

# Statistics

## Introduction of Statistics

### EXERCISE

**Q.1** The class marks of distribution are :

6, 10, 14, 18, 22, 26,30

Find the class size and the class interval.

**Q.2** The class marks of distribution are : 47, 52, 57, 62, 67, 72, 77, 82, 87, 92, 97, 102.

Determine the class size, the class limits and the true class limits.

**Q.3** Find the range of the following array of data :

70, 65, 71,36, 55, 61, 62, 41, 40, 39, 35.

**Q.4** Draw the ogive of the following distribution table:

|                |      |       |       |       |       |       |
|----------------|------|-------|-------|-------|-------|-------|
| Class interval | 0-10 | 10-20 | 20-30 | 30-40 | 40-50 | 50-60 |
| Frequency      | 10   | 5     | 8     | 6     | 6     | 4     |

**Q.5** The weights (in kilograms) of 25 students are given as follows :

35, 38, 36, 37, 38, 35, 37, 36, 35, 38, 36, 36, 37, 37, 35, 38, 36, 35, 36, 37, 37, 38, 36, 38, 37.

Complete the following frequency table:

|           |    |    |    |    |
|-----------|----|----|----|----|
| Weights   | 35 | 36 | 37 | 38 |
| Frequency | –  | –  | –  | –  |

**Q.6** The marks scored by 55 students in a test are given below :

| Marks | No. of students |
|-------|-----------------|
| 0-5   | 2               |
| 5-10  | 6               |
| 10-15 | 13              |
| 15-20 | 17              |
| 20-25 | 11              |
| 25-30 | 4               |
| 30-35 | 2               |

Prepare a cumulative frequency table

**Q.7** A cumulative frequency distribution table is given. Convert this into a frequency distribution table.

| Marks             | below 45 | below 60 | below 75 | below 90 |
|-------------------|----------|----------|----------|----------|
| Number of student | 0        | 8        | 23       | 48       |

**Q.8** Draw a frequency table for the following data:

| C.I.    | C.F. |
|---------|------|
| 111-120 | 6    |
| 121-130 | 11   |
| 131-140 | 16   |
| 141-150 | 20   |
| 151-160 | 27   |
| 161-170 | 36   |
| 171-180 | 42   |
| 181-190 | 45   |
| 191-200 | 50   |

**Q.9** Form the cumulative frequency table of less than series from following data :

| C.I.   | Frequency |
|--------|-----------|
| 0-10   | 3         |
| 10-20  | 12        |
| 20-30  | 36        |
| 30-40  | 76        |
| 40-50  | 97        |
| 50-60  | 85        |
| 60-70  | 39        |
| 70-80  | 12        |
| 80-90  | 12        |
| 90-100 | 6         |

**Q.10** Construct a c.f. table for the following data :

| C.I.  | Frequency |
|-------|-----------|
| 4-7   | 3         |
| 8-11  | 10        |
| 12-15 | 12        |
| 16-19 | 8         |
| 20-23 | 5         |
| 24-27 | 9         |

### ANSWER

1. Class size = 4, Ist Class interval = 4 - 8
2. Class size = 5, Class limit for first class = 44.5, 49.4.
3. 36
4. C.f. (10, 15, 23, 29, 35, 39)
5. 5, 7, 7, 6