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Q.1 Define Statistics.

Ans.- Statistics may be define as the science of collection , presentation analysis and interpretation of numerical data.

Q.2 Discuss the basic characteristics of statistics.

Ans.

1.**Statistics are aggregates of facts**: Single and isolated figures cannot be termed as statistics.

2.**Statistics are affected by multiplicity of causes**: In general related to social, economics and business, phenomenon are affected by a number of forces operating together.

3.**Statistics and numerically expressed**: only numerical data constitute statistics qualitative characteristics like intelligence, beauty, honesty etc. can not be termed as statistics unless they are numerically expressed by assigning particular scores as quantitative standards.

4.**Statistics are collected in a systematic manner** : The data must be collected in systematic manner.

5.**Statistics are collected for a pre-determined purpose** : The data collected should be in accordance with the purpose and objective of the enquiry. The purpose should be well defined and specific.

6. **Statistics should be placed in relation to each other** : Statistics data should be comparable. They may be compared with respect to some unit, generally time period or place.

Q. Discuss briefly the functions of statistics.

Ans. The main functions of statistics are given below

1. **It represent facts in a definite form:** Statistics represents general statement in a precise and definite form.

2. **It simplifies mass of figures**: Statistics helps in condensing the mass of data. The various statistical methods like classification, tabulation , averaging etc. help in simplifying the complex mass of data into meaningful figures which can be readily understood of comprehended.

3. **It helps in formulating and testing hypothesis**: Statistical methods are very helpful in formulating and testing hypotheses and developing new theories.

4. **It facilities comparison** : with the help of statistical theory we should able to compare a series of figures with the another series of same kind to arrive at meaningful conclusion.

5. **It helps in formulating of suitable policies**: Statistics are of great help in framing policies. In fact , statistics provide the basic material for framing suitable policies.

6. **It helps in prediction** : A knowledge of future trends is very helpful in flaming suitable policies and plans.

Q, **Discuss briefly the limitations of statistics**.

Ans.

1. **Statistics deals only with quantitative characteristics**: Statistical methods can be applied only to quantitative data. These methods cannot be applied to qualitative characteristics like intelligence , honesty, beauty etc.

2. **Statistics can not deal with single object**: Statistics does not deal with single objects. It deals with a group of objects.

3. **Statistical methods may not provide the best solution**: statistical methods may not provide the best solution when a problem is beset with social consideration like culture, religion etc.

4. **<u>Statistics can be misused</u>** : Statistics may prove dangerous in the hands of inefficient persons people who are well adversant with the various statistical methods can utilizes the fruits of statistics. If statistics put into wrong hands it can be misused.