LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

B.A. DEGREE EXAMINATION – **ECONOMICS**

FIFTH SEMESTER – **NOVEMBER 2022**

UEC 5504 – BASIC ECONOMETRICS

Date: 28-11-2022 Dept. No. Max. : 100 Marks
Time: 09:00 AM - 12:00 NOON

PART – A

Answer any FIVE questions in about 75 words each. **(5 × 4 =20 Marks)**

1. Differentiate between econometrics and economic theory.
2. State and explain random variable.
3. What is Probability Density Function?
4. Distinguish between estimation and estimator.
5. What is linear regression model?
6. Differentiate between variance and standard error of OLS estimator.
7. Define co-efficient of determination.

PART – B

Answer any FOUR questions in about 250 words each. **(4 ×10 =40 Marks)**

8. Examine the nature and scope of econometrics.
9. State and prove the conditional probability.
10. Enumerate the Central limit theorem
11. Illustrate the confidence interval approach to hypothesis testing.
12. Compare simple regression model with multiple regression model with example.
13. Differentiate between PRF and SRF.
14. Derive the normal equations to estimate the parameters of the model $Y_t = \alpha + \beta X_t + \mu_t$.

PART – C

Answer any TWO questions in about 900 words each. **(2 × 20 =40 Marks)**

15. Discuss the relation between mathematical economics, statistics and econometircs. Also explain about the division of econometrics.
16. Distinguish between point estimation from interval estimation and examine the properties of good estimator.
17. Describe the reason for inclusion of disturbance term in regression model and analyse the assumptions of linear stochastic regression model.
18. From the following data, estimate parameters of the SLR model $Y_t = \alpha + \beta X_t + \mu_t$, S.E.($\beta$) and also compute R^2.

X:	50	52	55	59	5	58	62	65	68	70
Y:	6	7	8	10	8	9	10	9	11	10
