



INDIAN SCHOOL AL WADI AL KABIR

Class: XI	Department: Commerce
	Topic: Presentation of Data

1. The arrangement of data in rows and columns is called:

- (a) Classification
- (b) Tabulation
- (c) Frequency distribution
- (d) Cumulative frequency distribution

A: b

2. A source note in a statistical table is given:

- (a) At the end of a table
- (b) In the beginning of a table
- (c) In the middle of a table
- (d) Below the body of a table

A: a

3. The budgets of two families can be compared by:

- (a) Sub-divided rectangles
- (b) Pie diagram
- (c) Both (a) and (b)
- (d) Histogram

A: c

4. Total angle of the pie-chart is:

- (a) 45
- (b) 90
- (c) 180
- (d) 360

A: d

5. Histogram can be drawn only for:

- (a) Discrete frequency distribution
- (b) Continuous frequency distribution
- (c) Cumulative frequency distribution
- (d) Relative frequency distribution

A: b

6. Histogram is a graph of:

- (a) Frequency distribution
- (b) Time series
- (c) Qualitative data
- (d) Ogive

A: a

7. The graph of the cumulative frequency distribution is called:

- (a) Histogram
- (b) Frequency polygon
- (c) Pictogram
- (d) Ogive

A: d

8. When successive mid-points in a histogram are connected by straight lines, the graph is called a:

- (a) Histogram
- (b) Ogive
- (c) Frequency curve
- (d) Frequency polygon

A: d

9. Ogive curve can be occurred for the distribution of:

- (a) Less than type
- (b) More than type
- (c) Both (a) and (b)
- (d) Neither (a) and (b)

A: c

10. The word ogive is also used for:

- (a) Frequency polygon
- (b) Cumulative frequency polygon
- (c) Frequency curve
- (d) Histogram

A: b

11. Cumulative frequency polygon can be used for the calculation of:

- (a) Mean
- (b) Median
- (c) Mode
- (d) Geometric mean

A: b

12.. Data represented through a histogram can help in finding graphically the

- a. mean
- b. mode

- c. median
 - d. All of these
- A: b

13. Bar diagram is a:
- a. one-dimensional diagram
 - b. two -dimensional diagram
 - c. diagram with no dimension
 - d. none of the above
- A: a

14. Histogram is prepared in case of:
- a. individual series
 - b. discrete series
 - c. continuous series
 - d. none of the above
- A: c

15. While preparing Arithmetic line graph, we show ----- on the X – axis.
- a. time
 - b. expense
 - c. income
 - d. all of the above
- A: a

16. Diagrammatic representation of the cumulative frequency distribution is:
- a. frequency polygon
 - b. ogive
 - c. histogram
 - d. none of the above
- A: b

17. In a ---- presentation, data are presented in rows (read horizontally) and columns (read vertically).
- a. tabular
 - b. diagrammatic
 - c. graphic
 - d. all of these
- A: a

18. Arithmetic line graphs are also known as:
- a. Linear graphs
 - b. Non-linear graphs
 - c. Time-Series graphs
 - d. None of these

A: c

19. In this classification time becomes the classifying variable and data are categorised according to time:

- a. qualitative
- b. quantitative
- c. temporal
- d. spatial

A: c

20. Which of the following is a diagrammatic presentation of data?

- a. geometric diagram
- b. frequency diagram
- c. arithmetic line graph
- d. all of these

A: d

1. Distinguish between classification and tabulation. (refer notes)
2. Distinguish between simple bar diagram and component bar diagram. (refer notes)
3. A histogram is never drawn for a ----- variable. (discrete)
4. We can have a ----- (bar diagram/Histogram) both for discrete and continuous variables. (bar diagram)
5. Width of bars in a bar diagram need not be equal. (True/False)
False, Bar diagram comprises a group of equi spaced and equi width rectangular bars for each class or category of data.
6. Width of rectangles in a histogram should essentially be equal. (True/False)
False
If the class intervals are of equal width, the area of the rectangles are proportional to their respective frequencies and width of rectangles will be equal. However, sometimes it is convenient or necessary to use varying width of class intervals and hence unequal width of rectangles
7. What kind of diagrams are more effective in representing the following?
(a) Monthly rainfall in a year
(b) Composition of the population of Delhi by religion
(c) Components of cost in a factory

Answer:

- (a) The monthly rainfall in a year can be best represented by a bar diagram as only one variable i.e., monthly rainfall is to be presented diagrammatically. The rainfall is plotted on Y-axis in the corresponding month that is plotted on the X-axis.
- (b) Composition of the population of Delhi by religion can be represented by a component bar diagram. A component bar diagram shows the bar and its sub-divisions into two or more components. Thus, the total population can be sub divided in terms of religion and presented through a component bar diagram.
- (c) Different components of cost in a factory can most effectively be depicted

through a pie chart. The circle represents the total cost and various components of costs are shown by different portions of the circle drawn according to percentage of total cost each component covers.

1. Suppose you want to emphasise the increase in the share of urban non-workers and lower level of urbanisation in India as shown in Example 4.2. How would you do it in the tabular form?

Share of Rural and Urban Non-workers in India

Non-workers in Urban	Non-workers in Rural	Total Non-workers Population
(1)	(2)	(3) = (1) + (2)
19,31,38,837	42,96,00,032	62,27,38,869

Source: Census of India, 2001

We can infer from the above table that the absolute number of the rural non-workers is greater than the absolute number of the urban non-workers. The higher (lower) share of the rural non-workers (urban non-workers) reveals lower degree of urbanisation in India.

2. How does the procedure of drawing a histogram differ when class intervals are unequal in comparison to equal class intervals in a frequency table?

A Histogram of equal class intervals has equal width of all rectangles indicating the same class intervals. In contrast, a Histogram of unequal class intervals has rectangles of varying width as per their corresponding class intervals. Before constructing a Histogram, frequencies of unequal class intervals are to be adjusted. The adjustment factor of each class is calculated with the following formula.

$$\text{Adjustment factor for any class} = \frac{\text{Class Interval of the Concerned Class}}{\text{Lowest Class Interval}}$$

And the adjusted frequency will be calculated by dividing the original frequency by adjustment factor.

3. The Indian Sugar Mills Association reported that, ‘Sugar production during the first fortnight of December 2001 was about 3,87,000 tonnes, as against 3,78,000 tonnes during the same fortnight last year (2000). The off-take of sugar from factories during the first fortnight of December 2001 was 2,83,000 tonnes for internal consumption and 41,000 tonnes for exports as against 1,54,000 tonnes for internal consumption and nil for exports during the same fortnight last season.’

- (i) Present the data in tabular form.
- (ii) Suppose you were to present these data in diagrammatic form which

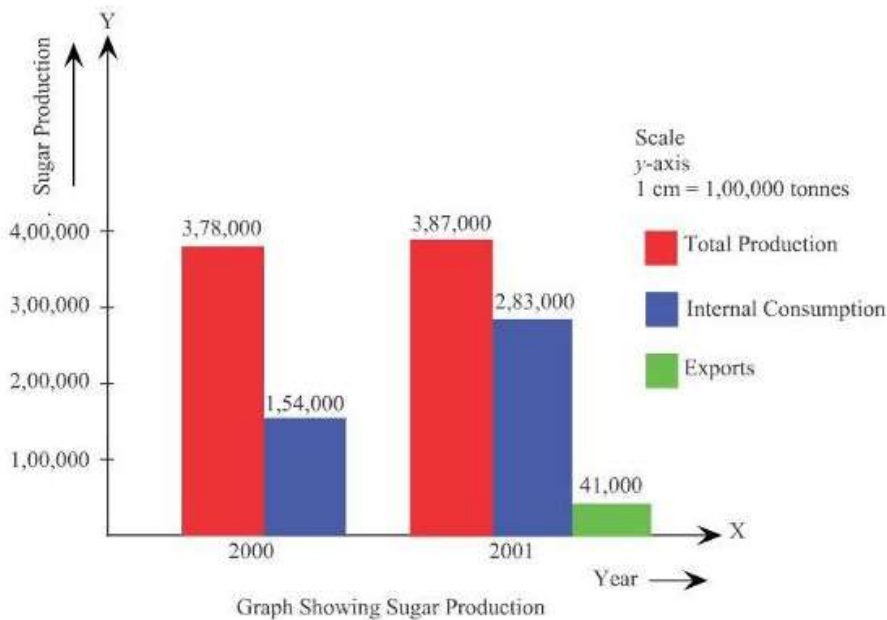
of the diagrams would you use and why?

(iii) Present these data diagrammatically.

(i)			
Sugar Production in India			
Month, Year	Total Production (tonnes)	Internal Consumption (tonnes)	Export of Sugar (tonnes)
Dec, 2000	3,78,000	1,54,000	–
Dec, 2001	3,87,000	2,83,000	41,000

(ii) With a view to present the data diagrammatically the multiple bar diagram can be effectively used.

(iii)



4.

Prepare histogram and frequency polygon from the following data:

Marks	0–10	10–20	20–30	30–40	40–50	50–60
Number of Students	5	8	15	11	6	4

5.

From the following data, construct frequency histogram, frequency polygon and frequency curve.

Wages (₹)	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90
Number of Workers	2	4	11	15	25	18	15	4	1

6.

Draw the 'less than' and 'more than' ogive on the same graph paper from the following data:

Marks	0-20	20-40	40-60	60-80	80-100
Number of Students	40	51	64	38	7

7.

Following table gives hypothetical figures of exports from India during the years 2014-15 to 2018-19. Present the information in the form of a suitable graph.

Year	2014-15	2015-16	2016-17	2017-18	2018-19
Exports (₹ crore)	600	640	670	780	900

8.

Represent the following data related to population (in thousands) of men and women in a village in different years graphically:

Year	2013	2014	2015	2016	2017	2018	2019
Number of Men	10	13	15	14	17	18	21
Number of Women	12	18	16	17	20	22	24