

**STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086**  
**(For Candidates admitted during the academic year 2019-2020 and thereafter)**

**SUBJECT CODE: 19EC/PC/EC34**  
**M.A. DEGREE EXAMINATION NOVEMBER 2023**  
**BRANCH III – ECONOMICS**  
**THIRD SEMESTER**

**COURSE : CORE**  
**PAPER : ECONOMETRIC METHODS I**  
**TIME : 3 HOURS**

**MAX.MARKS: 100**

**SECTION – A**

**I. ANSWER ANY FIVE QUESTIONS. EACH ANSWER NOT TO EXCEED 300 WORDS. (5 X 8 = 40)**

1. Define Econometrics and discuss its meaning.
2. Discuss the assumptions of Linear regression model.
3. Derive  $R^2$ .
4. Discuss the various functional forms of Regression model.
5. Bring out the reasons for including random term in a linear regression model.
6. Discuss Durbin Watson d test to detect Autocorrelation.
7. Discuss the uses of Dummy variable.

**SECTION – B**

**II. ANSWER ANY THREE QUESTIONS. EACH ANSWER SHOULD NOT EXCEED 1200 WORDS. (3 X 20 = 60)**

8. Discuss the Methodology of Econometrics.
9. Estimate the regression parameters.
10. Derive Gauss Markov theorem for a two variable model.
11. What are the various tests of significance used for a two variable model?
12.  $X_1 ; 1 \ 2 \ 3 \ 4 \ 5$   $X_2 ; 2 \ 1 \ 5 \ 4 \ 3$   $X_3 ; 3 \ 1 \ 4 \ 5 \ 2$ . Construct the regression equation of  $X_1$  on  $X_2$  and  $X_3$ .

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