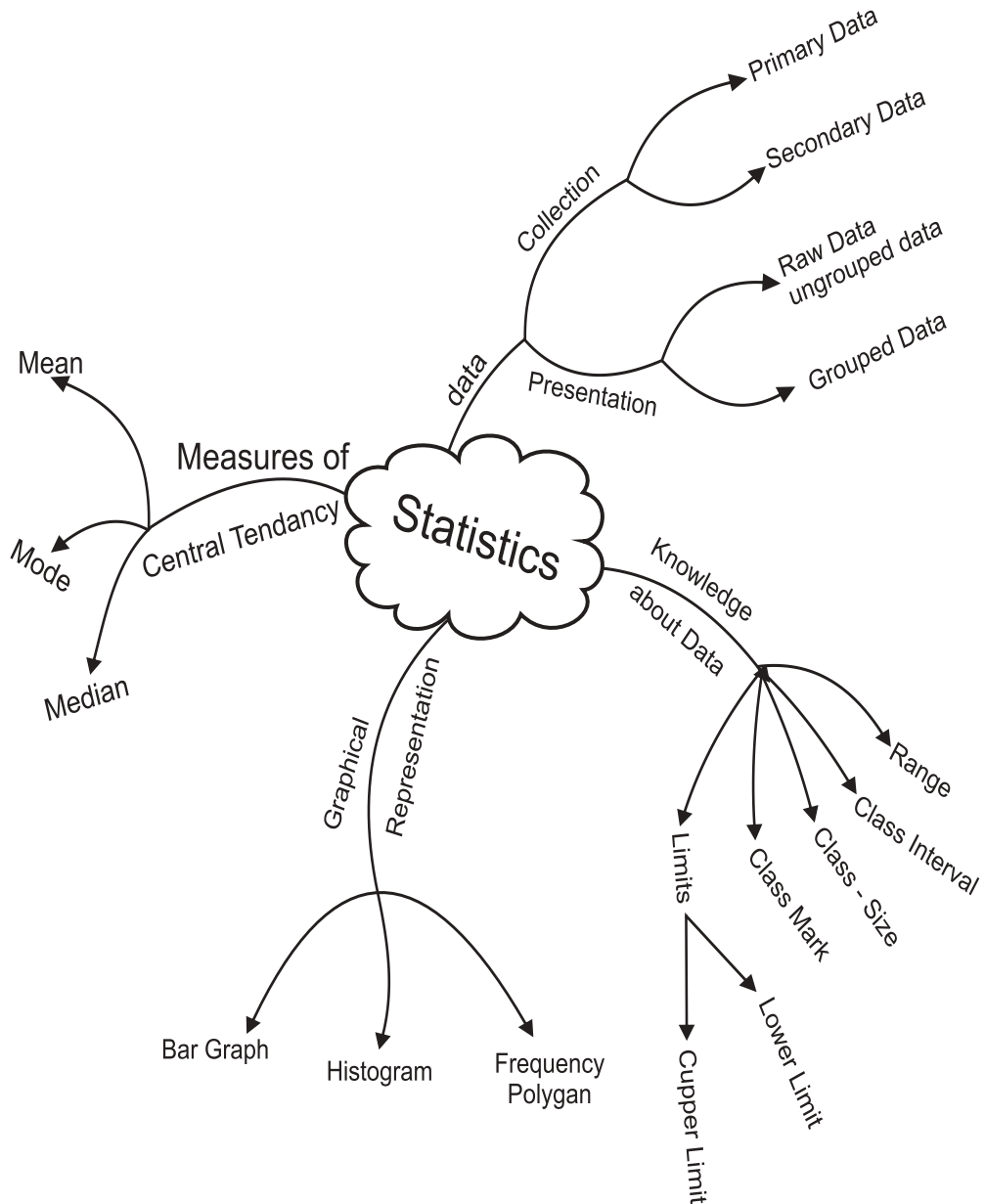


CHAPTER-14

STATISTICS

MIND MAP



CHAPTER-14

STATISTICS

KEY POINTS

- In Statistics we study collection, presentation, analysis and interpretation of data.
- Facts or figures collected with a definite purpose are called data.
- The number of times an observation occurs in the given data is called frequency of the observation.
- Class intervals are the groups in which all observations are divided.
- For class-interval 20-30, 30 is called upper class limit and 20 is called lower class limit.
- Class mark = $\frac{\text{Lower class limit} + \text{upper class limit}}{2}$

- Average or mean = $\frac{\text{Sum of all observations}}{\text{number of observations}}$

- For raw data, mean $(\bar{x}) = \frac{\sum_{i=1}^n x_i}{n}$ Mean $(\bar{x}) = \frac{X_1 + X_2 + \dots + X_n}{n}$

- When frequency f_i is given Mean $\bar{x} = \frac{\sum_{i=1}^n f_i x_i}{\sum_{i=1}^n f_i}$

- Mode is the value of observation which occurs most frequently.
- For Median arrange the data in ascending order or descending order.

If number of observation ' n ' is odd

Then Median = $\frac{(n+1)^{\text{th}}}{2}$
If number of observation ' n ' is even

Then Median = $\frac{\left(\frac{n}{2}\right)^{\text{th}} \text{ term} + \left(\frac{n}{2} + 1\right)^{\text{th}} \text{ term}}{2}$