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UG – I First Year First Semester, 2023

STAT – 1 (MINOR) PRACTICAL

Sl. No.	Name of Program	Date	Signature
1.	Mean without Frequency		
2.	Mean with Frequency		
3.	Variance without Frequency		
4.	Variance with Frequency		
5.	Co-variance without Frequency		
6.	Co-variance with Frequency		
7.	Correlation without Frequency		
8.	Correlation with Frequency		
9.	Regression of X on Y (with plot)		
10.	Regression of Y on X (with plot)		
11.	Spearman's Rank Correlation		
12.	Spearman's Rank Correlation with Perfect agreement		
13.	Spearman's Rank Correlation with Perfect disagreement		

1. (1,3) The weights (in pounds) of 45 persons are given below:

122	173	179	176	159	175	160	102	133
159	176	151	115	105	72	170	128	112
101	123	117	93	117	99	90	113	128
129	134	178	105	107	147	157	155	95
177	98	174	135	97	168	160	144	174

Write a MATLAB programme to find the mean and standard deviation for the above data. Write the answer along with all the data.

2. (2,4) Write a MATLAB program to find the mean and standard deviation for the following frequency distribution of age(in years) of 100 persons:

Age of Persons	19-23	24-28	29-33	34-38	39-43	44-48
Number of Persons	15	20	30	18	12	5

Write the answer along with all input data.

3. (5,7) The ages (x) and blood pressures (y) of 12 women are given in the following table:

x	56	42	72	36	63	47	55	49	38	42	68	60
y	147	125	160	118	149	128	150	145	115	140	152	155

Find the correlation coefficient between x and y.

4. (6,8) The frequency distribution of marks of 100 students in Mathematics(x) and Physics(y) is given by the following table:

	Marks in Mathematics (x)							
Marks in Physics (y)		40-49	50-59	60-69	70-79	80-89	90-99	TOTAL
	90-99				2	4	4	10
	80-89			1	4	6	5	16
	70-79			5	10	8	1	24
	60-69	1	4	9	5	2		21
	50-59	3	6	6	2			17
	40-49	3	5	4				12
	TOTAL	7	15	25	23	20	10	100

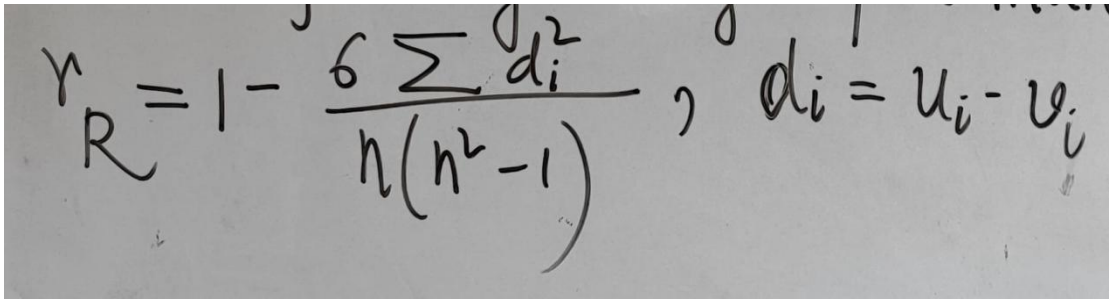
Find the correlation coefficient between the marks in Mathematics and the marks in Physics.

5. (9,10) Find the regression of X on Y and vice versa with plot using the data provided in Q3.

6. (11) The marks obtained by 8 students in Mathematics & Physics in a test are given below:

Student	A	B	C	D	E	F	G	H
Marks in Math	43	77	64	96	48	35	86	71
Marks in Phys	36	68	49	79	50	41	82	65

Find the Correlation Coefficient between the marks in two subjects by using **Spearman Rank Correlation.**



7. (12) The marks obtained by 8 students in Mathematics & Statistics in a test are given below:

Student	A	B	C	D	E	F	G	H
Marks in Math	43	77	64	96	48	35	86	71
Marks in Stat	41	68	50	82	49	36	79	65

Find the Correlation Coefficient between the marks in two subjects by using **Spearman Rank Correlation.**

8. (13) The marks obtained by 8 students in Mathematics & Bengali in a test are given below:

Student	A	B	C	D	E	F	G	H
Marks in Math	43	77	64	96	48	35	86	71
Marks in Beng	79	49	65	36	68	82	41	50

Find the Correlation Coefficient between the marks in two subjects by using **Spearman Rank Correlation.**

========== HAPPY CODING!! ==========