LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

B.Sc. DEGREE EXAMINATION – **COMMERCE**

FOURTH SEMESTER – **NOVEMBER 2013**

ST 4207 - ECONOMETRICS

Date : 05/11/2013   Dept. No.   Max. : 100 Marks
Time : 1:00 - 4:00

Section –A

Answer all the questions   (10 x 2 = 20)

1. Write the importance of BLUE.

2. Give any two properties of R^2.

3. State the assumptions of linear regression models.

4. What is mean absolute error?

5. Compare regression analysis and ANOVA.

6. Write any two causes of autocorrelation.

7. Define pure heteroscedasticity.

8. Write the formula for spearman rank correlation test.

9. State the procedure of park test?

10. Define koyck mean log.

Section –B

Answer any five questions   (5 x 8 = 40)

11. Write the short notes on policy making in the goal of econometrics

12. Derive least square estimators for simple linear regression model.

13. State and prove Gauss Markov theorem

14. Find Durbin Watson d-statistic for the following data

    e_t : 0.9, 2.3, -0.9, -3.5, 2.5,4.8, 0.4,0.9, 3.2, -2.7, -1.8

15. Explain the reasons for problem of heteroscedasticity.

16. Describe the consequences of multicollieraity

17. Explain dummy variables.

18. Find the value of R^2 for the following data:

Y	15	7	10	4	6
X1	11	8	3	5	7
X2	13	9	4	7	8

Section – C

Answer any two questions (2 x 20= 40)

19. a) Explain the relationship between economics, mathematical economics and statistics.
    b) Write the limitations of econometrics. (12 + 8)

20. Estimate the equations of Y on X Test the significance of the parameters at 5% level of significance for the following data

X	45	44	67	56	48	50	63	55	44	45	83	24	31
Y	55	63	69	78	58	79	80	76	78	70	56	70	30

21. Test the problem of heteroscedasticity using Goldfeld –Quandt test for the following data

X	2	3	6	8	9	1	2	5	4	3	7	9	8	3	5
Y	3	5	2	6	7	3	8	2	7	9	11	4	9	10	2

22. Fit a linear regression model for the given data by using the dummy variables
    (Bench mark category = MBA)

Aptitude Score	5	6	8	12	4	10	7	11	13	9
Education qualification	MSc	M.Com	M.Com	MSc	MBA	MSc	M.Com	MBA	MSc	M.Com

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