



22103155

QP CODE: 22103155

Reg No :

Name :

**B.Sc DEGREE (CBCS) REGULAR / IMPROVEMENT / REAPPEARANCE
EXAMINATIONS, OCTOBER 2022**

Second Semester

B.Sc Psychology Model I

Complementary Course - ST2CMT22 - STATISTICAL TOOLS

2017 ADMISSION ONWARDS

3D473FB1

Time: 3 Hours

Max. Marks : 80

Part A

Answer any ten questions.

Each question carries 2 marks.

1. Which are the measures of dispersion?
2. What are the demerits of quartile deviation?
3. Define mean deviation.
4. What is the meaning of coefficient of variation?
5. If the first three raw moments about 5 are 2, 20, 40 then find the first 3 central moments.
6. Distinguish between Pearson's measure and Bowley's measure of skewness.
7. Briefly explain the term kurtosis.
8. Give the moment measures of skewness and kurtosis.
9. What is the importance of correlation?
10. Pearson's correlation coefficient is zero, What does it mean?
11. Give any three properties of correlation coefficient.
12. The regression coefficients for a data set is 0.9 and 0.4. Find the correlation coefficient.

(10×2=20)





Part B

Answer any **six** questions.

Each question carries **5** marks.

13. What are the merits and demerits of range ?

14. Find the variance of the data

X :	0	1	2	3	4	5	6
f :	14	28	65	90	65	4	1

15. Calculate the SD for the following data

Marks obtained	0-10	10-20	20-30	30-40	40-50	50-60	60-70
Number of students	16	20	25	30	18	10	8

16. 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 $\mu_4=26$.

17. Distinguish between skewness and kurtosis. Explain how we can find the skewness and kurtosis from the moments about the mean.

18. Explain the concept of skewness and state the relation between mean, median and mode with skewness.

19. Explain different types of correlation with Pearson's coefficient and scatter diagram.

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.

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

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

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

23. a) Differentiate between raw moments and central moments





b) Calculate the first four moments about the mean for the following data.

X	1	2	3	4	5	6	7	8	9
F	1	6	12	25	30	20	9	5	2

24. Find the moment measure of skewness and kurtosis.

Marks	:	30-34	35-39	40-44	45-49	50-54	55-59
Frequency	:	5	10	15	30	5	5

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

Price 18 24 25 20 28 32

Demand 8 7 6 10 5 4

(2×15=30)

