 LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

**M.A.** DEGREE EXAMINATION - **ECONOMICS**

SECOND SEMESTER – **APRIL 2012**

# EC 2811 - ECONOMETRICS

Date : 24-04-2012 Dept. No. Max. : 100 Marks

Time : 9:00 - 12:00

**Part – A**

**Answer any Five questions in about 75 words each: (5 x 4 = 20)**

1. Define Econometrics.
2. What is the use of a non linear transformation in econometrics?
3. What is Dummy Variable Trap?
4. What is an instrumental variable?
5. Distinguish between extreme and less extreme multi-collinearity.
6. What is meant by simultaneous equation bias?
7. Distinguish between Structural form and reduced form of a model.

**Part – B**

**Answer any Four questions: (4 x 10 =40)**

1. Explain the four non linear transformations commonly used in Econometrics.
2. Derive the two normal equations of a two variable linear model by OLS.
3. How do we deseasonalize a series by dummy variable technique?
4. Derive the GLS estimate.
5. Explain the consequences of heteroscedasticity.
6. Discuss the method of ILS.
7. How do we estimate a distributed lag model by using Koyck’s transformation?

**Part – C**

**Answer any Two questions: (2 x 20 = 40)**

1. Show that OLS estimator is BLUE (use a two variable linear model)
2. Define autocorrelation. How do autocorrelated disturbances lead to violation of the assumption E (u u’) = σ2I. Discuss the methods of detecting autocorrelation.
3. Discuss the identifiability state of the following model (by both structural and reduced form)

y1 = 3y2 – 2x1 + x2 + u1

y2 = y3 + x3 + u2

y3 = y1 – y2 – 2x3 + u3.

1. Derive the 2SLS estimator.

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