

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.(CS) END SEMESTER EXAMINATIONS APRIL-2023

SEMESTER - IV

20UCSAT4004 - Statistical Methods and its Applications - II

Total Duration : 2 Hrs 30 Mins.

Total Marks : 60

Section B

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

1. Prove that $r = \sqrt{b_{xy} \times b_{yx}}$.
2. Describe the importance of level of significance.
3. Discuss the procedure for testing the difference between two proportions for large sample test.
4. Write the steps involved in the testing of hypothesis.
5. Explain the concept of completely randomized design with its layout.
6. Apply the following terms in real life : (i) Randomization (ii) Replication.
7. Sketch the importance of critical region.
8. Compare Karl Pearson's Co-efficient of correlation with Spearman's rank Correlation.

Section C

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

9. Establish the relationship between correlation co-efficients and two lines of regression using scatter diagram.
10. Classify the difference between Type I and Type II errors with an example.
11. Discuss: (i) Large sample test for mean. (ii) Large sample test for proportion.
12. Explain the procedure for testing the independence of attributes which is in $m \times n$ contingency table.
13. Explain about the Latin square design with its layout.
