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

Q1. What are two main differences of Correlation and Regression ?

Ans 1: Regression is a relationship of dependency whereas correlation represents the independence of variables upon each other; the result of a regression problem is an approximating equation which can be used for further prediction whereas the final result of a correlation technique is a number indicating the nature and strength of relationship and which cannot be used for prediction purposes.

Q2. 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.

Q3. 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.

Q4. The two regression lines Y on X and X on Y intersect each other at a specific point in the rectangular coordinate system. What is that ?

Ans 1:

Q5. 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.

Q6. Which one is true for coefficient of correlation ?

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

Q7. What we conclude from if $r^2 = 1$?

Ans 1: We conclude that there exists a perfect linear correlation between the two variables.

Q8. 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.

Q9.

Ans 1: Option (ii) is true.

Q10. Is it possible that both regression coefficients be equal ?

Ans 1: No. It is not possible at all. They have always the same sign.