

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.(Statistics) END SEMESTER EXAMINATIONS NOVEMBER -2023

SEMESTER - V

**20USTCT5010 - Design of Experiments**

Total Duration : 2 Hrs 30 Mins.

Total Marks : 60

### **Section B**

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

1. Explain the method of determining of experimental units.
2. Explain the procedure for One-way clarification of ANOVA.
3. Prepare Statistical Analysis of Randomized Block design.
4. Discuss the advantages and disadvantages of LSD.
5. Explain the types of confounding.
6. Write a detail note on Tukey's test.
7. Distinguish between ANOVA and ANCOVA.
8. Explain the procedure for  $2^2$  factorial experiments.

### **Section C**

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

9. Elaborate the principles of Experimentation.
10. Explain the following.
  - (i) Newman- Keuls test
  - (ii) Duncan's multiple range test
11. Assess the statistical analysis of Latin Square Design.
12. Discuss the procedure for one missing observation under LSD.
13. Examine in detail  $3^2$  experimental design.

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