ST. LAWRENCE HIGH SCHOOL

A JESUIT CHRISTIAN MINORITY INSTITUTION

SOLUTION OF WORKSHEET-3

SUBJECT – STATISTICS

Term : 1st

Topic - REGRESSION **Class: XII**

Full Marks: 15 **Date:05.05.2020**

Q1. Select the correct alternative of the following questions.

(i) In a scatter diagram the number of regression lines exist is

Ans: a) 1 **b) 2** c)3 d) none of these

(ii) The equation of reression x on y the errors for the points are measured parallel to

Ans: **a) X axis** b) Y axis c)the perpendicular to the line d) none of these

(iii) To derive the exact equation of the regression line yon x from y= a +bx, minimise the total sum of square of errors with respect to

Ans: a) x b) y **c) a and b** d) none of these

(iv) To derive the exact equation of the regression line yon x from y= a + bx, we solve the normal equation to solve the value of

Ans: a) a **b) b** c) a and b d) none of these

(v) For two uncorrelated variables the no of regression lines can be obtained, is

Ans: a) 1 b) 2 c)3 **d) none of these**

(vi) The correlation coefficient of x and y is 0.12, with respective standard deviations 2 and 3, then the value of regression coefficient of y on x is

Ans: a) 0.06 **b) 0.18** c) 0.08 d) none of these

(vii) Given two point on the scatter diagram, the number of regression lines can be obtained is

Ans: **a) 1** b) 2 c)3 d) none of these

(ix) The slope of the regression line yon x is

Ans: a) $\frac{1}{b_{yx}}$ **b)** $\boldsymbol{b_{yx}}$ c) b_{xy} d) none of these

(x) The slope of the regression line x on y is

Ans: **a)** $\frac{1}{b_{xy}}$ b) b_{yx} c) b_{xy} d) none of these

(xi) When two regression lines are perpendicular then the correlation coefficient is

Ans: **a) 0** b) 1 c) 0.5 d) none of these

(xii) The method of least square gives

Ans: a) residual equations **b) normal equations**
c) exponential equations d) none of these

(xiii) If the sign of correlation coefficient be negative, then the sign of regression coefficient of y on x can be

Ans: a) positive **b) negative** c) both a and b d) none of these

(xiv) The numerical value of two regression coefficients

Ans: **a) can not be less than IrI** b) can not exceed IrI
c) is equal to IrI d) none of these

(xv) In the method of least squares, the principle to minimise

Ans: a) sum of errors b) square of errors
c) sum of square of errors d) none of these

- **Prepared by**
  Sanjay Bhattacharya