INDIAN SCHOOL AL WADI AL KABIR

Class: XI	Department: Commerce	
	Topic: Correlation	

1. _____ is the statistical tool that studies the degree of all the relationships.
   (a) Index numbers
   (b) Dispersion
   (c) Correlation
   (d) Range
   A: c

2. Correlation between different variables is_____.
   (a) Positive
   (b) Negative
   (c) Both (a)&(b)
   (d) Neutral
   A: c

3. When the two variables do not change in a constant proportion it is known as;
   (a) Positive correlation
   (b) Negative correlation
   (c) Linear correlation
   (d) Nonlinear correlation
   A: d

4. Rank correlation is a superior method of analysis in case of ---- distribution.
   a. Qualitative
   b. Quantitative
   c. Frequency
   d. None of these
   A: a

5. Where is correlation multiple placed:

   (a) Between 0 and + 1
   (b) Between – 1 and 0
   (c) Between – 1 and + 1
   (d) None of these.
   A: c

6. A scatter diagram:
   a. Is a statistical test
   b. Must be linear
   c. Must be curvilinear

d. Is a graph of X and Y values

A: d

7. The correlation coefficient will be -1 if the slope of the straight line in a scatter diagram is:
   a. Positive
   b. Negative
   c. Zero
   d. None of these

   A: b

8. In a negative relationship:
   a. As X increases, Y increases
   b. As X decreases, Y decreases
   c. As X increases, Y decreases
   d. Both (a) and (b)

   A: c

9. Relation between price and demand is:
   a. Positive
   b. Negative
   c. One to one
   d. No relationship

   A: b

10. When r = 1, all the points in a scatter diagram would lie:
   a. On a straight line directed from lower left to upper right
   b. On a straight line
   c. On a straight line directed from upper left to lower right
   d. Both (a) and (b)

   A: a

11. The correlation between sale of cold drinks and day temperature is:
   a. Positive
   b. Negative
   c. Zero
   d. None of these

   A: a

12. The correlation between ages of husbands and wives is:
   a. Positive
   b. Negative
   c. Zero
   d. None of these

   A: b

13. The correlation between shoe-size and intelligence is:
   a. Zero
   b. Negative
   c. Positive
   d. None of these

A: a

14. Correlation measures ---------, not ----------. (causation /covariation)
A: covariation, causation

15. ---------- gives a visual presentation of the relationship and is not confined to linear relations.
A: scatter diagram

16. A high value of 'r' indicates strong linear relationship. True/False.

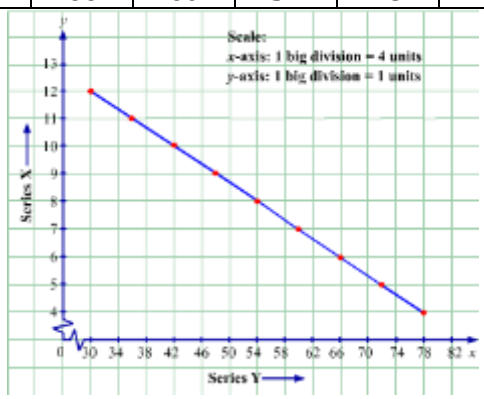
A: True.

17. If $r_{XY} = 0$, the variable X and Y are
(a) linearly related
(b) not linearly related
(c) independent
(d) perfectly correlated
A: b

18. Karl Pearson's coefficient of correlation is also known as ------
(a) product moment correlation coefficient
(b) simple correlation coefficient
(c) rank correlation coefficient
(d) both (a) and (b)
A: D

19. Make a scatter diagram from the following data and interpret the result.

X	4	5	6	7	8	9	10	11	12
Y	78	72	66	60	54	48	42	36	30



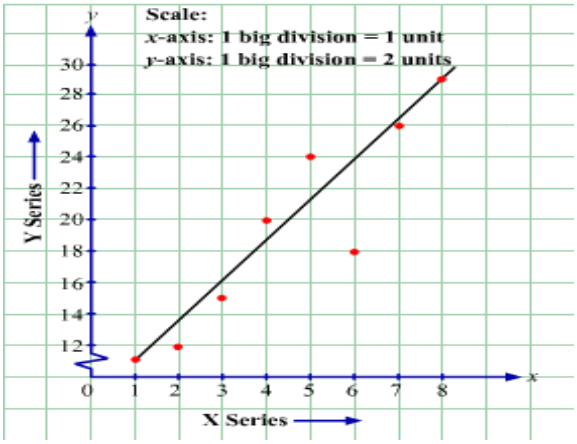
Thus, there is perfect negative correlation between X and Y.

20. Calculate Karl Pearson's coefficient of correlation:
X: 20 18 16 15 14 12 12 10 8 5
Y: 12 16 10 14 12 10 9 8 7 2
(Ans: 0.87)

21. Given the following pairs of values of the variables X and Y:

X	1	2	3	4	5	6	7	8
Y	11	12	15	20	24	18	26	29

Make a scatter diagram. Comment on the nature of relationship between variables X and Y.



Thus, there is a high degree of positive correlation between X and Y.

22. Compute Karl Pearson's coefficient of correlation and interpret the result:

Marks in Kannada: 15 18 21 24 27
Marks in Sociology: 25 25 27 31 32

(Ans: 0.95)

23. Calculate the coefficient of correlation by step deviation method:

Income (Rs Lac): 23 27 28 29 30 31 33 35 36 39
Expenditure : 18 22 23 24 25 26 28 29 30 32

(Ans: 0.99)

24. Calculate the correlation coefficient between the heights of fathers in inches (X) and their sons (Y).

X: 65 66 57 67 68 69 70 72
Y: 67 56 65 68 72 72 69 71

(Ans: 0.44)

25. Calculate the correlation coefficient between X and Y and comment on their relationship.

X: -3 -2 -1 1 2 3
Y: 9 4 1 1 4 9

(Ans: 0)

26. Calculate the correlation coefficient between X and Y and comment on their relationship.

X: 1 3 4 5 7 8
Y: 2 6 8 10 14 16

(Ans: 1)