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Name.....

Reg. No.....

THIRD SEMESTER M.A. DEGREE EXAMINATION, DECEMBER 2016

(CCSS)

Economics

ECO 3C 10—ECONOMETRICS

(2013 Admissions)

Time : Three Hours

Maximum : 80 Marks

Section I

Answer all questions.

Each question carries 1 mark.

1. For solving exactly identified equation we use ——— method.
 - (a) Indirect Least Square.
 - (b) Ordinary Least Square.
 - (c) Two Stage Least Square.
 - (d) Any of the above.
2. The problem of ——— results in Dummy Variable Trap.
 - (a) Heteroscedasticity.
 - (b) Auto-correlation.
 - (c) Multicollinearity.
 - (d) Instrumental Variables.
3. The regression model $\log Y = \log A + B \log X + u$ is a case of :
 - (a) Lin-log model.
 - (b) Log-log model.
 - (c) Log-lin model.
 - (d) Reciprocal log model.
4. Models involving lagged values of the dependent variable as explanatory variables are called :
 - (a) Distributed lag models.
 - (b) Auto-regressive models.
 - (c) Reciprocal models.
 - (d) MA model.
5. Frisch's Confluence analysis is used to detect :
 - (a) Heteroscedasticity.
 - (b) Errors in Variables.
 - (c) Multicollinearity.
 - (d) Autocorrelation.
6. Correlation between the explanatory variables in a regression model is known as :
 - (a) Heteroscedaticy.
 - (b) Multicollinearity.
 - (c) Autocorrelation.
 - (d) Simultaneous Equation Bias.

Turn over

7. Dummy variable is also known as :
- (a) Qualitative Variable. (b) Quantitative variable.
(c) Pre-determined variable. (d) None of the above.
8. A system where dependent variables are functions of independent and other dependent variables in the model is called :
- (a) Reduced Form system. (b) Structural system.
(c) Deterministic system. (d) None of the above.
9. Statistical criteria is also known as :
- (a) First order test. (b) Second order test.
(c) Third order test. (d) None of the above.
10. Which among the following is not an assumption for the application of Ordinary Least Squares ?
- (a) Non-zero mean value of the random term.
(b) No correlation among the explanatory variables.
(c) Homoscedasticity.
(d) No correlation among the random terms.

(10 × 1 = 10 marks)

Section II

*Answer any **eight** questions.*

Each question carries 5 marks.

11. Interpret the regression result of demand for tea (D) on price of tea (P) (both coefficients are statistically significant and $R^2 = 0.95$) :
- $$D = 25 + 0.50 P + u.$$
12. What is coefficient of determination and explain its significance in regression ?
13. Explain Simultaneous Equation Bias and prove it using an example.
14. Discuss how Durbin-Watson d -statistic is used to understand the problem of Autocorrelation.
15. Elaborate the concept of Dynamic Econometric Models and state the difference between Autoregressive and Distributed Lag Models.
16. What do you mean by Identification and explain the formal rules of identification ?
17. Discuss Weighted Least Square as a solution for Heteroscedasticity.
18. What is multicollinearity and explain the consequences of Multicollinearity.

19. Discuss Indirect Least Square method as a solution to Simultaneous Equation Bias.
20. State and explain the steps involved in the methodology of econometric research.
21. Discuss the application of ANOVA techniques in regression.
22. How will you interpret the results of a dummy variable regression model ?

(8 × 5 = 40 marks)

Section III

Answer any two questions.

Each question carries 15 marks.

23. State and prove the Gauss-Markov theorem.
24. Discuss Almon's scheme of polynomial lag.
25. Explain 2SLS method as a solution to simultaneous equation bias.
26. Estimate Consumption function from the following data :

Consumption :	10	13	23	26	45	12	20
Income :	23	25	34	35	60	34	36

(2 × 15 = 30 marks)