SECOND SEMESTER M.Sc. DEGREE EXAMINATION, APRIL 2024

(CBCSS - PG)

(Regular/Supplementary/Improvement)

CC19P MST2 C06 / CC22P MST2 C06 - DESIGN AND ANALYSIS OF EXPERIMENTS

(Statistics)

(2019 Admission onwards)

Time : 3 Hours   Maximum : 30 Weightage

Part-A

Answer any *four* questions. Each question carries 2 weightage.

1. Define (i) Replication (ii) Local control

2. (i) Distinguish between fixed effects and random effects model.
   (ii) Briefly explain model adequacy checking.

3. What is resolvable balanced incomplete block design?

4. Explain PBIBD with two associate classes.

5. Explain Yates procedure for finding sum of squares in a 2^2 factorial experiment.

6. Explain the concept of fractional factorial.

7. Briefly describe the method of steepest accent.

$(4 \times 2 = 8$ **Weightage)**

Part-B

Answer any *four* questions. Each question carries 3 weightage.

8. Describe the analysis of one way classified data.

9. Describe the relative efficiency of RBD relative to CRD.

10. Describe intrablock analysis of BIBD.

11. What do you mean by Lattice Design? Explain.

12. What do you mean by 2^3 factorial experiment? Explain.

13. Explain complete confounding in factorial experiments.

14. Explain orthogonality of a design and Response surface design.

$(4 \times 3 = 12$ **Weightage)**

Part-C

Answer any *two* questions. Each question carries 5 weightage.

15. Explain the analysis of a three way classified data.

16. Explain the analysis of variance of a randomised block design has an auxilary variable.

17. What do you mean by BIBD? State and prove parametric relations in BIBD.

18. Explain the analysis of split plot and strip plot design.

(2 × 5 = 10 Weightage)

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