LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

M.A. DEGREE EXAMINATION – **ECONOMICS**

SECOND SEMESTER – **APRIL 2022**

PEC 2504 – ECONOMETRICS

Date: 22-06-2022 Dept. No. Max. : 100 Marks
Time: 09:00 AM - 12:00 NOON

PART–A

Answer any FIVE questions in about 75 words each **(5x4=20)**

1. What is autocorrelation?
2. Distinguish between distributed-lag and auto-regressive models.
3. What is regression through the origin?
4. Define Econometrics.
5. Write a note on full information maximum likelihood method.
6. What is the significance of r^2? How should it be interpreted?
7. How is the PRF derived geometrically?

PART–B

Answer any FOUR questions in about 300 words each **(4x10=40)**

8. State and prove the Gauss-Markov Theorem.
9. Suppose the true model is $Y_i = \beta_1 + \beta_2 X_{2i} + \beta_3 X_{3i}$. But a relevant variable X_3 is omitted in the model as $Y_i = \beta_1 + \beta_2 X_{2i}$. What are the consequences of omitting the relevant variable X_3?
10. What is Heteroscedasticity? Explain what happens to the OLS estimator and its variance if we introduce Heteroscedasticity?
11. Elucidate the modern application of regression analysis in the field of economics.
12. Explain the procedure for estimating a just identified equation using the method of Indirect Least Squares.
13. Write the Multiple Regression equation with two independent variables and explain how to interpret the coefficients.

14. How should we apply regression on Standardized variables? Explain with a suitable example.

PART–C

Answer any TWO questions in about 1200 words each (2x20=40)

15. Explain the methodology of Econometrics with an economic example.
16. Explain the ANOVA model with your own example.
17. Enumerate the identification problem using the demand-supply model.
18. Explain the Koyck's approach to distributed-lag models.

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