



ST. LAWRENCE HIGH SCHOOL
A JESUIT CHRISTIAN MINORITY INSTITUTION



SOLUTION OF WORKSHEET-5

SUBJECT - STATISTICS

Term : 1st

Topic - REGRESSION

Class: XII

Full Marks: 15

Date:07.05.2020

Q1. Select the correct alternative of the following questions.

(i) If e_i be the difference of the observed and predicted value of y in the scatter diagram while deriving the regression equation y on x , then mean of e is
Ans: a) 1 **b) 0** c)-1 d) none of these

(ii) If y and Y be respectively the ordinates of plotted and estimated values from regression line y on x , then difference of their means is
Ans: **a) 0** b) 1 c)-1 d) none of these

(iii) In regression line y on x , the coefficient of determination is
Ans: a) 0 b) 1 **c) r^2** d) none of these

(iv) For regression equation coefficient of determination is a measure indicates ?? as prediction formula. ?? stands for
Ans: a) unbiasedness **b) usefulness** c) completeness d) none of these

(v) In regression lines y on x , the standard error of estimate of y obtained, is
Ans: a) variance of e **b) SD of e** c) mean of e d) none of these

(vi) The correlation coefficient between x and e is
Ans: **a) 0** b) 0.5 c) -0.5 d) none of these

(vii) The regression line is of no help as a prediction formula when $V(e) =$
Ans: a) s_y b) s_y^2 **c) s_y^2** d) none of these

(ix) The correlation coefficient between Y and e is
Ans: **a) 0** b) 0.5 c) -0.5 d) none of these

- (x) The correlation coefficient between y and Y is
 Ans: a) r^2 **b) 1r1** c) 0 d) none of these
- (xi) In regression line y on x , $\text{cov}(y, Y)$ is equal to
 Ans: **a) $V(Y)$** b) $V(y)$ c) 0 d) none of these
- (xii) The regression line becomes prediction formula when $Y_i =$
 Ans: a) x_i **b) y_i** c) 0 d) none of these
- (xiii) The value of the regression coefficient lies between
 Ans: a) 0 and 1 b) -1 and 0 c) a and b both **d) none of these**
- xiv) For the equation $x - y = 7$, the value of the correlation coefficient is
 Ans: **a) 1** b) -1 c) 0 d) none of these
- xv) If the correlation coefficient of the bivariate observations (5, 5), (1, 7) and (9, y) is 1, then y is equal to
 Ans; a) 1 b) 2 **c) 3** d) none of these

- **Prepared by**
Sanjay Bhattacharya