

09.02.26.

~~09.02.2026~~

$$SEM = \frac{SD}{\sqrt{N}}$$

Correlation
Statistics

P.G. II Unit II

Q- What is coefficient of correlation? what are its kinds & uses?

Ans: - The relation of two variables is called correlation. It can be defined that correlation is the relationship between two variables or two sets of scores. Galton wrote that correlation means the carry over of any change of any one variable to another variable. This carry over is of three types on the basis of which correlation has been divided into positive, negative & zero correlation. Positive correlation is that when increase of one variable increases the other variable & decrease in one variable results in decrease in the other variable also. This can be maximum +1.00 & minimum at 0.00 +1.00 indicates perfect positive correlation.

Negative Correlation - If the increase of one variable results in decrease in another variable or vice versa, it is called a negative correlation. It is -1.00 at minimum -0.00 . -1.00 is called perfect negative correlation. Zero correlation is that when change in one variable does not ~~at~~ cause any change in the other variable.

Uses of Correlation -

- ① It indicates the relation between the two variables.
- ② It helps in comparative study of two or more groups.
- ③ It indicates the internal consistency of frequency distribution.
- ④ It helps in different types of planning.

Q - What are the methods of correlation? under what circumstances Rank & Product moment correlations are used?

Ans :- There are two ~~methods~~ methods of correlation

① Rank difference & ② Product moment. Rank difference is used when :- ① when the N is 30 or less than that ② when scores are in form of ranks ③ when scores are such which can be converted into ranks. ④ when in short period of time correlation is to be found out.

Product moment correlation are used when

① when N is more than 30 ② when data are ~~not~~ not ranked ③ when data is such which can not be converted into rank. Though this method is more time consuming but is more reliable than rank difference m.

What are the methods of graphic representation?

Ans. Following are the four methods of graphic representation of certain data.

① Frequency Polygon - This is simplest method of graphic representation. In this method on X Axis mid point is written & on Y Axis frequency is written. In this way whatever the graph is drawn is called Polygon. Garret said "Polygon is many figured curve". It ~~is~~ is the graphic representation of frequency distribution.

② Histogram :- It is also graphic device like Polygon which indicates the frequency distribution. Basically it is similar to Polygon. The difference is only that in Polygon mid point of a class interval indicates a particular frequency whereas in Histogram frequency spread throughout the class interval.

③ Ogive or Cumulative Percentile Curve :-

It is the most useful of graphic representation of a data. It gives reliable information of the nature of any frequency distribution. At X Axis mid point & At Y Axis, cumulative frequency are drawn and in this way S letter type is formed which is called ogive. Its uses are -

① It gives the information of a frequency distribution graphically.

② It helps to determine the percentile.

- ② It helps in finding percentile score
- ③ It provides a comparative study of the performances of different groups which is shown graphically.

