LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034 **B.A.** DEGREE EXAMINATION – **ECONOMICS** FIFTH SEMESTER - APRIL 2022 **UEC 5504 – BASIC ECONOMETRICS** Date: 28-06-2022 Dept. No. Max.: 100 Marks Time: 01:00 PM - 04:00 PM PART A Answer any FIVE questions in about 75 words each. (5 x 4 = 20 marks)1. Define Econometrics. What are the types of data used in econometric analysis? 2. State the probability density function. 3. Distinguish between population parameter and sample statistics. 4. What is meant by auto correlation? 5. Write a short note on \mathbb{R}^{2} . 6. Differentiate between simple linear and multiple linear regression. 7. PART B Answer any FOUR questions in about 250 words each. $(4 \times 10 = 40 \text{ marks})$ 8. Explain the divisions of econometrics. 9. Derive PDF and CDF in tossing 3 coins. 10. State and prove conditional probability. 11. Write a note on Central Limit theorem.

- 12. Explain the steps involved in hypothesis testing.
- 13. Explain the properties of good estimator.
- 14. Write a note on the significance of the error term.

PART C

Answer any TWO of the following questions in about 900 words each. $(2 \times 20 = 40 \text{ marks})$

- 15. Discuss the methodology of econometrics.
- 16. Elaborate the assumptions of classical linear regression model.
- 17. Derive the normal equations to estimate the sample estimators for a two variable model.
- 18. From the following data calculate (i) β_1 and β_2 (ii) calculate r^2 .

X:	95	85	80	70	60
Y:	85	95	70	65	70

&&&&&&&&&&&&