

Roll.No.

20UCSAT4004

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.Computer Science - END SEMESTER EXAMINATIONS - NOVEMBER 2025
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. Describe a scatter diagram.
2. Define the terms:
 - (i) Type I and Type II error
 - (ii) Level of Significance
 - (iii) Critical region
3. How will you test for a difference in means in case of large samples?
4. Explain the F-test for testing the equality of two sample variances.
5. Briefly discuss about K-S test.
6. Discuss the rank correlation coefficient with repeated ranks.
7. State the properties of the student t-distribution.
8. Explain the basic principle of the design of experiments.

Section C

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

9. Define regression lines and discuss why there are two regression lines.
10. Explain the relationship between, F and chi-square distribution.
11. How will you test the equality of two proportions in the case of large samples?
12. Discuss the test of independence of the $m \times n$ contingency table.
13. Explain the layout in constructing a Latin square Design and prepare an ANOVA table.
