

Service costing

Questions:

- Q.1** A company runs holiday home. For this purpose, it has hired a building at a rent of Rs. 10, 00,000 per month along with 5% of total taking. It has three types of suites for its customers, viz., single room, double rooms and triple rooms.

Following information is given:

Types of suite	Number	Occupancy percentage
Single Rooms	100	100%
Double Rooms	50	80%
Triple Rooms	30	60%

The rent of double rooms suite is to be fixed at 2.0 times of the single room suite and that of triple rooms suite as twice of the double rooms suite. The other expenses for the year 2019 are as follows:

	(Rs.)
Staff salaries	14,25,00,000
Room attendants' wages	4,50,00,000
Lighting , hating and power	2,15,00,000
Repairs and renovation	1,23,50,000
Laundry charges	80,50,000
Interior decoration	74,00,000
Sundries	1,53,00,000

Provide profit @ 20% on total taking and assume 360 days in a year.

You are required to CALCULATE the rent to be charged for each type of suite.

- Q.2** A group of 'Health Care Service' has decided to establish a Critical Care Unit in a metro city with an investment of Rs. 85 lakhs in hospital equipments. The unit's capacity shall be of 50 beds and 10 more beds, if required, can be added.

Other information for a year are as under:

	Rs.
Building Rent	2,25,000 per month
Manager's Salary (Number of Managers – 03)	50,000 per month to each one
Nurses' Salary (Number of Nurses – 24)	18,000 per month to each Nurse

Word boy's Salary (Number of word boys -24)	9000 per month per person
Doctor's Payment (Paid on the basis number of patients attended and time spent by them)	5,50,000 per month
Food and laundry services (Variable)	39,53,000 per year
Medicines to patients (variable)	22,75,000 per year
Administrative Overheads	28,00,000 per year
Depreciation on equipment's	15% per annum on original cost

It was reported that for 200 days in a year 50 beds were occupied , for 105 days 30 beds were occupied and for 60 days 20 beds were occupied.

The hospital hired 250 beds at a charge of Rs. 950 per bed to accommodate the flow of patients. However, this never exceeded the normal capacity of 50 beds on any day.

Find out:

- Profit per patient day, if hospital charges on an averages Rs. 2.500 per day from each patient.
- Break even point per patient day (Make calculation on annual basis)

Answer:

Q.1 Ans (i) Total equivalent single room suites

Nature of suite	Occupancy (Room days)	Equivalent single room suites (Room – days)
Single room suites	36,000 (100 rooms × 360 days × 100%)	36,000 (36,000 × 1)
Double rooms suites	14,400 (50 rooms × 360 days × 80%)	36,000 (14,400 × 2.5)
Triple rooms suites	6,480 (30 rooms × 360 days × 60%)	32,400 (6,480 × 5)
		1,04,400

(ii) Statement of total cost:

	(Rs.)
Staff salaries	14,25,00,000
Room attendant's wages	4,50,00,000
Lighting , heating and power	2,15,00,000
Repairs and renovation	1,23,50,000
Laundry charges	80,50,000
Interior decoration	74,00,000
Sundries	<u>1,53,00,000</u>
	25,21,00,000
Building rent { (Rs. 10,00,000 × 12 months) + 5% on total taking}	1,20,00,000 + 5% on total takings
Total cost	26,41,00,000 + 5% on total takings

Profit is 20% of total takings

∴ Total takings = Rs. 26, 41, 00,000 + 25% (5% + 20%) of total takings

Let x be rent for single rooms suite

Then $1, 04,400x = 26, 41, 00,000 + 0.25 \times 1, 04,400x$

Or, $1, 04,400x = 26, 41, 00,000 + 26,100x$

Or, $78,300x = 26, 41, 00,000$

Or, $x = 3,373$

(iii) Rent to be charged for single room suite = Rs. 3,373

Rent for double rooms suites Rs. $3,373 \times 2.5 = \text{Rs. } 8,432.5$

Rent for triple rooms suites Rs. $3,373 \times 5 = \text{Rs. } 16,865$

Q.2 Ans (i) Calculation of Contribution Per Patient day

Total Contribution = Rs. 2, 34, 34,500

Total Patient days = 14,600

Contribution per Patient day = Rs. $2, 34, 34,500 / 14,600$

= Rs. 1,605.103

(ii) Break even point

$$\begin{aligned}
\text{Break even point} &= \text{Fixed Cost} / \text{Contribution per patient day} \\
&= \text{Rs. } 1,63,51,000 / \text{Rs. } 1,605.103 \\
&= 10.187 \text{ patient days}
\end{aligned}$$

Working Notes:

1. Calculation of number of patient days:

50 Beds × 200 days	= 10,000
30 Beds × 105 days	=3,150
20 Beds × 60 days	= 1,200
Extra bed	= <u>250</u>
Total	= <u>14,600</u>

Statement of Profitability

Particulars	(Rs.)	(Rs.)
Income for the year (Rs. 2,500 per patient per day × 14,600 Patient days)		3,65,00,000
Less: Variable Costs:		
Doctors Fees (Rs. 5,50,000 × 12)	66,00,000	
Food to patients (Variable) and Laundry Services	39,53,000	
Medicines to patients (Variable)	22,75,000	
Bed Hire Charges (Rs. 950 × 250)	2,37,500	1,30,65,500
Total Variable Costs		2,34,34,500
Contribution		
Less: Fixed Costs		
Building Rent (Rs. 2,25,000 × 12)	27,00,000	
Manager's Salary (Rs. 50,000 × 3 × 12)	18,00,000	
Nurses' Salary (Rs. 18,000 × 24 × 12)	51,84,000	
Word boy's Salary (Rs. 9,000 × 24 × 12)	25,92,000	
Administrative Overheads	28,00,000	
Depreciation on equipments (Rs. 85, 00,000 × 15%)	12,75,000	
Total fixed Costs	1,63,51,000	
Profit		70,83,500

