

# Statistical Description of Data

## EXERCISE

- Which of the following statements is false?
  - Statistics is derived from the Latin word 'Status'
  - Statistics is derived from the Italian word 'Statista'
  - Statistics is derived from the French word 'Statistik'
  - None of these.
- Statistics is defined in terms of numerical data in the
  - Singular sense
  - Plural sense
  - Either (a) or (b)
  - Both (a) and (b).
- Statistics is applied in
  - Economics
  - Business management
  - Commerce and industry
  - All these.
- Statistics is concerned with
  - Qualitative information
  - Quantitative information
  - (a) or (b)
  - Both (a) and (b).
- An attribute is
  - A qualitative characteristic
  - A quantitative characteristic
  - A measurable characteristic
  - All these.
- Annual income of a person is
  - An attribute
  - A discrete variable
  - A continuous variable
  - (b) or (c).
- Marks of a student is an example of
  - An attribute
  - A discrete variable
  - A continuous variable
  - None of these.
- Nationality of a student is
  - An attribute
  - A continuous variable
  - A discrete variable
  - (a) or (c).
- Drinking habit of a person is
  - An attribute
  - A variable
  - A discrete variable
  - A continuous variable.
- Age of a person is
  - An attribute
  - A discrete variable
  - A continuous variable
  - A variable.
- Data collected on religion from the census reports are
  - Primary data
  - Secondary data
  - Sample data
  - (a) or (b).

12. The data collected on the height of a group of students after recording their heights with a measuring tape are  
(a) Primary data (b) Secondary data  
(c) Discrete data (d) Continuous data.
13. The primary data are collected by  
(a) Interview method (b) Observation method  
(c) Questionnaire method (d) All these.
14. The quickest method to collect primary data is  
(a) Personal interview (b) Indirect interview  
(c) Telephone interview (d) By observation.
15. The best method to collect data, in case of a natural calamity, is  
(a) Personal interview (b) Indirect interview  
(c) Questionnaire method (d) Direct observation method.
16. In case of a rail accident, the appropriate method of data collection is by  
(a) Personal interview (b) Direct interview  
(c) Indirect interview (d) All these.
17. Which method of data collection covers the widest area?  
(a) Telephone interview method (b) Mailed questionnaire method  
(c) Direct interview method (d) All these.
18. The amount of non-responses is maximum in  
(a) Mailed questionnaire method (b) Interview method  
(c) Observation method (d) All these.
19. Some important sources of secondary data are  
(a) International and Government sources  
(b) International and primary sources  
(c) Private and primary sources  
(d) Government sources.
20. Internal consistency of the collected data can be checked when  
(a) Internal data are given (b) External data are given  
(c) Two or more series are given (d) A number of related series are given.
21. The accuracy and consistency of data can be verified by  
(a) Internal checking (b) External checking  
(c) Scrutiny (d) Both (a) and (b).
22. The mode of presentation of data are  
(a) Textual, tabulation and diagrammatic (b) Tabular, internal and external  
(c) Textual, tabular and internal (d) Tabular, textual and external.
23. The best method of presentation of data is  
(a) Textual (b) Tabular  
(c) Diagrammatic (d) (b) and (c).

24. The most attractive method of data presentation is  
(a) Tabular (b) Textual  
(c) Diagrammatic (d) (a) or (b).
25. For tabulation, 'caption' is  
(a) The upper part of the table  
(b) The lower part of the table  
(c) The main part of the table  
(d) The upper part of a table that describes the column and sub-column.
26. 'Stub' of a table is the  
(a) Left part of the table describing the columns  
(b) Right part of the table describing the columns  
(c) Right part of the table describing the rows  
(d) Left part of the table describing the rows.
27. The entire upper part of a table is known as  
(a) Caption (b) Stub  
(c) Box head (d) Body.
28. The unit of measurement in tabulation is shown in  
(a) Box head (b) Body  
(c) Caption (d) Stub.
29. In tabulation source of the data, if any, is shown in the  
(a) Footnote (b) Body  
(c) Stub (d) Caption.
30. Which of the following statements is untrue for tabulation?  
(a) Statistical analysis of data requires tabulation  
(b) It facilitates comparison between rows and not columns  
(c) Complicated data can be presented  
(d) Diagrammatic representation of data requires tabulation.
31. Hidden trend, if any, in the data can be noticed in  
(a) Textual presentation (b) Tabulation  
(c) Diagrammatic representation (d) All these.
32. Diagrammatic representation of data is done by  
(a) Diagrams (b) Charts  
(c) Pictures (d) All these.
33. The most accurate mode of data presentation is  
(a) Diagrammatic method (b) Tabulation  
(c) Textual presentation (d) None of these.
34. The chart that uses logarithm of the variable is known as  
(a) Line chart (b) Ratio chart  
(c) Multiple line chart (d) Component line chart.
35. Multiple line chart is applied for  
(a) Showing multiple charts  
(b) Two or more related time series when the variables are expressed in the same unit  
(c) Two or more related time series when the variables are expressed in different unit  
(d) Multiple variations in the time series.

36. Multiple axis line chart is considered when  
(a) There is more than one time series  
(b) The units of the variables are different  
(c) (a) or (b)  
(d) (a) and (b).
37. Horizontal bar diagram is used for  
(a) Qualitative data  
(b) Data varying over time  
(c) Data varying over space  
(d) (a) or (c).
38. Vertical bar diagram is applicable when  
(a) The data are qualitative  
(b) The data are quantitative  
(c) When the data vary over time  
(d) (a) or (c).
39. Divided bar chart is considered for  
(a) Comparing different components of a variable  
(b) The relation of different components to the table  
(c) (a) or (b)  
(d) (a) and (b).
40. In order to compare two or more related series, we consider  
(a) Multiple bar chart  
(b) Grouped bar chart  
(c) (a) or (b)  
(d) (a) and (b).
41. Pie-diagram is used for  
(a) Comparing different components and their relation to the total  
(b) Representing qualitative data in a circle  
(c) Representing quantitative data in circle  
(d) (b) or (c).
42. A frequency distribution  
(a) Arranges observations in an increasing order  
(b) Arranges observation in terms of a number of groups  
(c) Relates to a measurable characteristic  
(d) All these.
43. The frequency distribution of a continuous variable is known as  
(a) Grouped frequency distribution  
(b) Simple frequency distribution  
(c) (a) or (b)  
(d) (a) and (b).
44. The distribution of shares is an example of the frequency distribution of  
(a) A discrete variable  
(b) A continuous variable  
(c) An attribute  
(d) (a) or (c).
45. The distribution of profits of a blue-chip company relates to  
(a) Discrete variable  
(b) Continuous variable  
(c) Attributes  
(d) (a) or (b).

46. Mutually exclusive classification
- (a) Excludes both the class limits
  - (b) Excludes the upper-class limit but includes the lower-class limit
  - (c) Includes the upper-class limit but excludes the upper-class limit
  - (d) Either (b) or (c).
47. Mutually inclusive classification is usually meant for
- (a) A discrete variable
  - (b) A continuous variable
  - (c) An attribute
  - (d) All these.
48. Mutually exclusive classification is usually meant for
- (a) A discrete variable
  - (b) A continuous variable
  - (c) An attribute
  - (d) Any of these.
49. The LCB is
- (a) An upper limit to LCL
  - (b) A lower limit to LCL
  - (c) (a) and (b)
  - (d) (a) or (b).
50. The UCB is
- (a) An upper limit to UCL
  - (b) A lower limit to LCL
  - (c) Both (a) and (b)
  - (d) (a) or (b).
51. length of a class is
- (a) The difference between the UCB and LCB of that class
  - (b) The difference between the UCL and LCL of that class
  - (c) (a) or (b)
  - (d) Both (a) and (b).
52. For a particular class boundary, the less than cumulative frequency and more than cumulative frequency add up to
- (a) Total frequency
  - (b) Fifty per cent of the total frequency
  - (c) (a) or (b)
  - (d) None of these.
53. Frequency density corresponding to a class interval is the ratio of
- (a) Class frequency to the total frequency
  - (b) Class frequency to the class length
  - (c) Class length to the class frequency
  - (d) Class frequency to the cumulative frequency.
54. Relative frequency for a particular class
- (a) Lies between 0 and 1
  - (b) Lies between 0 and 1, both inclusive
  - (c) Lies between -1 and 0
  - (d) Lies between -1 to 1.

55. Mode of a distribution can be obtained from  
 (a) Histogram (b) Less than type ogives  
 (c) More than type ogives (d) Frequency polygon.
56. Median of a distribution can be obtained from  
 (a) Frequency polygon (b) Histogram  
 (c) Less than type ogives (d) None of these.
57. A comparison among the class frequencies is possible only in  
 (a) Frequency polygon (b) Histogram  
 (c) Ogives (d) (a) or (b).
58. Frequency curve is a limiting form of  
 (a) Frequency polygon  
 (b) Histogram  
 (c) (a) or (b)  
 (d) (a) and (b).
59. Most of the commonly used frequency curves are  
 (a) Mixed (b) Inverted J-shaped  
 (c) U-shaped (d) Bell-shaped.
60. The distribution of profits of a company follows  
 (a) J-shaped frequency curve (b) U-shaped frequency curve  
 (c) Bell-shaped frequency curve (d) Any of these.
61. Out of 1000 persons, 25 per cent were industrial workers and the rest were agricultural workers. 300 persons enjoyed world cup matches on TV. 30 per cent of the people who had not watched world cup matches were industrial workers. What is the number of agricultural workers who had enjoyed world cup matches on TV?  
 (a) 260 (b) 240 (c) 230 (d) 250
62. A sample study of the people of an area revealed that total number of women were 40% and the percentage of coffee drinkers were 45 as a whole and the percentage of male coffee drinkers was 20. What was the percentage of female non-coffee drinkers?  
 (a) 10 (b) 15 (c) 18 (d) 20
63. The number of accidents for seven days in a locality are given below:

<b>No. of accidents:</b>	0	1	2	3	4	5	6
<b>Frequency:</b>	15	19	22	31	9	3	2

What is the number of cases when 3 or less accidents occurred?

- (a) 56 (b) 6 (c) 68 (d) 87

64. The weight of 50 students in pounds are given below:

82,	95,	120,	174,	179,	176,	159,	91,	85,	175
88	160,	97,	133,	159,	176,	151,	115,	105,	172
170,	128,	112,	101,	123,	117,	93,	117,	99,	90
113,	119,	129,	134,	178,	105,	147,	107,	155,	157
98,	117,	95,	135,	175,	97,	160,	168,	144,	175

If the data are arranged in the form of a frequency distribution with class intervals

As **81-100, 101-120, 121-140, 141-160 and 161-180**, then the frequencies for these 5 class intervals are

- (a) 6, 9, 10, 11, 14      (b) 12, 8, 7, 11, 12      (c) 10, 12, 8, 11, 9      (d) 12, 12, 6, 9, 11

65. In a study about the male and female students of commerce and science departments of a college in 5 years, the following data were obtained:

1995	2000
70% male students	75% male students
65% read Commerce	40% read Science
20% of female students read Science	50% of male students read Commerce
3000 total No. of students	3600 total No. of students.

After combining 1995 and 2000 if  $x$  denotes the ratio of female commerce student to female Science student and  $y$  denotes the ratio of male commerce student to male Science student, then

- (a)  $x = y$                       (b)  $x > y$                       (c)  $x < y$                       (d)  $x > y$

**Solu:**

No. of Students	1995	2000
No Female Students		
No of Male Students		
No of Commerce Students		
No of Science Students		
No of Male Commerce Students		
No of Female Commerce Students		
No of Male Science Students		
No of Female Science Students		

**Answer Sheet**

1.	(c)	2.	(b)	3.	(d)	4.	(d)	5.	(a)	6.	(b)
7.	(b)	8.	(a)	9.	(a)	10.	(c)	11.	(b)	12.	(a)
13.	(d)	14.	(c)	15.	(a)	16.	(c)	17.	(b)	18.	(a)
19.	(a)	20.	(d)	21.	(c)	22.	(a)	23.	(b)	24.	(c)
25.	(d)	26.	(d)	27.	(c)	28.	(a)	29.	(a)	30.	(b)
31.	(c)	32.	(d)	33.	(b)	34.	(b)	35.	(b)	36.	(d)
37.	(d)	38.	(b)	39.	(d)	40.	(c)	41.	(a)	42.	(d)
43.	(a)	44.	(a)	45.	(b)	46.	(b)	47.	(a)	48.	(b)
49.	(b)	50.	(a)	51.	(a)	52.	(a)	53.	(b)	54.	(a)
55.	(a)	56.	(c)	57.	(b)	58.	(d)	59.	(d)	60.	(c)
61.	(a)	62.	(b)	63.	(d)	64.	(d)	65.	(b)		