

FOURTH SEMESTER M.A. DEGREE EXAMINATION, APRIL 2022
(Regular/Improvement/Supplementary)**ECONOMICS**
FECO4E02 – ADVANCED ECONOMETRICS**Time: 3 Hours****Maximum Weightage: 30****Part A: Multiple choice questions. Answer *all* questions. Each carries $\frac{1}{5}$ weightage.**

1. Tobit model is also known as
 - (a) Binary model
 - (b) Threshold model
 - (c) Normit model
 - (d) Censored regression model
2. In a LPM, $E(y_i/x_i)$ must lie between
 - (a) -1 and $+1$
 - (b) 0 and 1
 - (c) -1 and 0
 - (d) None of the above
3. In logit/probit models the regressand is a
 - (a) Quantitative variable
 - (b) Qualitative variable
 - (c) Random variable
 - (d) None of the above
4. Endogenous lagged variables are in
 - (a) Koyck model
 - (b) Almon's polynomial model
 - (c) Adaptive expectation model
 - (d) None of the above
5. The method used to remove the correlation between y_{t-1} and error term in Koyck Adaptive expectation model is
 - (a) Weighted least square method
 - (b) Dummy variable model
 - (c) Instrumental variables method
 - (d) None of these
6. A distributed lagged model has the effect of
 - (a) Reducing the number of parameters to be estimated
 - (b) Increasing the number of parameters to be estimated by one
 - (c) Increasing the number of parameters to be estimated
 - (d) Doubling the number of parameters to be estimated

(P.T.O.)

7. Least squares dummy variable model is associated with
- (a) Random effects model
 - (b) Fixed effects model
 - (c) Error components model
 - (d) All of the above
8. The circular relationship between X and Y makes the estimates
- (a) Biased
 - (b) Biased and inefficient
 - (c) Biased and inconsistent
 - (d) Biased and insufficient
9. If the equation is over identified, the appropriate method to be used is
- (a) ILS
 - (b) 2 SLS
 - (c) 3 SLS
 - (d) FIML
10. In $(K - M) \geq (G - 1)$, M – denotes
- (a) Total number of equations
 - (b) Total number of endogenous variables
 - (c) Total number of exogenous variables
 - (d) None of the above
11. Strong exogeneity is
- (a) Weak exogeneity plus efficiency
 - (b) Weak exogeneity plus super exogeneity
 - (c) Weak exogeneity plus Granger causality
 - (d) Granger causality minus weak exogeneity
12. The Jarque – Bera test is a
- (a) Model specification test
 - (b) Residential normality test
 - (c) Test of unbiasedness of estimators
 - (d) Test for goodness of fit of the model
13. Dicky Fuller test is based on
- (a) t distribution
 - (b) F – distribution
 - (c) Tau distribution
 - (d) Chi square distribution
14. One of the features of VAR model is
- (a) All variables are regarded as endogenous
 - (b) All variables are regarded as exogenous
 - (c) All variables are measured at a point of time
 - (d) All variables are measured over a period of time

15. The MA part in the Box Jenkins methodology cannot be avoided because
- (a) It will remove autocorrelation and produce a stationary series
 - (b) It will remove trend and produce a stationary series
 - (c) It will not remove trend and produce a stationary series
 - (d) None of these

(15 x 1/5 = 3 weightage)

Part B: Answer any *five* questions. Each carries one weightage.

- 16. Distinguish between a single equation model and a simultaneous equation model with suitable examples.
- 17. Give an expression for ARMA process.
- 18. Explain a recursive model.
- 19. How will you check the instrument validity?
- 20. What do you mean by spurious regression?
- 21. Write a note on error correction models.
- 22. Explain the reasons for lags in economics.
- 23. What are features of logit model?

(5 x 1 = 5 weightage)

Part C: Answer any *seven* questions. Each carries two weightage.

- 24. What are linear probability models and what is their need?
- 25. Explain 2 stage least square method.
- 26. Distinguish between fixed effects and random effects models?
- 27. Explain the uses of panel data in research.
- 28. Define an instrumental variable? Give an example.
- 29. What are the rules for identification?
- 30. Show that random walk model with drift is non stationary after first differencing.
- 31. Suggest a test for cointegration.
- 32. State general IV model.
- 33. Explain the essence of ARCH models.

(7 x 2 = 14 weightage)

(P.T.O.)

Part D: Answer any *two* questions. Each carries four weightage.

34. What do you mean by distributed lag model? Describe Almon's approach to distributed log model.
35. Explain the methods of estimating Auto correlation function.
36. What is identification? If an equation is exactly identified show that ILS and 2 SLS give identical results.
37. Explain the various approaches to econometric forecasting.

(2 x 4= 8 weightage)