



MANGALORE UNIVERSITY
Department of Statistics

STP456:PRACTICAL III: PRACTICALS BASED ON STH454

Hours/Week:6
Credits : 3

I.A.Marks:30

Exam. Marks: 70

Course Outcomes:

- CO1: Learn estimation of model parameters ,inference problems in case of simple and multiple linear regression model
- CO2: estimate the model parameters of regression model when some of the basic ideal conditions are violated
- CO3: Learn to select the best subsets of regressors for the model.
- CO4: Learn how to use estimated regression models for prediction.
- CO5: Understand the estimation techniques and inference procedure in case of simultaneous equations model
- CO6: interpretation and critical evaluation of the outcomes of empirical analysis

1. Simple linear regression.
2. Multiple linear regression.
3. Testing the significance of regressors and ANOVA.
4. Restricted least squares estimators and Testing linear restrictions.
5. Residual Analysis
6. Best Linear Unbiased Prediction (BLUP) and confidence interval.
7. Testing for autocorrelation and fitting auto-correlated model.
8. Testing Heteroscedasticity in multiple linear regression model.
9. Recursive residuals and their applications.
10. Feasible generalised least squares estimation.
11. Multicollinearity.
12. Best subset selection based on MSE, R^2 and Mallows C_p -criterion.
13. Ridge regression.
14. Indirect Least squares (ILS)
15. Two stage least squares (2SLS) estimation.