Key Notes

Chapter 14
Statistics

1. Collection of Data

2. Presentation of Data

3. Graphical Representation of Data

4. Measures of Central Tendency

- Statistics is the area of study that deals with the collection presentation, analysis and interpretation of data.

- **Data:** Facts or figures, collected with a definite purpose, are called data.

- There are two types of data (i) Primary (ii) Secondary

- We can represent the data by (i) ungrouped and grouped frequency distribution.

- Data can also represent by (i) bar graph (ii) Histogram (iii) Frequency polygons

- Class mark of grouped data is $\dfrac{+}{2}$

- Measure of central tendencies by mean, median, mode.

- **Mean:** $(\overline{x}) = \dfrac{\text{sum of all observations}}{\text{Total no. of observations}}$

- If observations denoted by and their occurrence i.e. frequency is denoted by then mean is

  $(\overline{x}) = \dfrac{\angle}{-}$ $(\overline{x}) = \dfrac{\Sigma f_i x_i}{\Sigma f_i}$

- **Median:** Arrange the observations in ascending or descending order then if numbers of observations (n) are odd then then median is $\dfrac{+}{2}$ term.

  If no. of observations (n) are even, then median is average of $\dfrac{}{2}$ ... and $\dfrac{n}{2} + ..$ terms.

- **Mode:** The observation whose frequency is greatest.

- Mode = 3 median - 2 mean.