

Statistics - ICS Part 2 Statistics English Medium Chapter 4 Short Questions Preparation

Q1. What we conclude from if $r^2 = 1$?
Ans 1: We conclude that there exists a perfect linear correlation between the two variables.
Q2. What is a coefficient of correlation ? For what purpose it is used ?
Ans 1: The coefficient of correlation is a measure designed to give the information about the nature and strength of the relationship existing between the two variables.
Q3. "Regression coefficients are independent of origin". What does it mean?
Ans 1: It means that addition or subtraction of a constant to the values of variables have no effect on the values of regression coefficients.
Q4. Is it possible that both regression coefficients be equal?
Ans 1: No. It is not possible at all. They have always the same sign.
Q5.
Ans 1: Option (ii) is true.
Q6. if we measure the correlation between weights (in kg) and height (in cm) then what would be the unit of coefficier of correlation? i. Kg per cm or ii. Cm per Kg ii. Non of these
Ans 1: Coefficient of correlation is independent of units of measurement. It is a pure real number lying in between -1 and + 1. Option (iii) is true.
Q7. Is it true that a change in origin scale of the variables affects the value of correlation coefficient?
Ans 1: Coefficient of correlation is independent of the change in the origin and scale.
Q8. Is it possible that both regression by equal ?

Ans 1: For a specific problem they may have equal and identical value. But it is not possible for all the situations.

Q9. What is meant by linear regression?

Ans 1: A statistical method providing best possible linear relationship between a dependent variable and an independent variable.

Q10. What do we mean by nature of the relationship?

Ans 1: By nature of the relationship we mean that whether the relationship is linear or curvilinear; positive or negative etc.