Name

II Semester M.A. Degree (CBSS – Reg./Suppl./Imp.) Examination, April 2020
(2014 Admission Onwards)
ECONOMICS/APPLIED ECONOMICS/DEVELOPMENT ECONOMICS
ECO 2C09 : Basic Econometrics

Time : 3 Hours Max. Marks : 6

PART – A

(Answer **all** the **eight** questions in Part – A. **Each** question carries ½ mark.)

1. Which among the following is not used for detecting autocorrelation ?

A) BG Test
B) Durbin Watson d
C) BPG Test
D) Runs Test

2. When all the equations are exactly identified, one can use the method of

A) ILS
B) OLS
C) GLS
D) All the above

3. A confidence interval consists of

A) A confidence level
B) A statistic
C) A margin of error
D) All the above

4. Choose the correct pair :

A) Chow test – Autocorrelation
B) Breusch-Godfrey test – Residual normality
C) Goldfeld-Quandt test – Heteroscedasticity
D) Jarque-Bera test – Structural change

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5. In the econometric model, $Y = \alpha + \beta X$, β indicates

A) Lag
B) Intercept
C) Slope
D) Error

6. The mean value of the estimate is the same as its true value, the property is

A) Linearity
B) Unbiasedness
C) Consistency
D) Efficiency

7. OLS regression model must be linear in

A) Parameters
B) Variables
C) Both A) and B)
D) None

8. Which among the following is not a distribution free test ?

A) Kruskal-Wallis test
B) Student's t test
C) Fisher-Irwin test
D) Wilcoxon test

(8×½=4)

PART – B

(Answer **any eight** questions in Part **B**. **Each** question carries **2** marks. No answer should exceed **one** page.)

9. Define a random variable.

10. What is meant by bias in regression ?

11. Define econometrics.

12. What is Breusch-Pagan test ?

13. Point out the rank condition of identification.

14. What do you mean by forecasting ?

15. Explain the significance of error term in regression.

16. OLS estimator is not appropriate in a simultaneous equation. Why?

17. What is cross-sectional data ?

18. Interpret the coefficients of linear regression model : $y_i = \alpha + \beta x_i + u_i$.

19. Prepare a short note on Gauss-Markov Theorem. **(8×2=16)**

PART – C

(Answer **any four** questions in Part **C**. **Each** question carries **5** marks. No answer should exceed **two** and **half** pages.)

20. Explain the steps involved in the White's test for heteroscedasticity.

21. Prepare a note on 2SLS.

22. Mathematically derive coefficients using OLS method for the regression function : $y_i = \beta_1 + \beta_2 x_i + u_i$.

23. Examine the meaning and properties of Indirect Least Squares.

24. Explain analysis of variance in regression.

25. Explain the remedies for the problem of multicollinearity. **(4×5=20)**

PART – D

(Answer **any two** questions in Part **D**. **Each** question carries **10** marks. No answer should exceed **six** pages.)

26. Explain the methodology of Econometrics.

27. State and prove the properties of OLS regression estimators.

28. Estimate regression equations Y on X and X on Y using the following sample data of a two variable regression model :

$\sum X_i = 60, \sum Y_i = 120, \sum X_i^2 = 540, \sum Y_i^2 = 1200, \sum X_i Y_i = 620$, Sample size = 30.

29. Discuss in detail the problem of autocorrelation, its consequences in the presence of OLS estimation and the methods of detection. **(2×10=20)**