

SHRIMATHI DEVKUNVAR NANALAL BHATT VAISHNAV COLLEGE FOR WOMEN
(AUTONOMOUS)

(Affiliated to the University of Madras and Re-accredited with 'A+' Grade by NAAC)
Chromepet, Chennai — 600 044.

B.Sc. END SEMESTER EXAMINATIONS NOVEMBER-2022

SEMESTER - III

21UPCAT3003 - Statistics in Psychology

Total Duration : 2 Hrs 30 Mins.

Total Marks : 60

Section A

Answer any **SIX** questions ($6 \times 5 = 30$ Marks)

1. Name and illustrate levels of measurement based on their hierarchical order.
2. Interpret your understanding about the various skewness using diagrams.
3. Define hypothesis and classify the types of hypothesis.
4. Describe the assumption of a chi square and its various forms.
5. Illustrate the procedure to calculate the standard deviation with an example.
6. The below are the dance and music scores of 5 students

Dance Score	50	40	60	80	70
Music Score	45	65	75	85	55

Solve the correlation by rank-difference method.

7. Classify the formula to calculate 'df' and t-test of one sample t-test, paired sample t-test and independent sample t-test.
8. Differentiate non-parametric and parametric tests.

Section B

Answer any **THREE** questions ($3 \times 10 = 30$ Marks)

9. Explain the steps in constructing a grouped frequency table.
10. Prepare a table on the different elements of measures of central tendency.
11. Organize a mind map and explain the types of correlation.
12. With the application of examples, briefly discriminate the Type I and Type II errors.
13. A group of eight individuals with high cholesterol levels participated in an exercise program that was designed to lower cholesterol levels. Cholesterol levels, in milligrams per deciliter, were measured before and after exercise for each individual, with the following results

Subjects	1	2	3	4	5	6	7	8
Before	283	299	274	284	248	275	293	271
After	290	281	262	287	253	287	267	271

Can you conclude that the median cholesterol level after treatment is different from the median before treatment? Use the $\alpha = 0.05$ level of significance.

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