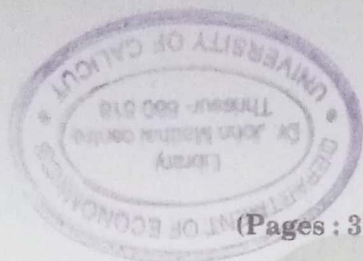


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Name.....

Reg. No.....

FOURTH SEMESTER P.G. DEGREE EXAMINATION, APRIL 2022

(CCSS)

Economics

ECO 4E 04—APPLIED ECONOMETRICS

(2019 Admissions)

Time : Three Hours

Maximum : 80 Marks

Part A (Multiple Choice Questions)

Answer **all** questions.

Each question carries 1 mark.

1. Linearity in Econometrics means _____.
 - (a) Linearity in parameters.
 - (b) Linearity in variables.
 - (c) Linearity with respect to variables and parameters.
 - (d) None of these.
2. The probability distribution underlying the probit model is :
 - (a) Normal distribution.
 - (b) Logistic distribution.
 - (c) χ^2 distribution.
 - (d) F distribution.
3. 'When latent variables take negative value in principle we represent them as zeros since we do not observe this.' In this case the most appropriate modeling procedure would be :
 - (a) Probit.
 - (b) Logit.
 - (c) Tobit.
 - (d) Poisson regression model.
4. A time series data whose mean, variance and autocovariance are time invariant is :
 - (a) Stationary series.
 - (b) Non-stationary series.
 - (c) Purely random series.
 - (d) Random walk.

Turn over

5. Testing for cointegration is given by :
- (a) Dickey-Fuller test. (b) Engle-Granger test.
(c) Error correction mechanism. (d) F-test.
6. The asymptotic distribution of the Philips-Peron test is the same as that of :
- (a) Augmented Dickey-Fuller test. (b) Unit root test.
(c) Engle-Granger test. (d) Error correction mechanism.
7. Box-Jenkins methodology involves :
- (a) Detection of stationarity. (b) Detection of seasonality.
(c) Detection of autocorrelation. (d) All of the above.
8. When Y depends on current and previous time period error term, it is a :
- (a) Single equation model. (b) AR(1) model.
(c) MA(1) model. (d) ARMA(1,1) model.
9. In panel data :
- (a) The same cross-sectional units are surveyed over time.
(b) Different cross-sectional units are surveyed over time.
(c) Different cross-sectional units are surveyed at a point in time.
(d) Cross-sectional units are surveyed in detail.
10. Hausman test statistic follows :
- (a) Normal distribution. (b) t -distribution.
(c) χ^2 distribution. (d) F distribution.

(10 × 1 = 10 marks)

Part B (Very Short Answer Questions)

Answer any **five** questions.
Each question carries 2 marks.

11. Write a short note on linear probability model.
12. What are the features of Logit model ?
13. Define unit root stochastic process.
14. Distinguish between trend stationary and difference stationary processes.
15. Explain ARMA model.

16. Define Cointegration.
17. Explain the nature of error component.
18. What are the features of a simultaneous equation model ?

(5 × 2 = 10 marks)

Part C (Short Essay Questions)

Answer any **eight** questions.

Each question carries 5 marks.

19. Briefly discuss about the limitations of panel data regression.
20. Explain linear probability model.
21. Discuss the limitations of qualitative response models.
22. Discuss the features of time series data.
23. Explain the augmented Dickey-Fuller test.
24. Distinguish between single equation and simultaneous equation regression models.
25. Explain Philip Perron test of stationarity.
26. Discuss the random effects approach.
27. What is autocorrelation function ?
28. What are the limitations of fixed effects model ?
29. How we can transform non-stationary process into stationary process ?
30. What is moving average model ? Explain its significance.

(8 × 5 = 40 marks)

Part D (Essay Type Questions)

Answer any **two** questions.

Each question carries 10 marks.

31. Write an essay on qualitative response models.
32. Explain the Box-Jenkins methodology.
33. Explain the unit root test.
34. Write a note on ARIMA model and explain its significance.

(2 × 10 = 20 marks)