. per trip	Trips per day	Days per month	Km. per month
Delhi to Chandigarh	250	2	8	4,000
Delhi to Agra	210	2	10	4,200
Delhi to Jaipur	270	2	6	3,240
				11,440

Passenger- km. per month **(3 Marks)**

	Total seats available per month (at 100% capacity)	Capacity utilised		Km. per trip	Passenger- Km. per month
		(%)	Seats		
Delhi to Chandigarh & Back	800 (50 seats × 2 trips × 8 days)	90	720	250	1,80,000 (720 seats × 250 km.)
Delhi to Agra and Back	1,000 (50 seats × 2 trips × 10 days)	85	850	210	1,78,500 (850 seats × 210 km.)
Delhi to Jaipur and Back	600 (50 seats × 2 trips × 6 days)	100	600	270	1,62,000 (600 seats × 270 km.)
Total					5,20,500

Monthly Operating Cost Statement **(4 Marks)**

	(Rs.)	(Rs.)
(i) Running Costs		
- Diesel {(11,440 km ÷ 4 km) × Rs. 56}	1,60,160	
- Lubricant oil {(11,440 km ÷ 100) × Rs. 10}	1,144	1,61,304
(ii) Maintenance Costs		
- Repairs & Maintenance		1,000
(iii) Standing charges		
- Salary to driver	24,000	
- Salary to conductor	21,000	
- Salary of part-time accountant	5,000	
- Insurance (Rs. 4,800 ÷12)	400	
- Road tax (Rs. 15,915 ÷12)	1,326.25	
- Permit fee	315	
- Depreciation {(Rs. 12,00,000 × 20%) ÷ 12}	20,000	72,041.25
Total costs per month before Passenger Tax (i)+(ii)+(iii)		2,34,345.25
Passenger Tax*		93,738.10
Total Cost		3,28,083.35
Add: Profit*		1,40,607.15
Total takings per month		4,68,690.50

*Let, total takings be X then

X = Total costs per month before passenger tax + 0.2 X (passenger tax) + 0.3 X (profit)

X = Rs. 2,34,345.25 + 0.2 X + 0.3 X

0.5 X = Rs. 2,34,345.25

or, X = Rs.4,68,690.50

Passenger Tax = 20% of Rs.4,68,690.50 = Rs. 93,738.10
Profit = 30% of Rs.4,68,690.50 = Rs. 1,40,607.15

Calculation of Rate per passenger km. and fares to be charged for different routes

Rate per passenger –km = $\frac{Total\ takings\ per\ month}{Total\ passenger-km.per\ month}$ **(1 Marks)**

$= \frac{Rs.468690.50}{520500\ passenger-\ km} = Rs.0.90$

Bus fare to be charged per passenger **(1 Marks)**

Delhi to Chandigarh = Rs.0.9 × 250 km = Rs.225

Delhi to Agra = Rs.0.9 × 210 km = Rs.189

Delhi to Jaipur = Rs.0.9 × 270 km = Rs. 243

ANSWER-6

MNP Construction Ltd.

Dr. **Contract Account (1st April 1999 to 31 March, 2000)** **Cr.**

Particulars		Amount	Particulars	Amount
To Materials issued		Rs. 3,00,000	By Plant returned to stores	Rs. 37,500
To Labour paid Rs.	2,00,000		(Note 1)	
Outstanding	20,000	2,20,000	By Materials at site	20,000
To Plant purchased		1,50,000	By Work certified	8,00,000
To Expenses paid	75,000		By Work uncertified	25,000
Less : Prepaid	15,000	60,000	By Plant at site	75,000
Notional Profit c/d		2,27,500	(Note 2)	
		9,57,500		**9,57,500**

(4 Marks)

MNP Construction Ltd.

Contract Account (1st April, 1999 to 31st December, 2000)

(For computing estimated profit)

Particulars	Amount	Particulars	Amount
To Materials used (Rs.3,00,000 + 5,50,000	8,50,000.00	By Material at site	50,000.00
To Labour (2,00,000 + 2,50,000 + 30,000)	4,80,000.00	By Plant returned to store on 31st March 1999	37,500.00
To Plant purchased	1,50,000.00	By Plant returned to store on 31.12.2000 (Note 3)	60,937.50
To Expenses (75,000 + 1,50,000)	2,25,000.00	By Contractor A/c	17,50,000.00
To Estimated Profit	1,93,437.50		
	18,98,437.50		**18,98,437.50**

(3 Marks)

Working Notes :

1. Value of Plant returned to store on 31st March, 2000

Historical cost of plant returned	Rs.50,000
Less : Depreciation at 25% for 1 year	12,500
Value of Plant returned to store on 31st March, 2000	37,500

2. Value of Plant at site

Historical cost	Rs.1,00,000
Less : Depreciation at 25% for 1 year	25,000
	75,000

3. Value of Plant returned to store on 31st December, 2000

Value of Plant on 31st March, 2000	Rs.75,000.00
Less : Depreciation at 25% for 9 months	
Rs. 75,000 x (25/100) x (9/12)	14,062.50
	60,937.50

(3 Marks)