

# chapte-22 Data Handling-I

## Exercise-22.1

Solution -01:-

(i) observations:-

We find that each entry in the above list is numerical fact which is called an observation.

(ii) data:-

collection of observations gathered initially is called raw data.

(iii) Frequency of an observation:-

The number of times an observation occurs in the given data, is called the frequency of the observation.

(iv) Frequency distribution:-

Frequency distribution is a method to representation raw data in the form from which one can easily understand the information contained in the raw data.

Solution -02:-

(i). The marks in the ascending order.

|              |                            |
|--------------|----------------------------|
| I - group    | 37, 39                     |
| II - group   | 44, 48, 48                 |
| III - group  | 50, 53, 55, 56, 58, 58, 59 |
| IV - group   | 60, 60, 61, 62, 64, 67     |
| V - group    | 70, 75, 77, 78             |
| VI - group   | 84, 88                     |
| VII - group  | 90, 98                     |
| VIII - group | 100                        |

(ii) By observing the given data Highest score is 100

(iii) By observing the given data Lowest score is 37.

(iv) Range:- Range can be defined as the difference between Highest score and Lowest score.

$$\begin{aligned}\text{Range} &= 100 - 37 \\ &= 63.\end{aligned}$$

(v) 2 members failed.

(vi) 3 members scored 75 or more marks.

(vii) 51, 54, 57 have not actually appeared.

(viii) 5 members scored less than 50.

Solution - 03.

(i) The weights in the descending order are.

3.1, 3.0, 2.9, 2.9, 2.8, 2.8, 2.7, 2.7, 2.6, 2.5, 2.4, 2.4,  
2.3, 2.2, 2.1.

(ii) Highest weight is 3.1

(iii) Lowest weight is 2.1.

(iv) Range = Highest weight - Lowest weight  
 $= 3.1 - 2.1$   
 $= 1.0$

(v) 15 Babies were born on that day.

(vi) 4 Babies weight below 2.5 kg.

(vii) 4 Babies weight more than 2.8 kg.

(viii) 2 Babies weight is 2.8 kg.

4) > Frequency distribution

| No. of children | Frequency. |
|-----------------|------------|
| 0               | 5          |
| 1               | 7          |
| 2               | 11         |
| 3               | 5          |
| 4               | 6          |
| 5               | 3          |
| 6               | 3          |

Solution - 05:-

| Marks. | No. of students | Marks. | Number of students | Marks. | No. of students. |
|--------|-----------------|--------|--------------------|--------|------------------|
| 07     | 2               | 33     | 2                  | 49     | 1                |
| 14     | 1               | 34     | 1                  | 51     | 3                |
| 16     | 1               | 37     | 4                  | 52     | 1                |
| 17     | 1               | 38     | 2                  | 53     | 3                |
| 19     | 1               | 39     | 4                  | 54     | 1                |
| 21     | 1               | 41     | 1                  | 57     | 1                |
| 22     | 1               | 42     | 6                  | 59     | 2                |
| 27     | 2               | 43     | 1                  | 61     | 1                |
| 29     | 1               | 44     | 1                  | 62     | 1                |
| 31     | 1               | 47     | 1                  | 67     | 1                |

Solution - 06:-

Frequency table.

| Score           | 1 | 2 | 3 | 4 | 5 | 6  |
|-----------------|---|---|---|---|---|----|
| Number of times | 5 | 5 | 4 | 3 | 4 | 4. |

Solution - 07:-

| Score | Number of times. |
|-------|------------------|
| 0     | 2                |
| 1     | 3                |
| 2     | 6                |
| 3     | 3                |
| 4     | 4                |
| 5     | 6                |
| 6     | 6.               |

Solution-08:-

| Age (in years) | No. of students. |
|----------------|------------------|
| 12             | 4                |
| 13             | 12               |
| 14             | 9                |
| 15             | 2                |
| 16             | 2                |
| 17             | 1                |

Solution-09:-

$$\begin{aligned}
 \text{Range in Wages} &= \text{highest Wages} - \text{Lowest Wages} \\
 &= 350 - 150 \\
 &= 200.
 \end{aligned}$$

(ii) one worker is getting Rs 350.

(iii) Three workers are getting the minimum wages.

Solution-10:-

$$\begin{aligned}
 \text{(i) Range of Marks} &= 25 - 9 \\
 &= 16.
 \end{aligned}$$

(ii) highest Mark is 25

(iii) 9 occurring more frequently.

Solution-11:-

| Marks | Tally Marks | Frequency |
|-------|-------------|-----------|
| 1     |             | 2         |
| 2     |             | 3         |
| 3     |             | 3         |
| 4     |             | 4         |
| 5     |             | 4         |
| 6     |             | 4         |
| 7     |             | 4         |
| 8     |             | 4         |
| 9     |             | 4         |

(i) 12 students obtained Marks equal to or More than 7

(ii) 8 students obtained Marks below 4.

12>(i)

| Sweet   | Tally Marks | Frequency. |
|---------|-------------|------------|
| Ladoo   |             | 12         |
| Burfi   |             | 3          |
| Jalebi  |             | 6          |
| Rasgula |             | 9          |

(ii) Ladoo sweet is preferred by more students