

21P327

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Name:

Reg. No:

THIRD SEMESTER M.A DEGREE EXAMINATION, NOVEMBER 2022

(CBCSS - PG)

(Regular/Supplementary/Improvement)

CC19P ECO3 C11 - BASIC ECONOMETRICS

(Economics)

(2019 Admission onwards)

Time: 3 Hours

Maximum: 30 Weightage

Part A

Answer *all* questions. Each question carries 1/5 weightage.

1. The dependent variable in regression analysis is assumed to be:
(a) Non-stochastic (b) Known values (c) Constant (d) Stochastic
2. The first stage of Methodology of Econometric Research is
(a) Estimation Stage (b) Specification Stage
(c) Evaluation Stage (d) None of the above
3. An estimator is unbiased if
(a) Its expected value is the true value of the parameter.
(b) Its expected value is not the true value of the parameter.
(c) Its unexpected value is the true value of the parameter
(d) None of the above
4. Accepting a false hypothesis results in
(a) Type I error (b) Type II error (c) Confidence value (d) Confidence limit
5. The adjusted R^2 lies between
(a) $-\infty$ and $+\infty$ (b) -1 and $+1$ (c) 0 and 1 (d) -1 and 0
6. A hypothesis such as $H_0: \beta_2 = \beta_3 = 0$, can be tested using
(a) t-test (b) Chi-square test (c) ANOVA test (d) F-test
7. Multicollinearity can be detected if the regression function has
(a) Higher R^2 with all co-efficients having high t ratios
(b) May not have R^2 but all co-efficients having high t ratios
(c) High R^2 with very few or no co-efficient having high t ratios
(d) Low R^2 with almost all co-efficients having low t ratios
8. Heteroscedasticity is more likely a problem of
(a) Cross-sectional data (b) Time series data
(c) Pooled data (d) All of the above

9. For a regression through the origin, the intercept is equal to
 (a) 0 (b) 2 (c) 1 (d) -1
10. In a semi-log model of type $\log Y_i = \beta X_i$ the co-efficient β stands for the
 (a) Slope (b) Elasticity
 (c) Slope and Elasticity (d) Growth rate
11. ANCOVA models include regressors that are
 (a) Only quantitative variables
 (b) Only qualitative variables
 (c) Only categorical variables
 (d) Both qualitative and quantitative variables
12. The process of removing the seasonal component from a time series sample data is known as
 (a) Seasonalization (b) Seasonality
 (c) Deseasonalization (d) Seasonal trend testing
13. Which of the following is used to detect specification errors?
 (a) The Park test (b) Chow test
 (c) Ramsey's RESET test (d) The Runs test.
14. A data point that is disproportionately distant from the bulk of the values of a regressor(s) is
 (a) Leverage point (b) Outlier (c) Influence point (d) Missing data
15. In linear probability model, the
 (a) regressand is dichotomous (b) regressand is ordinal variable
 (c) regressor is dichotomous (d) regressors is ordinal variable

Part B (Very Short Answer Questions)

Answer any *five* questions. Each question carries 1 weightage.

16. Give an example of an econometric model.
17. Define stochastic error term.
18. Explain the assumption of multicollinearity in regression model
19. Distinguish between null hypothesis and alternative hypothesis
20. Define partial regression coefficients.
21. What is Run's test?
22. Define deseasonalization.
23. Write a note on RESET.

(5 × 1 = 5 Weightage)

Part C (Short Answer Questions)

Answer any *seven* questions. Each question carries 2 weightage.

24. Explain the different steps involved in the methodology of econometric analysis.
25. Explain the coefficient of determination of two variable regression models.
26. Explain the maximum likelihood method of estimation.
27. Bring out the relation between R^2 and adjusted R^2 .
28. Explain the analysis of variance approach to testing the overall significance of an observed multiple regression.
29. Explain the matrix approach to k-variable regression models.
30. Explain the methods of detection and remedial measures of multicollinearity problem.
31. Explain regression through origin
32. Explain the lin-log model of regression analysis
33. How can we detect the presence of different types of model specification errors in econometric analysis?

(7 × 2 = 14 Weightage)

Part D (Essay questions)

Answer any *two* questions. Each question carries 4 weightage.

34. Explain the BLUE properties of OLS estimators.
35. Define heteroscedasticity. Explain the causes, consequences, detection and remedial measures of heteroscedasticity.
36. Explain dummy variables and the applications of dummy variables.
37. Explain the qualitative response regression models.

(2 × 4 = 8 Weightage)
