DATE : 31-10-2018

ST. JOSEPH'S COLLEGE (AUTONOMOUS), BANGALORE-27
MA ECONOMICS- III SEMESTER
SEMESTER EXAMINATION: OCTOBER 2018
EC9416: BASIC ECONOMETRICS

Time: 2.5 Hours **Maximum Marks-70**

This question paper has 1 printed page and 3 parts

Part A. Answer any TEN of the following: **2 X 10=20**

1. Explain dummy variable trap.
2. Write a note on specification bias in a regression model.
3. What are the consequences of hetero-scedasticity in OLS estimation?
4. Explain about the precision of the slope estimate, $\check{\beta}_2$, in a bi-variate regression analysis with respect to degrees of freedom and variability in independent variable.
5. Differentiate coefficient of determination and coefficient of correlation in terms of their properties.
6. List out the methodology of econometrics.
7. Explain the consequences of overfitting and underfitting a regression model.
8. List CNLRM assumptions precisely.
9. Differentiate the terms such as parameter, estimator and estimate in the econometric analysis.
10. Write a note on piece-wise regression model.
11. Briefly explain the effect of rescaling of variables Y_i dependent variable and X_i independent variables, upon the estimates of slope parameter in a bivariate model.
12. Explain size of test in the context of hypothesis testing.

Part B. Answer any TWO of the following: **10 X 2 = 20**

13. State the statistical properties of regression line estimated through OLS method.
14. Explain multi-collinearity in multiple regression analysis, its consequences, detection and remedial measures.
15. Give an account of different functional forms of regression models applicable under CLRM assumption of linearity in parameters.

Part C. Answer any TWO of the following: **15 X 2 = 30**

16. Explain autocorrelation, its reasons, consequences and various tests for detecting it.
17. State the Gauss-Markov theorem and prove BLUE property of $\check{\beta}_2$, the slope estimator, in the context of a bi-variate regression analysis.
18. For the following data on consumption (Y) and income (X), fit an econometric model Yi = $\beta_1 + \beta_2 X_i + U_i$ and estimate β_1, β_2, σ^2, var(β_1), var(β_2), se(β_1), se(β_2) and find confidence interval of mean prediction and individual prediction for X=250, at 5% level of significance ($t_{\alpha/2}$ = 2.30).

Y	129	137	141	149	157	168	179	194	200
X	203	213	221	240	260	284	312	340	360

EC9416-C-18