ASSIGNMENT

1. Define correlation, multiple correlation and partial correlation.
2. Write short notes on scatter diagram method for the study of correlation.
3. Define correlation coefficient and give its properties.
4. Give comparison between Karl Pearson's and Spearman's method for finding correlation coefficient.
5. Explain Spearman's rank correlation method for finding correlation coefficient.
6. What is probable error and give its uses.
7. The following data was collected during last ten months regarding the price and its respective demand of a product. Is there exists any relation between price and demand of the product? Is yes then interpret the value of correlation coefficient

Price per unit (in Rs.)	30	50	80	40	70	100	20	10	60	90
Demand (in units)	700	600	200	800	400	300	1000	900	500	100

[Ans: 0.94]

8. A company is studying the effect of its latest advertising campaign. Eight persons are chosen at random were called and asked how many units of that product they had brought in last month and how many advertisements they had either read or seen in the last month. Calculate the sample

correlation coefficient and give your inference regarding the population correlation coefficient.

Number of Advertisement	13	17	14	12	0	14	11	12
Number of units purchased	21	28	19	14	17	16	13	18

[Ans: 0.79, PE = 0.09, Significant correlation between population variables, Limit for population correlation coefficient is [0.70, 0.88]]

9. Two judges have given the ranks to stage performance of ten artists are given below by two judges. Determine the degree and nature of agreement of the judges while assigning the ranks.

Judge - A	3	5	8	4	7	10	2	1	6	9
Judge - B	6	4	9	8	1	2	3	10	5	7

[Ans: - 0.30]

10. Two persons – a lady and a gentleman has observed twelve various household products and they are asked to give the marks (out of 100) to the products according to shape, color, attractiveness, sustainability, etc. These marks are given below:

Marks given by lady	66	40	35	75	65	80	35	20	85	65	55	33
Marks given by gentleman	30	55	68	28	76	25	80	85	20	35	45	65

Discuss the nature of assigning marks to the products by them.

[Ans: - 0.87]