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 blockAnalysis.
5. Balanced Incomplete block design (BIBD): Verifying the relationship between the parameters of the design, computation of C-matrix of the design, bestestimates.
6. BIBD: Intra blockAnalysis
7. Analysis of Youden squareDesign.
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 factorialeffects.
10. Analysis of 3^2 FactorialExperiment.
11. Complete Confounding 2^3/2^4 and 3^2/3^3 FactorialExperiment.
12. 2^3 PartialConfounding
13. 3^2 PartialConfounding
14. Missing PlotTechniques