24/07/18

CH:- OPERATING COSTING

* It is a technique of calculating Total cost for service sectors. It gives more emphasis on providing services calculation of total cost for service providers. It is a process or technique of accumulating and ascertainment of cost, for providing a standardized service to the public or an undertaking.

It is also known as Service Costing or Terminal Costing.

* Features :-

(1) Uniform service is provided to all the customers.

(2) Total cost is classified into fixed cost (standing cost) and Variable cost (Running cost).

(3) The fixed and variable cost classification is necessary to calculate the cost of service and the unit cost of service.

(4) There is no physical stock of article if an undertaking renders a service.

(5) If a cost center is operating for an undertaking, there is no sale of service, but there is "rendering of services". If a cost center is operating for public, it sells its services to the public.

(6) The cost unit may be simple or composite cost unit.
Eg:- (a) Transport :-

Cost per passanger or cost per km. → Simple cost unit.
Cost per passanger/km → Composite Cost unit.

(7) Total Cost is averaged over the total amt. of services rendered.

(8) The cost are collected from authentic documents like daily log sheet, operating cost sheet etc.

* Application of Operating Costing :-

(1) Transport.
(2) Hotel.
(3) Hospital.
(4) Water Supply.
(5) Electricity
(6) LPG
(7) Garbage Management
(8) Road Maintenance.

* Cost Units :- The unit of identifying cost in operating costing is as follows :-

(1) Simple Cost Unit - It includes only 1 factor for calculation.
Ex :- Cost per km or Cost per passanger.

(2) Composite Cost Unit - It includes 2 factors for calculation.
Ex :- Cost per passanger/km, cost per tonne/km, cost per meal, Cost per rooms/days, cost per patient/days.

Operating Cost Sheet (CAS-5)

Particulars	Amt.
(A) Fixed Cost :-	
Depreciation of Vehicle.	xx
Rent/Interest on loan.	xx
License fees/Tax	xx
Salaries to staff	xx
Other Fixed Costs	xx
(TFC) TOTAL (A)	xx
(B) Variable Cost :-	
Depreciation of Vehicle (kms. run)	xx
Petrol/Oil/Grease.	xx
Salary to Operating Staff	xx
Maintenance Cost	xx
Other Variable Costs	xx
(TVC) TOTAL (B)	xx
(C) Total Operating Cost	xx
Add :- Profit	xx
Revenue	xx
TOTAL (C)	xx

* Meaning of Fixed Cost as per CAS-5 :-

Fixed cost means the expenses paid by the transporter irrespective of Kms. run.

* Meaning of Variable Cost as per CAS-5 :-

Expenses paid by the transporter with respect to kms. run.

25/07/18

* Formulae :-

(1) Effective km = No. of Vehicles × No. of Trips × No. of ways × km run × No. of days/month

(2) Effective passenger-km =

= No. of vehicles × No. of Trips × No. of ways × km run × No. of days/month × No. of Passengers × % Capacity.

OR

= Effective km × No. of Passengers × % Capacity.

(3) Effective tonn-km = Effective km × tonnes Carried × % Capacity.

03/08/18

TRANSPORT COSTING

Illus-9

WN-1 Effective km (formula) = Not Applicable

Running km = 3,000 km (Given) (for Variable Cost only)

⇒ Effective km = 3,000 − 20%

= 2,400 kms.

WN-3 Petrol :-

kms	:	Rs.
8		15
3,000		? (5,625)

Illus-8

CAS-5 Transport Cost Sheet for a Year

	Vehicle A		Vehicle B	
	(₹)	Eff-kms = 15,000	(₹)	Eff-kms = 6000
A) Fixed Cost :-				
1. Road License	750		750	
2. Insurance	700		400	
3. Garage Rent	900		500	
4. Supervision and Salaries	2,700		2,700	
5. Interest	1,250 (25,000 × 5%)		750 (15,000 × 5%)	
= TFC (A)	6,300	0.420	5,100	0.850
B) Variable Cost :-				
1. Drivers Wages (WN)	2,250		900	
2. Fuel (WN)	2,250		1,200	
3. Repairs & Maintenance (WN)	24,750		12,000	
4. Tyre Allocation (WN)	12,000		3,600	
5. Depreciation (WN)	3,750		1,200	
= TVC (B)	45,000	3.000	18,900	3.150
Total Operating Cost (A+B)	51,300	3.420	24,000	4.000
(+) Profit	—	—	—	—
Revenue	—	—	—	—

WN **Drivers Wages :-**

(A) → Kms : Rs.

20 — 3

15,000 — 2250

(B) → Kms : Rs.

20 — 3

6,000 — 900

WN **Fuel :-**

(A) → Kms : Rs.

20 — 3

15,000 — 2,250

(B) → Kms : Rs.

15 — 3

6,000 — 1,200

W/N Repairs :-

(A) → Kms : Rs.

1 : 1.65

15,000 : 24,750

(B) → Kms : Rs.

1 : 2

6,000 : 12,000

W/N Tyre Allocation :-

(A) → Kms : Rs.

1 : 0.80

15,000 : 12,000

(B) → Kms : Rs.

1 : 0.60

6,000 : 3,600

W/N Depreciation :-

(A) → Dep^n = $\frac{25,000 - 0}{1,00,000}$

= ₹0.25/km

Kms : Rs.

1 : 0.25

15,000 : 3,750

(B) → Dep^n = $\frac{15,000 - 0}{75,000}$

= ₹0.2/km

Kms : Rs.

1 : 0.2

6,000 : 1,200

Illus-5

Effective kms = 6,000 − 20%

= 4,800 kms.

Running kms = 6,000 kms

W/N Depreciation :-

Dep^n = $\frac{5,00,000 - 0}{4,00,000}$

= ₹1.25 per km.

Kms : Rs.

1 : 1.25

6,000 : 7,500

Date
Page

CAS-5 Transport Cost Sheet for a Month

	₹	Eff. kms = 4800
A) Fixed Cost :-		
1. Salary to Office Staff (12,000 / 30 taxi)	400	
2. Garage Rent (7,000 / 30 taxi)	233	
3. Insurance Premium (5,00,000 × 5% × 1/12)	2,083	
4. Taxes (9,600 / 12)	800	
= TFC (A)	3,516	0.7325
B) Variable Cost :-		
1. Salary to Mechanic (5,000 / 30 taxi)	167	
2. Salary to Driver	6,000	
3. Salary to Cleaner (4,000 / 30 taxi)	133	
4. Depreciation (WN)	7,500	
5. Oil and Grease (WN)	1,500	
6. Diesel (WN)	11,250	
= TVC (B)	26,550	5.5312
C) Semi-Variable Cost :-		
1. Repairs (4,800 / 12m)	400	
= TSVC (C)	400	0.0833
Total Operating Cost	30,466	6.3471
(+) Profit	—	—
Revenue	—	—

WN **Oil and Grease :-**

kms	:	Rs.
200		50
6,000		1,500

WN **Diesel :-**

lcms	:	Rs.
16		30
6,000		11,250

13/08/18

Illus-12

Effective kms = No. of Vehicles × No. of Trips × No. of Ways × kms run × No. of Days in a month

⇒ 10 ton truck = 1 × 5 × 2 × 6 × 24 = 1,440 kms

⇒ 08 ton truck = 1 × 5 × 2 × 6 × 24 = 1,440 kms

Effective ton-kms = Effective kms × tons Carried × % Capacity

⇒ 10 ton truck = 1,440 × 10 × 50% = 7,200 ton-kms

⇒ 08 ton truck = 1,440 × 08 × 50% = 5,760 ton-kms

CAS-5 Transpor Cost Sheet for a month

	10 ton truck		08 ton truck	
	(₹)	Eff. ton-km = 7200	(₹)	Eff. ton-km = 5760
A) Fixed cost :-				
1. Depreciation (WN)	16,667		13,333	
2. Other Fixed Expenses (60,000/12), (36,000/12)	5,000		3,000	
3. Other Staff Expenses (1,08,000/12) each	9,000		9,000	
= TFC (A)	30,667	4.259	25,333	4.398
B) Variable cost :-				
1. Repairs and Maintenance (60,000/12), (48,000/12)	5,000		4,000	
2. Lubricants (WN)	288		288	
3. Diesel (WN)	7,680		5,760	
4. Salary to Drivers (3,000×2)	6,000		6,000	
5. = TVC (B)	18,968	2.634	16,048	2.786
Total Operating Cost (A+B)	49,635	6.894	41,381	7.184
(+) Profit	—	—	—	—
Revenue	—	—	—	—

WN **Depreciation:-**

10 ton truck $= \frac{10L-0}{5} \times \frac{1}{12}$ = 16.667

08 ton truck $= \frac{8L-0}{5} \times \frac{1}{12}$ = 13.333.

WN **Lubricants :-**

10 ton truck – kms : Rs.

100 : 20

1440 : 288

08 ton truck – kms : Rs.

100 : 20

1440 : 288

WN **Diesel :-**

10 ton truck – kms : Rs.

3 : 16

1440 : 7680

08 ton truck – kms : Rs.

4 : 16

1440 : 5760

Conclusion :- From the above, 10 ton truck should be purchased because it has the least operating cost.

Illus-11 Effective kms = No. of vehicles × No. of Trips × No. of Ways × kms run × days in a month

= 5 × 1 × 2 × 50 kms × 30 days

= 15,000 kms

Eff. pass.-kms = Eff. kms × pass. carried × % Capacity

= 15,000 × 50 × 75%

= 5,62,500 pass-kms.

CAS-5 Transport Cost Sheet for a month (5 Buses)

		(₹)	
A) Fixed cost :-			
1. Salary to Office Staff		50,000	
2. Taxation and Insurance		80,000	
3. Depreciation (26,000×5)		1,30,000	
4. Interest		1,00,000	
	= TFC (A)	3,60,000	0.640
B) Variable Cost :-			
1. Wages of Driver and Cleaners (24,000×5)		1,20,000	
2. Repairs		40,000	
3. Tyre and Tube (WN)		7,500	
4. Diesel (WN)		67,500	
	= TVC (B)	2,35,000	0.418
Total Operating cost (A+B)	(100)	5,95,000	1.058
(+) Profit	(15)	89,250	0.159
Revenue	(115)	6,84,250	1.216

WN **Tyre and Tube :-**

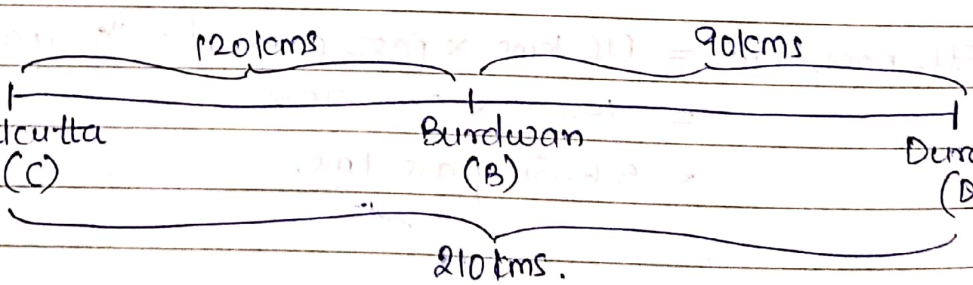
kms	:	Rs.
1		0.5
15,000		7,500

WN **Diesel :-**

kms	:	Rs.
10		45
15,000		67,500

14/08/18

Illus-2



C to D = 210 kms ; C to B = 120 kms ; B to D = 90 kms.

Effective ton-kms :-

Outward Journey – C to D = 8 trips × 5 tons (Full load) × 210 kms
= 8400

C to B = 2 trips × 5 tons × 120 kms
= 1200

B to D = 2 trips × 2 tons × 90 kms
= 360

Total = 8400 + 1200 + 360
= 9,960 ton-kms.

Return Journey –

D to C = 5 trips × 8 tons × 210 kms. = 8,400

B to C = 1 trip × 0 tons (empty) × 120 kms = 0

D to B = 1 trip × 5 tons × 90 kms = 450

8,850 ton-kms

∴ Effective ton-kms = 9,960 + 8,850
= 18,810 ton-kms.

CAS – 5 Transport Cost Sheet for a Month

	₹	Eff. ton-kms = 18,810
A) Fixed cost :-		
1. Fixed cost (1,92,000/12m)	16,000	
= TFC (A)	16,000	0.8506
B) Variable cost :-		
1. Maintenance Charges (9,60,000/12m)	80,000	
2. Operating Charges	12,020	
= TVC (B)	92,020	4.8921
Total Operating Cost (A+B)	1,08,020	5.7427

Illus-7

Effective km = 3,000 − 30%
= 2,100 kms.

Running kms = 3,000 kms.

CAS-5 Transport cost sheet for a Month (1 Bus)

	(₹)	Eff-kms = 2,100
A) Fixed Cost :-		
1. Salary to Manager (7,000/10)	700	
2. Salary to Accountant (5,000/10)	500	
3. Garage Rent (600/10)	60	
4. Annual Tax (900/12m)	75	
= TFC (A)	1,335	0.6357
B) Variable Cost :-		
1. Depreciation (WN)	3,000	
2. Salary to Cleaner (200/10)	20	
3. Salary to mechanic (400/10)	40	
4. Drivers Wages	350	
5. Annual Repairs (1,000/12m)	83	
6. Petrol (WN)	1,500	
7. Oil (WN)	450	
= TVC (B)	5,443	2.5919
Total Operating Cost (A+B)	6,778	3.2276

WN Depreciation :-

$$\text{Dep}^{n} = \frac{2,00,000 - 0}{2,00,000 \text{ kms}}$$

$= ₹1$ per km.

kms	:	Rs.
1		1
3,000		3,000

WN Petrol :-

kms	:	Rs
10		5
3,000		1500

WN : Oil :-

kms	:	Rs.
100		15
3,000		450

Illus-1 Effective kms = No. of Vehicles × No. of Trips × No. of Ways × kms run × Days in a month

$= 1 \times 6 \times 2 \times 30 \times 25$

$= 9,000$ kms.

Effective pass.-kms = Effective kms × No. of Passengers × % Capacity.

$= 9,000 \times 20 \times 100\%$

$= 1,80,000$ passenger-kms.

CAS-5 Transport cost Sheet for a Month

	(₹)	Eff. pass-kms = 1,80,000
A) Fixed cost :-		
1. Insurance. (15,000/12m)	1,250	
2. Interest on loan. (10,000/12m)	833	
3. Garage Rent. (9,000/12m)	750	
4. Road Tax. (3,000/12m)	250	
5. Admin Charges. (5,000/12m)	417	
6. Depreciation. (WN)	6,500	
= TFC (A)	10,000	0.056

B) Variable cost :-			
1. Repairs and Maintenance. (15,000/12m)		1,250	
2. Salary to Drivers & Conductors.		5,000	
3. Repairs and Replacement of Tyres.		300	
4. Diesel / Oil (WN)		45,000	
	=TVC (B)	51,550	0.286
Total operating cost (A+B)	(80)	61,550	0.342
(+) Profit	(20)	15,388	0.085
Revenue	(100)	76,938	0.427

WN Depreciation :- Dep^n = $\frac{4,00,000 - 10,000}{5 \text{ years.}} / 12m$

= 78,000 / 12m

= 6,500 p.m.

WN Diesel / Oil :-

Kms	:	Rs.
1		5
9,000		45,000

28/08/18

HOTEL AND HOSPITAL COSTING

HOTEL

Illus-5 Calculation of Single Room days :-

= No. of rooms × % Occupancy × Days in a year

	Single	Double	Tripple
	= 100 × 100% × 360	= 50 × 80% × 360	= 30 × 60% × 360
	= 36,000	= 14,400	= 6,480
Conversion (X)	1	2.5	5
	36,000	36,000	32,400

⇒ 1,04,400 Single room days.

Yearly Hotel Cost Sheet (BLUESTAR)

		(₹)	Single Room Days = 1,04,400
A) Fixed Cost :-			
1. Rent (10,000 x 12m)		1,20,000	
2. Staff Salary		14,25,000	
3. Repairs		1,23,500	
4. Interior Decoration		74,000	
5. Sundries		1,53,000	
= TFC	(A)	18,95,500	18.1561
B) Variable Cost :-			
1. Wages		4,50,000	
2. Power		2,15,000	
3. laundry		80,500	
= TVC without C.		7,45,500	7.1406
Total cost without commission	(75)	26,41,000	25.2969
(+) commission	(05)	1,76,067	
Total cost	(80)	28,17,067	26.9834
(+) Profit	(20)	7,04,267	6.7458
Room-Rent	(100)	35,21,334	33.7292

Room Rent :- Single Room = Rs. 33.7292

Double Room = (33.7292 x 2.5)
= Rs. 84.32

Triple Room = (33.7292 x 5)
= Rs. 168.65.

Illus-7(A) Calculation of Room-days :-

= No. of Days x % Occupancy x month in a year x Days in a year.

	Single	Double	Triple	Total.
Summer	= 100 x 90% x 7 x 30	= 30 x 80% x 7 x 30	= 20 x 60% x 7 x 30	
	= 18,900	= 5,040	= 2520	
Winter	= 100 x 50% x 5 x 30	= 30 x 20% x 5 x 30	= 20 x 20% x 5 x 30	
	= 7,500	= 900	= 600	
	26,400	5,940	3,120	
Conversion (x)	1	1.5	2	
	26,400	+ 8,910	+ 6,240	= 41,550 Sys Roo

ON Room Attendent Salary :-

	Single	Double	Triple
Summer	= 18,900 x Rs. 2	= 5,040 x Rs. 3	= 2,520 x Rs. 4
	= 37,800	= 15,120	= 10,080
Winter	= 7,500 x Rs. 3	= 900 x Rs. 4.5	= 600 x Rs. 6
	= 22,500	= 4,050	= 3,600
Total	= 60,300	= 19,170	= 13,680

Total ⇒ ₹93,150.

WN Lighting :-

	Single	Double	Triple
Summer =	100 × 90% × 7m × 40 = 25,200	30 × 80% × 7m × 60 = 10,080	20 × 60% × 7m × 80 = 6,720
Winter =	100 × 50% × 5m × 40 = 10,000	30 × 20% × 5m × 60 = 1,800	20 × 20% × 5m × 80 = 1,600
	35,200	11,880	8,320

∴ Total = ₹ 55,400

WN Power :-

	Single	Double	Triple
Summer =	630 × 20 = 12,600	168 × 30 = 5,040	84 × 10 = 840
Winter =	250 × 20 = 5,000	30 × 30 = 900	20 × 10 = 200
	17,600	5,940	1,040

∴ Total = ₹ 24,580

Yearly Hotel cost Sheet (OBERLIN HOTELS)

	(₹)	Single R. Days = 41,550
A) Fixed cost :-		
1. Staff Salary	2,20,000	
2. Repairs	42,000	
3. Interior Decorations	50,000	
4. Sundries	31,550	
5. Depreciation -		
Building (14,00,000 × 5%)	70,000	
Fixture (1,00,000 × 10%)	10,000	
Air Conditioner (2,00,000 × 10%)	20,000	
= TFC (A)	4,43,550	10.675

B) Variable Cost :-			
1. Linen		45,000	
2. Lighting (WN)		55,400	
3. Power (WN)		24,580	
4. Room Attendant Salary (WN)		93,150	
	= TVC (B)	2,18,130	5.250
Total Cost (A+B)	(100)	6,61,680	15.925
(+) Profit	(25)	1,65,420	3.981
Room Rent	(125)	8,27,100	19.906

Room Rent :- Single Room = 19.906 × 1 = ₹ 19.906 ⟹ ₹ 20
Double Room = 19.906 × 1.5 = ₹ 29.859 ⟹ ₹ 30
Triple Room = 19.906 × 2 = ₹ 39.812 ⇒ ₹ 40

Illus-7(B) Calculation of Room-Days :-

= No. of Rooms × % Capacity × Months in a yr. × Days in a month

⟹ Season = 50 × 80% × 6m × 30 = 7,200
⇒ Off-Season = 50 × 40% × 6m × 30 = 3,600
10,800 Room-Days.

Yearly Hotel Cost Sheet (BATLIWALA LODGING HOME)

	₹	Room-Days = 10,800
A) Fixed cost :-		
1. Staff Salary	2,75,000	
2. Repairs	1,30,500	
3. Interior Decorations.	87,500	

4. Sundry Expenses		95,400	
5. Depreciation –			
Building (80,00,000 × 5%)		4,00,000	
Furniture (20,00,000 × 15%)		3,00,000	
= TFC (A)		12,88,400	119.296
B) Variable Cost :–			
1. Laundry and linen		40,000	
2. Room Attendant Salary (10,800 × 5)		54,000	
3. Lighting (WN)		36,000	
= TVC (B)		1,30,000	12.037
Total cost (A+B)	(80)	14,18,400	131.333
(+) Profit	(20)	3,54,600	32.833
Room Rent	(100)	17,73,000	164.166

WN Lighting :–

$$= \text{No. of Rooms} \times \frac{\%}{\text{Capacity}} \times \frac{\text{Month in a}}{\text{year}} \times \text{Rate p.m.}$$

⇒ Summer = 50 × 80% × 6 × 120 = 28,800

⇒ Winter –

Season = 50 × 40% × 4m × 30 = 2,400

Off-season = 50 × 40% × 2m × 120 = 4,800

36,000

* Let the rent be for season be 'x'

∴ SR + Off-Season Rent = Total Rent

$\Rightarrow (7,200 \times x) + \left(3,600 \times \frac{1}{2} x\right) = 17,73,000$

⇒ 7,200x + 1,800x = 17,73,000

$\Rightarrow 9,000x = 17,73,000$

$\Rightarrow x = 197.$

$\therefore$ Season Rent $= x = ₹197.$

Off-Season Rent $= x/2 = ₹98.5.$

20/8/18

Illus-1 Calculation of Room-Days :-

= No. of rooms × % Occupancy × Months in year × Days in month

$\Rightarrow$ Season = $100 \times 90\% \times 8m \times 25 = 18,000$

$\Rightarrow$ Off-Season = $100 \times 10\% \times 4m \times 25 = 1,000$

19,000 Room-Days

Yearly Hotel Cost Sheet (RAMADA International)

	(₹)	Room-Days = 19,000
A) Fixed Cost :-		
1. Repairs –		
Building	12,60,000	
Furniture	3,75,000	
2. Permanent Staff Salary	4,75,000	
3. Sundry Expenses	3,00,000	
4. Depreciation –		
Building (500L × 5%)	25,00,000	
Furniture (250L × 10%)	25,00,000	
= TFC (A)	74,10,000	390
B) Variable Cost :-		
1. Food Expenses	3,81,000	
2. Temporary Staff Salary (7,000 × 20 Staff × 8m)	11,20,000	

3. Electricity Charges —			
Season (12,000 × 4.50)		54,000	
Off-Season (9,500 × 3.50)		33,250	
	= TVC (B)	15,88,250	83.59
Total Cost (A+B)	(80)	89,98,250	473.59
(+) Profit	(20)	(22,49,563)	118.40
Room Rent	(100)	1,12,47,813	591.99

21/8/18

Illus-2 Calculation of Room-Days :-

= No. of room × % Occupancy × month in year × Days in month

⇒ Peak Season = 50 × 80% × 8m × 30 = 9,600

⇒ Off Season = 50 × 40% × 4m × 30 = 2,400

12,000 Room-Days.

Yearly Hotel Cost Sheet (JAYPEE)

	(₹)	Room-Days = 12,000
A) Fixed Cost :-		
1. Permanent Staff Salaries	30,50,000	
2. Building Repairs	13,05,000	
3. Unkeep Maintenance	8,41,250	
4. Sundry Expenses	9,51,750	
5. Depreciation —		
Building (800L × 5%)	40,00,000	
Furniture (200L × 15%)	30,00,000	
= TFC (A)	1,31,48,000	1,095.67

B) Variable cost :-			
1. Laundry linen		5,80,000	
2. Temporary Staff Salary -			
Peak Season (32,000 × 8)		2,56,000	
Off Season (2,500 × 4)		10,000	
3. Electricity charges -			
Peak Season (2,000 × 3 × 8)		48,000	
Off Season (1,500 × 2 × 4)		12,000	
= TVC (B)		9,06,000	75.50
Total Cost (A+B)	(80)	1,40,54,000	1,171.17
(+) Profit	(20)	35,13,500	292.79
Room Rent	(100)	1,75,67,500	1,463.96

24/08/18

Illus-3 Calculation of Room-Days :-

= No. of rooms × % Occupancy × Month ys years × No. of Days.

⇒ Summer = 60 × 90% × 6m × 30 = 9,720

⇒ Winter = 60 × 40% × 6m × 30 = 4,320

14,040 Room-Days.

WN Room Attendant Salary :-

= No. of Room days × Rate per day.

= 14,040 × ₹3

= ₹42,120.

WN Lighting :-

= No. of rooms × % Occupancy × months in year × Rate p.m.

⇒ Summer = 60 × 90% × 6m × 60 = 19,440
⇒ Winter = 60 × 40% × 6m × 60 = 8,640
28,080

WN Heating and Power :-

Winter = No. of rooms × % Occupancy × Months in year × Rate p.m.
= 60 × 40% × 6m × ₹15
= ₹2,160.

WN Capital = Building + Equipment
= (6+1) Lakhs
= 7 Lakhs
∴ Interest = 7 Lacs @ 5% ⇒ ₹ 35,000

Yearly Hotel Cost Sheet (GRAND HYATT)

	(₹)	Room-Days = 14,040
A) Fixed Cost :-		
1. Staff Salary	60,000	
2. Repairs to Building	12,000	
3. Sundries	7,200	
4. Interiors	8,000	
5. Depreciation –		
Building (6,00,000 × 4%)	24,000	
Equipment (1,00,000 × 5%)	5,000	

6. Interest on Capital (WN)		35,000	
	= TFC (A)	1,51,200	10.77
B) Variable Cost :-			
1. Room attendants salary (WN)		42,120	
2. Lighting (WN)		28,080	
3. Heating and Power (WN)		2,160	
4. Linen		4,800	
5.	= TVC (B)	77,160	5.50
Total Cost (A+B)		2,28,360	16.26
(+) Profit (WN)		48,340	3.44
Room Rent		2,76,700	19.71

Imp :- 25% on Profit on cost excluding Int. :-

Cost	1,93,360	(2,28,360 − 35,000)
(+) Profit	48,340 →	(1,93,360 × 25%)

Illus-4 Calculation of Room Days :-

= No. of rooms × % Occupancy × Months in year × No. of Days

Summer = 100 × 80% × 6m × 30 = 14,400

Winter = 100 × 30% × 6m × 30 = 5,400

19,800 Room-Days.

WN Room Attendant Days :-

= No. of Room Days × Rate per days

= 19,800 × 10

= ₹1,98,000.

WN Heating and Power :-

Winter = No. of rooms × % Occupancy × Months in year × Rate per days

= 100 × 30% × 6m × 100

= ₹ 18,000.

WN Lighting :-

= No. of rooms × % Occupancy × month in yr. × Rate per rooms

⇒ Summer = 100 × 80% × 6m × 250 = 1,20,000

⇒ Winter = 100 × 30% × 6m × 250 = 45,000

1,65,000

WN Int. on Investment = 25L × 10%

= ₹ 2,50,000.

Yearly Hotel Cost Sheet

	(₹)	Room-Days = 19,800
A) Fixed Cost :-		
1. Staff Salary	4,00,000	
2. Repairs to Building	50,000	
3. Sundries	33,000	
4. Interiors	50,000	
5. Depreciation –		
Building (20L × 5%)	1,00,000	
Equipments (5L × 10%)	50,000	
6. Interest on Investment (WN)	2,50,000	
= TFC (A)	9,33,000	47.12

B) Variable Cost :-		
1. Room Attendant Salary (WN)	1,98,000	
2. Lighting (WN)	1,65,000	
3. Heating and Power (WN)	18,000	
4. Linen	24,000	
=TVC (B)	4,05,000	20.45
Total Cost (A+B)	13,38,000	67.58
(+) Profit (WN)	2,72,000	13.74
		81.50
Room Rent	16,10,000	81.31

Rounded off to next 50 paise

WN Calculation of Profit :-

Cost	10,88,000	(13,38,000 − 2,50,000)
(+) Profit	(2,72,000)	(10,88,000 × 25%)

5/9/18

HOSPITAL

Illus-1 No. of Patient Days = No. of rooms × No. of Beds × % Occupancy × Days in a year

⇒ 1 × 25 × 100% × 120 days = 3,000

⇒ 1 × 25 × 80% × 80 days = 1,600

Extra Beds ⇒ Rs. 2000 / Rs. 5 per bed day = 400

5,000 patient-days

Hospital Cost Sheet

	(₹)	Patient days = 5,000
A) Fixed Cost :-		
1. Rent of Building (5,000 × 12m)	60,000	
2. Staff Salary :-		
Supervision (2 × 500 × 12m)	12,000	
Nurse (4 × 300 × 12m)	14,400	
Ward Boy (2 × 150 × 12m)	3,600	
3. Repairs	3,600	
4. General admin expenses	49,550	
= TFC (A)	1,43,150	28.63
B) Variable Cost :-		
1. Hire Charges for extra beds	2,000	
2. Doctors Fees (10,000 × 12)	1,20,000	
3. Foods.	44,000	
4. Sanitary.	12,500	
5. Laundary.	28,000	
6. Medicine.	35,000	
7. Cost of X-Ray.	54,000	
= TVC (B)	2,95,500	59.10
Total Cost (A+B)	4,38,650	87.73
(+) Profit	61,350	12.27
Fees	5,00,000	100

Illus-3 No. of Patient days = No. of rooms × No. of Beds × % Occupancy × Days in a year

⇒ 1 × 25 × 100% × 120 = 3,000

⇒ 1 × 25 × 80% × 245 = 4,900

Extra Beds ⇒ 5,000 ÷ 10 = 500

8,400 Patient-days.

Hospital Cost Sheet

	(₹)	Patient-Days = 8,400
A) Fixed Cost :-		
1. Supervisor (2,500 × 2 × 12m)	60,000	
2. Building rent (5,250 × 12m)	63,000	
3. Nurse (1,500 × 4 × 12m)	72,000	
4. Ward Boy (750 × 2 × 12m)	18,000	
5. Repairs	7,200	
6. Janitor and Other Services	25,000	
7. General Admin	99,000	
= TFC (A)	3,44,200	40.98
B) Variable Cost :-		
1. Extra bed charges	5,000	
2. Visiting doctor fees (22,500 × 12)	2,70,000	
3. Food.	88,000	
4. Laundry.	28,000	
5. Medicine Supplied.	64,000	
6. Cost of Oxygen.	1,08,000	
= TVC (B)	5,63,000	67.02
Total Cost (A+B)	9,07,200	108
(+) Profit	3,52,800	42
Fees	12,60,000	150

7/9/18

Illus-2 Calculation of No. of Patient-days :-

= No. of Rooms × No. of Beds × % Occupancy × Days in a year

	General Ward (GW)	Cottage Ward (CW)	Deluxe Ward (DW)
	$= 1 \times 100 \times 100\% \times 360 + 12,000 / 20$	$= 1 \times 50 \times 80\% \times 360$	$= 1 \times 30 \times 60\% \times 360$
	$= 36,000 + 600$	$= 14,400$	$= 6,480$
	$= 36,600$		
Conversion	$= 36,600 \times 1$	$= 14,400 \times 2.5$	$= 6,480 \times 5$
	$= 36,600$	$= 36,000$	$= 32,400$

∴ Total GW Bed-days $= 36,600 + 36,000 + 32,400$
$= 1,05,000$ bed-days.

Hospital Cost Sheet

	(₹)	GW Bed-Days = 1,05,000
A) Fixed Cost :-		
1. Rent. (10,000 × 12)	1,20,000	
2. Supervisor, Nurse & Ward Boy	4,25,000	
3. Doctors.	13,50,000	
4. Repairs.	90,000	
5. General Admin.	63,000	
= TFC (A)	20,48,000	19.50
B) Variable Cost :-		
1. Visiting heart specialists fees (15,000 × 3)	45,000	
2. Food.	40,000	
3. Laundry.	80,500	
4. medicine.	74,000	
5. Cost of Oxygen	49,500	
6. Extra bed in G.W. (without Pt.) = TVC (B)	12,000	
	3,01,000	2.87

Total Cost without Interest (A+B)	(75)	23,49,000	22.37
(+) Interest @ 5%	(5)	1,56,600	1.49
Total Cost	(80)	25,05,600	23.86
(+) Profit	(20)	6,26,400	5.97
Fees	(100)	31,32,000	29.83

Rent Before Service Tax :-

General Ward = 29.83 x 1 = ₹ 29.83
Cottage Ward = 29.83 x 2.5 = ₹ 74.58
Deluxe Ward = 29.83 x 5 = ₹ 149.15

Rent After Service Tax :-

General Ward = 29.83 + 8% = ₹ 32.22
Cottage Ward = 74.58 + 8% = ₹ 80.55
Deluxe Ward = 149.15 + 8% = ₹ 161.08