LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

B.Sc. DEGREE EXAMINATION – **STATISTICS**

FIFTH SEMESTER – **APRIL 2016**

ST 5405 - ECONOMETRIC METHODS

Date: 25-04-2016 Dept. No. Max. : 100 Marks

Time: 09:00-12:00

PART – A

Answer ALL the questions **(10x2=20 Marks)**

1. Define Econometrics.
2. Define Dummy variable rule.
3. What is interaction effect?
4. Provide a model with varying slope but same intercept.
5. Define the term "Linear in parameter".
6. Define MAE and MAPE.
7. State the use of Weighted Least Squares regression.
8. Define Autocorrelation.
9. Define Lag variable.
10. State the use of ACF plot.

PART – B

Answer any FIVE questions **(5x8=40 Marks)**

11. Explain any four applications of Econometric models.
12. Define Multicollinearity and provide any one method to detect multicollinearity.
13. Define Homoscadasticity and provide any one method to test for Homoscadasticity.
14. Explain any two use of Residual analysis.
15. i) Define Adjusted R^2 and state its use. ii) Define ACF plot and PACF plot.
16. i) Provide ANOVA test procedure for overall fit of linear model .

    ii) Explain Durbin Watson test procedure.
17. Define Outlier and Explain any two methods to detect outliers.
18. Explain any one procedure for testing normality of error term.

PART – C

Answer any TWO questions **(2x20=40 Marks)**

19. i) Obtain OLS estimator for a k parameter linear regression model.

    ii) State the assumptions of OLS.
20. State and prove Gauss Markov theorem.
21. Explain Box Jenkins method of constructing ARIMA model.
22. Explain Logit model in detail.

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