



QP CODE: 24019434



Reg No :

Name :

**B.Sc DEGREE (CBCS) REGULAR / IMPROVEMENT / REAPPEARANCE
EXAMINATIONS, MAY 2024**

Second Semester

B.Sc Psychology Model I

Complementary Course - ST2CMT22 - STATISTICAL TOOLS

2017 ADMISSION ONWARDS

3ED41CB8

Time: 3 Hours

Max. Marks : 80

Part A

*Answer any **ten** questions.*

*Each question carries **2** marks.*

1. Compare mean deviation and standard deviation as measures of dispersion.
2. Variance of a data set is zero, What is its interpretation?
3. Find the standard deviation of the data 1,2,3,4,5,6.
4. What is the meaning of coefficient of variation?
5. Distinguish between raw moments and central moments.
6. Give any two formula to calculate skewness.
7. What is the difference between positive and negative skewness?
8. Briefly explain Moment measure of skewness.
9. What is the importance of correlation?
10. Just draw the scatter diagram for positively correlated data.
11. Draw the scatter diagram for a negatively correlated data.
12. What is the importance of sign of regression coefficients?

(10×2=20)

Part B

*Answer any **six** questions.*

*Each question carries **5** marks.*





13. What are the desirable properties of a good measure of dispersion.

Compute the Range and coefficient of range from the frequency distribution given below.

14.	Size:	5	8	13	20	25	30	40
	Freq:	2	10	20	35	18	7	5

Find the range and quartile deviation of the following data.

15.	X :	5	10	15	20	25	30	35
	f :	4	38	65	90	70	42	6

16. Explain the effect of change of origin and scale on central moments.

17. If the first four raw moments of a distribution about the value 4 are 1,4,10,45. S.T the mean is 5, variance is 3, $\mu_3=0$ and $\mu_4=26$.

Calculate the Pearson's measure of skewness of the following data.

18.	Class :	0-10	10-20	20-30	30-40
	Frequency :	1	3	4	2

Calculate Karl Pearson coefficient of correlation using the following.

19.	Husband's Age	23	27	28	28	29	30	31	35	36
	Wife's Age	18	30	22	27	21	29	27	28	29

20. How will you identify the two regression lines.
21. Explain the method of drawing regression lines.

(6×5=30)

Part C

Answer any **two** questions.

Each question carries **15** marks.

In a test given to two groups of students the scores obtained are as follows:

22.	Group 1 :	23	11	19	26	35	46	53	18	36
	Group 2 :	31	18	21	31	48	40	18	23	30

- Which group is more consistent?
- Find the mean deviation of the first group .

- (a) Define kurtosis.
- (b) Briefly explain the various measures of kurtosis.
23. (c) Find the coefficient of skewness of the data.

Salary :	10 – 20	20 – 30	30- 40	40 – 50	50 – 60
Frequency :	24	38	65	90	70

24. Define Kurtosis. Obtain the value of the moment measures of Kurtosis and interpret its value for the data on the number of defective batteries on each of 150 flashlights:





Number of defective 0 1 2 3 4

Number of flashlights 26 51 47 16 10

For the following data it is required to estimate demand when price is 20. Obtain the suitable regressing equation. Also find the estimate.

25.

Price 18 24 25 20 28 32

Demand 8 7 6 10 5 4

(2×15=30)

