Chapter 7

Correlation

1 Marks Questions

1. What is meant by correlation?

Ans. Correlation isa statistical toolwhichstudies the relationshipbetween twovariables.

2. List some variables where accuratemeasurement is difficult.

Ans. Beauty, bravery, wisdom, ability etc.

3. What is negative correlation?

Ans. Thecorrelationissaidtobenegativewhenthevariablesmoveinoppositedirection.

4. Give themeaning of positive correlation.

Ans. The correlation is said to be positive when the variablesmove togetherin the same direction

5. What is the range of simple correlation coefficient?

Ans. $1 < r < 1$

6. State thetypeofcorrelationwhen twovariableschange in thesame ratio.

Ans. Perfect correlation.

7. Give two examples of positive correlation?

Ans. (i) Age of husband and age of wife.

(ii) Increase in height and weight.

8. Mention the principal short coming of scatter diagram as a method of estimating correlation.

Ans. Scatter diagram does not indicate the exact numerical value of correlation.

9. Give two examples of negative correlation.

Ans. (i) Sale of swollen garments and day temperature.

(ii) Yield of crops and price.

10. When is rank correlation method used?

Ans. When data are of qualitative nature like beauty, honesty etc.

11. Mention the names of different methods for measuring correlation.

Ans. (i) Scatter diagram

(ii) Karl Pearson's coefficient of correlation.

(iii) Spearman's Rank correlation.

12. What is the main demerit of spearman's rank method?

Ans. This method cannot be employed for finding out correlation in a grouped frequency distribution.

13. Mention the principal short coming of Karl Pearson's coefficient of correlation.

Ans. The value of the coefficient is affected by extreme items.

14. If r_{xy} = 0, then the variables x and y are

(i) Linearly related

(ii) not linearly related

(iii) Independent

Ans. Independent

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15. The unit of correlation coefficient between height in feet and weight inkilograms is

(i) kg / feet

(ii) percentage

(iii) non existent

Ans. Non existent

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16. Which method of measuring correlation measures any type of relationship?

Ans. Karl Pearson's coefficient of correlation.

VERY SHORT ANSWER TYPE QUESTIONS (ONE MARK QUESTIONS)

1. What is meant by correlation?

Ans, Correlation is a statistical tool which studies the relationship between two variables.

2. List some variables where accurate measurement is difficult.

Ans, Beauty, bravery, wisdom, ability etc.

3. What is negative correlation?

Ans, The correlation is said to be negative when the variables move in opposite direction.

4. Give the meaning of positive correlation.

Ans, The correlation is said to be positive when the variables move together in the same direction.

5. What is the range of simple correlation coefficient?

Ans, $1 \le r \le 1$

6. State the type of correlation when two variables change in the same ratio.

Ans, Perfect correlation

7. Give two examples of positive correlation?

Ans, (i) Age of husband and age of wife.

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