Chapter – 8 Application of various Statistical data

8.1 Room occupancy %,

1) **Room Occupancy %** = No. of rooms sold

    Total no or rooms sold

Double Occupancy%,

1) **Double Occupancy %** =
   I) = (House Count – No. of rooms sold) x 100
   ii) = No. of rooms occupied by more than 1 person x 100

       Total no. of rooms occupied
   iii) = (House Count – 1) x 100

   No. of rooms sold

Foreign Occupancy %,

1) **Foreign occupancy** = Total no. of guest – local no. of guest.
2) **Foreign occupancy %** = No. of foreign guest x 100

                            House count

Local Occupancy %,

1) **Local occupancy %**
   I) 100 – Foreign occupancy %
   ii) No. of rooms occupied by Indian guest x 100

       Total no. of rooms sold.

House Count,

1) **House count:-**
   i)   No. of guests staying on a particular night, which equals to previous house count + arrivals-departures
   ii)   Total guest = single guest rooms sold + 2 (double rooms sold)+ extra beds)

ARR,
1) **ARR (Average Room Rate)** = Total Room Revenue

                                No. of rooms sold.
   It is called as ADR (Average Daily Rate)

RevPAR,

1) Rev PAR (Revenue per available room)= $\dfrac{\text{Total Room Revenue}}{\text{No. of rooms available}}$

ARG,

1) Average rate per guest / Average revenue per guest / Average spend per guest.

ARG = $\dfrac{\text{Total room revenue}}{\text{House count}}$

Single Occupancy,

1) Single occupancy%

i) $\dfrac{\text{No. of rooms occupied by single guest}}{\text{Total no. of rooms sold.}} \times 100$

ii) $= \dfrac{(2 - \text{house count})}{\text{No. of rooms sold}} \times 100$

iii) = 100 – Double occupancy %

iv) $= \dfrac{2 \,(\text{No. of rooms sold}) - \text{House count}}{\text{No. of rooms sold}} \times 100$

Cancellation %,

1) **Cancellation %** = $\dfrac{\text{Total no. of cancellation}}{\text{Total no. of confirmed reservation}} \times 100$

No Show %,

1) **No show %** = $\dfrac{\text{No. of no shows}}{\text{No. of reservations}} \times 100$

Overstay%,

1) **Overstay %** = $\dfrac{\text{No. of overstays}}{\text{Total no. of scheduled departures}} \times 100$

Understay %

1) Under stay % = $\dfrac{\text{No. of under stay}}{\text{Stay over}} \times 100$

2) **Bed/ Sleeper occupancy %** = <u>No. of beds occupied</u> x 100

No. of beds available

- Double bedded, twin bedded, king bedded and queen bedded and suites are counted as 2 beds while computing bed occupancy %.

3) **Room positions** = Expected departures + vacant rooms – Expected arrivals.
4) **Lost room revenue** = no. of unsold rooms x ARR

Definitions:-
1) **Double occupancy %** = no. of rooms sold with 2 people occupying each room is called double occupanc7
2) **Multiple occupancy %**= the term multiple occupancy means, no. of rooms sold with 2 or more than 2 guest in a room. Hence multiple occupancy can be double occupancy / triple occupancy or more.
3) **AGR (Average no. of guests per room)**
   = <u>No. of guests</u>
      No. of rooms sold
4) **Over stay** = this is the % of scheduled departures who remain in the hotel even after their scheduled day of departure.
5) **Under stay** =
   This is the % of those guests who have before their expected day of departure. i.e. they don't stay till the announced date of their departure.
6) **No-shows /DNA (did not arrive) =**
   It is the % of those guests who did not arrive instead of a guaranteed reservation.
7) **Cancellation % =**
   It is the total no of cancellations as against the total no. of reservation.
8) **Stay over =**
   In house guests are termed to be as stay over for that particular night.
9) **Potential capacity of the hotel**:-
   = Total capacity (no. of rooms) of the hotel – (no. of rooms occupying by staff + complimentary room)
10) **Calculation of available capacity**
   = potential capacity – rooms under repair/ooo

Exercises
Q.1 a hotel has 100 rooms with the following configuration;
Single room   25   @ Rs. 4,000
Double room   20   @ Rs. 5,000

Twin room   50   @ Rs. 6,000

Suites   5   @ Rs. 10,000

On 1st spt.

20 single ⎫

10 double ⎬   were occupied

30 twin   ⎪

2 suites   ⎭

Foreigners staying in house = 20

Calculate;

1) House count

2) Room occupancy%

3) ARR

4) Rev PAR

5) Occupancy

6) Local occupancy %

7) Double occupancy %

8) Foreign occupancy %

Solution

1) **House count** = total no. of guests in the hotel

=no. of single guest rooms + 2 (no. of double guest) + 2 (no. of twin guest rooms) + 2 (no. of sites sold)

= 20 + 2 (10) + 2 (30) +2 (2)

=20 + 20 + 60 + 4

= 104

2) **Room occupancy %** = no. of rooms sold   x 100

                   Total no. of rooms available

= (20 + 10 + 30 + 2) x 100

(25 + 20 + 50 + 5)

= 62/100   x 100

= 62%

3) **ARR** = total room revenue

No. of rooms sold

Total room revenue;

20 single rooms = 20 x 4,000 = 80,000

10 double rooms = 10 x 5,000 = 50.000

30 twin rooms   = 30 x 6,000 = 120,000

2 suites   = 2 x 10,000 = 20, 000

ARR = 3, 30,000 = 5,322.50

4) **Rev PAR** = $\dfrac{\text{total room revenue}}{\text{No. of rooms available}}$

      = $\dfrac{3,30,000}{100}$

      = 3,300/-

5) **Occupancy %** = $\dfrac{\text{no. of rooms sold}}{\text{No. of rooms available}} \times 100$

        $\dfrac{62}{100} \times 100$

        = 62%

6) **Local occupancy %** = $\dfrac{\text{local no. of guest}}{\text{No. of total guest}} \times 100$

        = $\dfrac{(\text{house count} - \text{foreign guest})}{\text{Total no. of guest}} \times 100$

        = $\dfrac{104-20}{62} \times 100$

        = $\dfrac{821 \times 100}{104}$

        = 80.76

7) **Foreign occupancy %** = $\dfrac{\text{no. of foreign guest}}{\text{Total no. of guest}} \times 100$

        = $\dfrac{20 \times 100}{104}$

        = 19.23%

8) **Loss room revenue** = no. of unsold rooms x ARR

        = (100 – 62) x 5, 5322.50

        = 38 x 5,322.50

        = 2, 02,255/-

9) **Double occupancy %** = $\dfrac{\text{house count} - \text{no. of rooms sold}}{\text{No. of rooms sold}} \times 100$

        = $\dfrac{104-62}{62} \times 100$

        = $\dfrac{42}{62} \times 100$

        = 62.74%

10) **Bed occupancy %** = $\dfrac{\text{no. of beds occupied}}{\text{No. of beds available}} \times 100$

$$= \frac{20 + 2\,(10) + 2\,(30) + 2\,(2)}{25 + 2\,(20) + 2\,(50) + 2\,(5)} \times 100$$

$$= \frac{104}{175} \times 100$$

Q.2 a hotel has 78 salable rooms, just finished 28 days of an accounting period, and has 1412 rooms sold on double occupancy and 560 rooms sold on single occupancy.

The room sales totaling to Rs. 28, 60,608.87

Calculate the following

1) Room occupancy%
2) ARR
3) Bed occupancy %
4) AGR

The same hotel has opened today with following no. of reservations and check out schedule.

1) Standby reservation / wait list = 7
2) Vacant rooms = 18
3) Time arrival reservation (6 pm) 13
4) Guaranteed reservation = 47
5) Check outs = 43
6) Waits = guest who arrived before arrival time = 2

Constant and count sheet and determine the selling status for the day, further using the same information as above apply the following historical data for the day and determine what management decision be made regarding the selling at front desk;

1) Cancellation= 6
2) Walk in / roll in = 12
3) Stay over = 11
4) Early checkouts = 27
5) No shows = 3

Solution

1) **Room occupancy %** = $\dfrac{\text{no. of rooms sold}}{\text{Total no. of rooms}} \times 100$

$$= \frac{1412 + 560}{78 \times 28} \times 100$$

$$= 90.29\%$$

2) **ARR** = $\dfrac{\text{total room revenue}}{\text{No. of rooms sold}}$

$$= \frac{28,\,60,608.87}{1412 + 560}$$

$$= 1451$$

3) **Bed occupancy %** = $\dfrac{\text{no of beds sold}}{\text{no. of beds available}} \times 100$

$$\frac{2\,(1412) + 560}{2 \times 78\,28} \times 100$$

$$= \frac{2824 + 560}{4368} \times 100$$

77.47%

4) **AGR** = no. of guests

= no. of rooms sold

$$= \frac{3384}{1412 + 560}$$

$$= \frac{3384}{1972}$$

= 1.71/-

Previous shift – arrival + departure

= (-1) – (12 + 11) + (6 + 27 + 3)

= -1 -23 + (36)

= -24 + 36

= + 12

Q.3 Hotel ABC has 400 r00ms, out of which 10 rooms are permanently in hotel use, all rooms have 2 beds each, on 10th December, the house count was 510. The no. of rooms sold on this day is 305. On 11th December, 68 new guests arrived, 43 guests checked out. The no. of rooms sold on 11th December was 321. The total room revenue realized on 11th December was 123475678

The rack rate of a room is 40,000 day, calculate

1) Room occupancy%
2) Bed occupancy %
3) Single occupancy%
4) Double occupancy %
5) House count
6) Room count
7) ARR
8) AGR

Solution

1) Room occupancy %= no. of rooms sold x 100

= no. of rooms available

= 1412 + 560 x 100

$$\frac{}{78 \times 28}$$

= 90.29%

2)ARR = total room revenue
$$\overline{\text{No. of rooms sold}}$$

= 2860608.67
$$\overline{1972}$$

= 1451/-

3) **Bed occupancy %=** no. of beds sold   x 100

~~No. of beds available~~

= (1412 x 2) + 560   x 100
$$\overline{}$$

~~78 x 2 x 28~~

= 2824 + 560   x100
$$\overline{}$$

~~436~~ = ~~77.~~47%