Reg. No. : ....

Name : ....

Fourth Semester M.A. Degree Examination, September 2019

Economics

Optional — II

EC 244 (E) : ECONOMETRICS

(2013 Admission onwards)

Time : 3 Hours

Max. Marks : 75

PART – A

Answer **all** questions from this part. Explain in a sentence or **two** :

1. Gauss-Markov Theorem

2. Co-efficient of determination

3. Homoscedasticity

4. Specification Error

5. Dummy variable trap

6. Structural stability

7. Instrumental variable

8. Lags in Economics

9. Simultaneous equation model

10. Zero restrictions.

(10 × 1 = 10 Marks)

PART – B

Answer **any seven** questions. Each answer should not exceed 500 words.

11. Distinguish between a mathematical model and an econometric model.

12. Distinguish between R^2 and Adjusted R^2 Show that $R^2 > \overline{R}^2$.

13. What is heteroscedasticity? Briefly outline one test for heteroscedasticity.

14. What is multicollinearity? Explain remedial measures for multi collinearity

15. Do you agree that dummy variable technique is alternative to the chow-test to know the structural stability of a regression model?

16. Explain dummy variable, describe their uses in seasonal analysis.

17. What are the causes of errors in variables?

18. Explain the need for simultaneous equation model in econometric analysis.

19. Distinguish a reduced form model from a structural model.

20. What are k-class estimators?

$(7 \times 5 = 35 \text{ Marks})$

PART – C

Answer **any three** questions. Each answer should not exceed 1200 words.

21. Explain in detail the methodology of econometric research.

22. State and prove Gauss-Markov theorem.

23. Discuss Nerlov's lag model and compare it with Almon's scheme of polynomial lag.

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24. Write the reduced form of the following structural d equation

$$c_t = a_0 + a_1 y_t + u_t$$
$$l_t = b_0 + b_1 y_t + b_2 y_{t-1} + v_t$$
$$y_t = c_t + l_t + G_t$$

25. Examine the identifiably of the following simultaneous equation model

$$y_1 = 3y_2 - 2x_1 + x_2 + u_1$$
$$y_2 = y_3 + x_3 + \mu_2$$
$$y_3 = y_1 - y_2 - 2x_3 + u_3$$

(3 × 10 = 30 Marks)

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