

• Ref. Chapter 1, Section 1.1, 1.2, 1.3, 1.4

• What does 'Statistics' mean to you? Does it bring in mind the scores of basket ball game, election results, daily temperatures etc.?

- 'Statistics', in plural sense, means 'data' and in singular sense, means 'methods for analyzing the data'.

• Branches of Statistics: (i) Descriptive and (ii) Inferential.

(i) Descriptive Statistics are all the methods used to collect, organize and summarize the data.

(ii) Inferential statistics discuss the ways of making predictions about characteristics of a population based on sample data.

• Population and Sample: The population is the set of all individuals under study. A sample is the subset of the population of interest.

• Classification of data: Data

(a) Qualitative

(b) Quantitative

(i) Discrete

(ii) Continuous

(a) Data which cannot be expressed in numerical terms is called qualitative data, and (b) data which can be expressed in numeric terms is called quantitative data. Quantitative data may take some isolated values or any value within a range of variation — accordingly called as discrete or continuous. A discrete variable can take finite or countable number of values. A continuous variable can assume an infinite number of values.

Examples: (a) Qualitative data - gender, mother tongue, marital status etc.,

(b) Quantitative data: (i) discrete - no. of children in a family, word length

(ii) continuous - height, weight, temperature, amount of time taken to read a passage etc. (Vide Ex. 1.1, p.8-9, Ex. 1.2, p.10)

• Graphical representation of data: It is used for the purpose of describing the main features of the data. Dot plot, line chart, bar chart, pie chart etc. are used for representing the data.

Ex. Vide Ex. 1.3, p.12, Ex. 1.4, p.13-14, Ex. 1.5, p.18, Ex. 1.6, p.19, Fig. 1.9, p.20