



ST. LAWRENCE HIGH SCHOOL
A JESUIT CHRISTIAN MINORITY INSTITUTION



WORKSHEET-1
SUBJECT - STATISTICS

Term : 1st

Topic - CORRELATION

Class: XII

Full Marks: 15

Date:02.05.2020

Q1. Write down the nature of correlation (positive or negative or zero) for the following variables :

- (i) Ages of husbands and wives
- (ii) Age and income
- (iii) Income and expenditure
- (iv) Sell of woolen garments and daily minimum temperature
- (v) Sell of cold drinks and maximum daily temperature
- (vi) Production and per unit price of an item
- (vii) Speed of an automobile and the distance required to stop the car after applying brakes
- (ix) Match score and shoe size
- (x) Income and religion

Q2 Write down the correct answer :

- (i) If $u + 3x = 5$, $2y - v = 7$ and correlation coefficient of x and y is 0.12, then correlation coefficient of u and v will be :
(a) 0.6 (b) 0.12 (c) -0.12 (d) none of these
- (ii) If $2u + 5x = 17$ and $5v = 11 + 2y$ are the relations between variables x,y,u and v, and the covariance between x and y is 3, then the covariance between u and v is
(a) 3 (b) -3 (c) 30 (d) none of these
- (iii) If $2x + 3y = 7$ is the relation between x and y, then the correlation coefficient between x and y is
(a) +1 (b) -1 (c) any positive fraction (d) impossible to be determined from the information given.

Q3. Explain what is wrong in the following statements :

- (i) There is a high correlation between the gender of workers and their weekly income
- (ii) The correlation between planting rate and the yield of corn is found to be $r=0.21$ units.

- **Prepared by**
Sanjay Bhattacharya