Statistics for Economics Class 11 Notes Chapter 4 Presentation of Data

Textual Presentation
In textual presentation, data are a part of the text of study or a part of the description of the subject matter of study.

Tabular Presentation of Data
"Tabulation involves the orderly and systematic presentation of numerical data in a form designed to elucidate the problem under consideration"

Components of a Table
Following are the principal components of a table

- Table number
- Title
- Head note
- Stubs
- Caption
- Body or field
- Footnotes
- Source

Classification of Data and Tabular Presentation
(i) Qualitative Classification of Data and Tabular Presentation Qualitative classification occurs when data are classified on the basis of qualitative attributes or qualitative.

(ii) Characteristics of a Phenomenon

- Quantitative Classification of Data These occurs when data are classified on the basis ot quantitative characteristics of a phenomenon.
- Temporal Classified of Data In this, data are classified according to time, and time becomes the classifying variable.

(iii) Spatial Classification In spatial classification place, location becomes the classifying variable. It may be a village, a town, a district, etc.
(iv) Merits of Tabular Presentation

- Simple and brief presentation
- Facilitates comparison
- Easy analysis
- High lights characteristics of data
- Economical

Diagrammatic Presentation of Data

These translates quite effectively the highly abstract ideas contained in numbers into more concrete and easily comprehensible form. Diagrammatic presentation is classified as given below

(i) Bar Diagrams Bar diagrams are these diagrams in which data are presented in the form of bars or rectangles. Types of Bar Diagram are as follows

- Simple Bar Diagrams Simple bar diagrams are those diagrams which are based on a single set of numerical data.
- Multiple Bar Diagrams These are those diagram which show two or more sets of data simultaneously.
- Sub Divided Bar Diagram Sub-divided bar diagram are those diagrams which simultaneously present total values as well as part values of a set of data.
- Percentage Bar Diagram Percentage bar diagrams are those diagrams which show simultaneously, different parts of the values of a set of data in terms of percentages.

(ii) Pie or Circular Diagrams Pie diagram is a circle divided into various segments showing the per cent values of a series. This diagram does not show absolute values.

(iii) Frequency Diagram Data in the form of grouped frequency distributions are generally represented by frequency diagram like histogram, frequency polygon, frequency curve and ogive.

- Histogram A histogram is a two dimensional diagram. It is a set of rectangles with passes as the intervals between class boundaries and with areas proportional to the class frequency
  Histogram frequency distribution are of two types
    - Histogram of equal class intervals
    - Histogram of unequal class intervals
- Polygon Polygon is another form of diagrammatic presentation of data. It is formed by joining mid points of the tops of all rectangles in a histogram. However, a polygon can be drawn even without constructing a histogram.
- Frequency Curve A frequency curve is a curve which is plotted by joining the mid points of all tops of histogram by free hand smoothed curves and not by straight lines.
- Ogive or Cumulative Curve Ogive or cumulative curve is the curve which is constructed by plotting cumulative frequency data on the group paper, in the form of a smooth curve.
  A cumulative frequency curve or ogive may be constructed in two ways
    - Less than Method In this method, beginning from upper limit of the 1st values we go on adding the frequencies corresponding to every next upper limit of the series.
    - More than Method In this method, we take cumulative total of the frequencies beginning with lower limit of the 1st class interval.

(iv) Arithmetic Line Graph An arithmetic line graph is also called time series graph. In it time is plotted along x-axis and the value of the variable along y-axis. A line graph by joining these plotted points, these obtained is called time series graph.

Rules for Constructing a Graph

- Choice of scale
- Proportion of axis
- Method of plotting the points
- Lines of different types
- Table of data
- Use of false line
- To draw a line or curve
  - One Variable Graph One variable graph are those graphs in which values of only one variable are shown with respect to some time period.
  - Two or More than Two Variable Graphs These – are the graphs in which values of two variables are simultaneously shown with respect to some period of time.

Merits of Diagrammatic and Graphic Presentation

- Simple and understandable information
- Lasting impact
- No need of training or specialised knowledge
- Attractive and effective means of presentation
- A quick comparative glance
- Information and entertaining
- Location of averages
- Study of correlation

Limitations of Diagrammatic and Graphic Presentation

- Limited use
- Misuse
- Only preliminary conclusions