***S. S. College, Jehanabad Internal Examination*

 Department: Economics Class: M.A(Sem-I)

Paper: Elementary Statistics( Paper-III)
Session:- 2018-2020

Full marks - 40

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Mode of submission: Online through E-mail or WhatsApp
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*Instructions:-***

* **All questions are compulsory and carries equal marks**
* **Students must submit their name, class roll no, examination roll no, registration no & their respective mobile no during submission of the paper.**

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| **Name of the Student** |  |
| **Class Roll No** |  |
| **Exam Roll No** |  |
| **Registration No** |  |
| **Mobile No** |  |

1. The correlation coefficient is used to determine:
a. A specific value of the y-variable given a specific value of the x-variable
 b. A specific value of the x-variable given a specific value of the y-variable
 c. The strength of the relationship between the x and y variables
d. None of these

 2. If there is a very strong correlation between two variables then the correlation coefficient must be
 a. any value larger than 1
b. much smaller than 0, if the correlation is negative
 c. much larger than 0, regardless of whether the correlation is negative or positive
 d. None of these alternatives is correct.

 3. In regression, the equation that describes how the response variable (y) is related to the explanatory variable (x) is:
 a. the correlation model
b. the regression model
 c. used to compute the correlation coefficient
 d. None of these alternatives is correct.

4. If the correlation coefficient is a positive value, then the slope of the regression line
 a. must also be positive
 b. can be either negative or positive
 c. can be zero
 d. can not be zero

 5. If the coefficient of determination is 0.81, the correlation coefficient
 a. is 0.6561
 b. could be either + 0.9 or - 0.9
c. must be positive
 d. must be negative

6. If the coefficient of determination is equal to 1, then the correlation coefficient
 a. must also be equal to 1
 b. can be either -1 or +1
c. can be any value between -1 to +1
 d. must be -1

7. If the coefficient of determination is a positive value, then the regression equation
a. must have a positive slope
 b. must have a negative slope
 c. could have either a positive or a negative slope
d. must have a positive y intercept

8. If the value of any regression coefficient is zero, then two variables are:

**A** a. Qualitative

**B** b. Correlation

**C** c. Dependent

**D** d. Independent

9. In simple regression equation, the numbers of variables involved are:

**A A** a. 0

**B A** b. 1

**C A** c. 2

**D A** d. 3

10. The slope of the regression line of Y on X is also called the:

**A** Correlation coefficient of X on Y

**B** Correlation coefficient of Y on X

**C** Regression coefficient of X on Y

**D** Regression coefficient of Y on X

11. A relationship where the flow of the data points is best represented by a curve is called:

**A A** a.  Linear relationship

**B A** b.  Nonlinear relationship

**C A** c.  Linear positive

**D A** d.  Linear negative

12. A process by which we estimate the value of dependent variable on the basis of one or more independent variables is called:

**A A** a.   Correlation

**B A** b.   Regression

**C A** c.   Residual

**D** **A** d.  Slope

13. If regression line of = 5, then value of regression coefficient of Y on X is:

**A A** a.    0

**B A** b.    0.5

**C A** c.    1

**D A** d.    None of these

14. If Y = 2 - 0.2X, then the value of Y intercept is equal to:

**A A** a.     -0.2

**B A** b.     2

**C A** c.     0.2X

**D A** d.     All of the above

15. The straight line graph of the linear equation Y = a + bX, slope is horizontal if:

**A** a.**A** b = 0

**A** b.**B** b ≠ 0

**A** c.**C** b = 1

**A** d.**D** a = b

16. 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 the mathematics test got 20 on the statistics test", he is saying that the correlation between the statistics test and the mathematics test is:
 (a) Negative
(b) Positive
(c) Zero
 (d) Difficult to tell

17. If rxy = 1, then:
(a) byx = bxy
 (b) byx > bxy
 (c) byx < bxy
(d) byx . bxy = 1

18. If the sum of the product of the deviation of X and Y from their means is zero, the correlation coefficient between X and Y is:
 (a) Zero
 (b) Maximum
 (c) Minimum
 (d) Undecided

19. If the coefficient of correlation between the variables X and Y is r, the coefficient of correlation between X2 and Y2 is:
 (a) -1
(b) 1
(c) r
 (d) r 220. A regression model may be:
(a) Linear
(b) Non-linear
(c) Both (a) and (b)
(d) Neither (a) and (b)