## **Frequently Asked Questions**

1. What is a central tendency value?

**Answer:** A central value, which represents the whole mass of data, is worked out. This value is called the central tendency or central value or average.

2. What is a positional average?

**Answer:** A positional average is average which determines the position or place of central value or variable in the series. They have nothing to do with the sum of the values of the variables like the mathematical averages but are concerned about the position they hold.

3. What is a Median?

**Answer:** Median is a positional average which is widely used in statistical analysis. It refers to the middle value of a distribution when the series are arranged in ascending or descending order.

4. What is a cumulative frequency?

**Answer:** Cumulative Frequency corresponding to a particular value is the sum of all the frequencies up to and including that value. Cumulative frequency is nothing but the running total of frequencies.

5. What has to be done when only the cumulative frequency is given to the data?

**Answer:** When only the cumulative frequency is given to the data then it should be converted into simple frequency before calculating the median or the mode.

6. What is a partition value?

**Answer:** A positional average and partitions in a series are those values that divide a series in a number of parts.

7. What is the various partition value of a series?

**Answer:** The most common positional values besides median are quartiles, deciles and percentiles. Similarly, there are other positional averages that divide the data four called as quartiles, five called as quintiles, six called as hextiles, eight called as octiles, ten called as deciles and hundred called as percentiles.

8. What is a Mode?

**Answer:** Mode is also a positional average which represents the most frequently occurring items of the series. It means it represent the item which is repeated maximum number of items in the series.

9. What are the various types of mode?

**Answer:** The various types of modes are unimodal, bimodal, multimodal and no mode depending on the values in the data set.

10. What are the various methods of calculating mode for a given set of data?

**Answer:** The various methods of calculating mode for a given set of data are Observation method, Grouping method, Interpolation, Graphical method and Empirical Relation method.

11. What is grouping and analysis table?

**Answer:** Grouping and Analysis table is a table where the frequencies are grouped and analysis is done with respect to the variable as to where the mode of the data lies.

12. What is an empirical relation method?

**Answer:** Empirical Relation method given by a famous statistician Karl Pearson establishes a relationship between the three measures of central tendency that is Mean(X), Median(M) and Mode(Z). The relationship is stated as follows Z=3M-2X.

13. Where do we use Harmonic Mean?

**Answer:** It is useful for computing the average rate of increase in profits of a concern, in computing the average speed at which a journey has been performed and in computing the average price at which an article is sold.

14. What happens when the given data has unequal class intervals?

**Answer:** When the data has unequal class intervals, then it is must to bring the class intervals to equal intervals for calculating the mode of the given data.

15. What are the limitations of median and mode?

**Answer:** Mode cannot be determined always, it could be bimodal, multimodal, and not capable of further algebraic treatment, it is not based on each and every item of the data and is not rigidly defined. When there are big variations between the values of different items, then median is not a representative average of the series, if big or small value in a data set has to receive greater importance then median would be an unsuitable average.