

MANGALORE UNIVERSITY
Department of Statistics

STP555:PRACTICAL VII(BASED ON ALL THEORY STH551, STS552, STS553, STS554)

Hours/Week:6
Credits : 3

I.A.Marks:30
Exam. Marks: 70

Course Outcomes:

- CO1:** Construct complete and partially confounded factorial designs and their analysis.
- CO2:** Able to analyse the experimental designs with missing values.
- CO3:** To solve the problems related to linear programming.
- CO4:** A running knowledge of R in the estimation techniques in the other applied areas.

STH551-DESIGN AND ANALYSIS OF EXPERIMENTS:

1. Linear estimation: Estimability of linear parametric function, Least squares estimators.
2. Testing Linear hypothesis. Analysis of one way and two way classified data.
3. Incomplete Block Design-1: computations of Incidence matrix, C-matrix, Q-matrix, estimability of contrasts, determining estimable and non estimable treatment contrasts. Best estimates and testing linear restrictions
4. Incomplete Block Design-2 : Intra block Analysis.
5. Balanced Incomplete block design (BIBD): Verifying the relationship between the parameters of the design, computation of C-matrix of the design, best estimates.
6. BIBD: Intra block Analysis
7. Analysis of Youden square Design.
8. Analysis of covariance ANCOVA.
9. Analysis of $2^3/2^4$ Factorial Experiment: Yates table, estimation of main effect and interaction effect, testing the significance of factorial effects.
10. Analysis of 3^2 Factorial Experiment.
11. Complete Confounding $2^3/2^4$ and $3^2/3^3$ Factorial Experiment.
12. 2^3 Partial Confounding
13. 3^2 Partial Confounding
14. Missing Plot Techniques