NATIONAL MANAGEMENT COLLEGE,THUDUPATHI.

CA FOUNDATIO

PAPER-3: BUSINESS MATHEMATICS, LOGICAL REASONING AND STATISTICS

TEST 2

Time Allowed:1/2 hours **Maximum Marks: 20**

1) If two regression equations x + 5y = 13 and 3x – 2y =5, then the mean values of x and y are respectively.

(A) (2,3) (B) (3,2) (C) (4,5) (D) (5,4)

2) The two regression co efficient s for the following data:

X	38	23	43	33	28
Y	28	23	43	38	8

Are

a)1.2 and 0.4 b)1.6 and 0.8 c)1.7 and 0.8 d) 1.8 and 0.3

3) The following results relate to bivariate data on (x,y):

$\sum xy = 414$, $\sum x = 120$, $\sum y = 90$, $\sum y^2 = 300$, $\sum x^2 = 600$, n = 30. Later or, it was known that two pairs of observation (12,11) and (6,8) were wrongly taken, the correct pairs of observations being (10,9) and (8,10). The corrected value of the correlation coefficient is

a) 0.752 b) 0.768 c) 0.846 d) 0.953

4) The two lines of regression are given by 8x+10y=25, 16x+5y = 12 respectively.

If the variance of x is 25, what is the standard deviation of y ?

a) 16 b)8 c)64 d)4

5)For y = 25, what is the estimated value of x, from the following data

X	11	12	15	16	18	19	21
Y	21	15	13	12	11	10	9

a) 15 b) 13.926 c) 14.388 d) none of these

6) The lines of regression passes through the points, bearing ---------- no. of points on both sides

a) equal b)unequal c) zero d) none

7) If the line y = 13-3x/2 is the regression equation of y on x then b_{yx} is

a) 2/3 b)-2/3 c) 3/2 d) -3/2

8) when r=0 then cov (x,y) is equal to

a) +1 b) -1 c)0 d) none

9) If r = 0.6, then the confficient of non-determination is

a)0.4 b) -0.6 c) 0.36 d) 0.64

10) If the sum of the squares of rank difference in the marks of 10 students in two subject is 4, then the coefficient of rank correlation is

a) 0.85 b) 0.95 c) 0.75 d) 0.5

11) With usual notation, then the coefficient of concurrent deviation is

a) 0.75 b) 0.65 c) -0.65 d) -0.75

12) If scatter diagram from a line move from lower left to upper right corner then the correlation is.

a) Perfect positive b) Perfect negative
c)Simple positive d) No correlation

13) Consider to regression line 3x+2y=26, 6x+y=31 find the correlation coefficient between x and y

a) 0.5 b) -0.5
c) 0.25 d)-0.25

14) If correlation coefficient between x and y is 0.5 then find the correlation coefficient between 2x – 3 and 3 – 5y is

a) 0.5 b) -0.5
c) 2.5 d) -2.5

15) The coefficient of correlation between two variables x and y is 0.38, Their convariance is. 10.2. The variance of X is 16. The Standard deviation of Y is

a) 5.71 b) 6.71 c) 7.71 d) 8.71

16) In calculating the Karl Pearson's coefficient of correlation it is necessary that the data should be of numerical measurements. The statement is

a) valid b) not valid c) both d) none

17)The value we would predict for the dependent variable when the independent variables are all equal to zero is called:

a) Slope b) Sum of residual
c) Intercept d) Difficult to tell

18) The coefficient of correlation is significant if:

a)r ≥ P.E b) r<6 P.E c) r ≥6 P.E d)r =6 P.E

19) The straight line graph of the linear equation Y = a + bx,slope is horizontal if:

a) b = 0 b) b ≠ 0 c) b= 1 d) a = b

20) If a statistics professor tells his class, " All those who got 100 on the statistics test got 20 on the mathematics test, and all those that got 100 on mathematics test got 20 on the statistics test", he is saying that the correltion between the statistics test and the mathematics test is

a) negative b) positive c) zero d) none of the above