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TOPIC :- SCOPE OF STATISTICS

Statistics means quantification of information or quantifications of the facts and findings. The quantifications of facts and findings can be obtained only by the way of systematic analysis. Thus, we can say statistics is a systematic way for quantifications of facts and findings of any project matter.

The study of the scope of statistics can be analysed in following ways:—

(1) Nature of statistics:— Under this head of analysis, the basic question is whether statistics is a science or an art. Prof. Tippet has aptly remarked that statistics is both a science as well as an art. As a science, statistics studies numerical data in a scientific or systematic manner. As an art statistics relates to qualitative data to the real life problems. By using statistical data, we are able to analyse and understand real life's problems much better than otherwise.

(2) Subject matter of Statistics :-

Subject matter of statistics deals with the two main components, they are as follows :-

(a) Descriptive statistics :-

Descriptive statistics refers to those methods which are used for the collection, presentation as well as analysis of data. These methods relate to such estimations as 'measurement of central tendencies', 'measurement of dispersion', 'measurement of correlation' etc.

(b) Inferential statistics :-

Inferential statistics refers to all such methods by which conclusions are drawn relating to the universe or population on the basis of a given sample. In statistics, the term universe or population refers to the aggregate of all items or units relating to any subject.

(3) Limitations of Statistics:—

Presently, statistics has been emerged as a subject of crucial significance in every walk of life.

However, it has certain limitations.

Following are some important limitations of statistics:—

(a) Study of Numerical facts only.—

Statistics studies only such facts as can be expressed in numerical terms. It does not study qualitative phenomena.

(b) Study of Aggregates only:—

Statistics studies only the aggregates of quantitative facts. It does not study statistical facts relating to any particular unit.

(c) Homogeneity of data, an essential requirement:—

To compare data, it is essential that statistics are uniform in quality. Data of diverse qualities and kinds cannot be compared.

- (d) Results are true only on an average :— Most statistical findings are true only as averages. They express only the broad tendencies.
- (e) Without reference, results may be proved to be wrong :— In order to understand the conclusions precisely, it is necessary that the circumstances and conditions under which conclusions have been drawn are also studied. Otherwise, they may prove to be wrong.
- (f) Statistics can be used only by the experts.
- (g) Prone to misuse :— Misuse of statistics is very common. Statistics may be used to support a pre-drawn conclusion even when it is absolutely false.