23P327 (Pages: 3) Name: ……..

Reg. No: ……..

THIRD SEMESTER M.A. DEGREE EXAMINATION, NOVEMBER 2024

(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. In a regression analysis, the values are fixed for the
   (a) Explanatory variables (b) All variables
   (c) Dependent variables (d) None of the variables
2. Econometrics is
   (a) Statistical analysis of economic relationship
   (b) Mathematical analysis of economic relationship
   (c) Both a and b
   (d) None of the above
3. The least square estimators are
   (a) Sample estimators (b) Point estimators
   (c) Population estimators (d) Interval estimators
4. Unbiasedness, efficiency and consistency are … properties of estimators?
   (a) Sociological (b) Statistical (c) Mathematical (d) All of the above
5. If errors are not normally distributed, then the OLS estimators are
   (a) Biased (b) Inefficient
   (c) Non-linear (d) Still BLUE but t and F – tests are invalid
6. The level of significance is the:
   (a) maximum allowable probability of Type II error
   (b) maximum allowable probability of Type I error
   (c) same as the confidence coefficient
   (d) same as the p-value
7. As the number of explanatory variables increases in a regression model, the R^2 value
   (a) Definitely decrease (b) Definitely increase
   (c) Definitely will not decrease (d) Definitely will not increase

8. 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

9. To test for structural break in a time series data, we use

(a) t-test (b) F-test (c) MWD test (d) Chow test

10. In the case Heteroscedasticity the Variance of u is:

(a) Constant (b) Zero (c) Not Constant (d) None of the above

11. In a semi-log model of type log Yi = βXi the co-efficient β stands for the

(a) Slope (b) Elasticity

(c) Slope and Elasticity (d) Growth rate

12. If a quantitative variable has 'm' categories, we can introduce

(a) Only 'm-1' dummy variables (b) Only 'm+1' dummy variables

(c) Only 'm' dummy variables (d) Only 'm×1' dummy variables

13. Coefficient of overfitted model would have

(a) Biased coefficient (b) Inconsistent coefficient

(c) Inefficient coefficient (d) All of the above

14. An observation with a large residual is

(a) Leverage point (b) Outlier (c) Influence point (d) Missing data

15. In LPM, the error term follows.

(a) normal distribution (b) Chi-square distribution

(c) Bernoulli probability distribution (d) Logistic distribution

(15 × 1/5 = 3 Weightage)

Part B (Very Short Answer Questions)

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

16. Bring out the uses of econometric analysis.
17. Define SRF.
18. Bring out the difference between Y and $\hat{Y}$.
19. Distinguish between type I and type II error.
20. Define multiple regression models.
21. Define adjusted R^2.
22. Define tolerance.
23. Define log-lin model

(5 × 1 = 5 Weightage)

Part C (Short Answer Questions)

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

24. Bring out the difference between a mathematical model and an econometric model.
25. Explain the measure of goodness of fit of regression coefficients.
26. Explain the maximum likelihood method of estimation.
27. Explain the procedure for testing the equality of two regression coefficients.
28. Explain the matrix approach to estimation of regression analysis.
29. Explain the remedial measures for solving the problem of autocorrelation.
30. Explain regression through origin.
31. Explain the relevance of ANOVA in regression analysis.
32. Explain dummy variables and seasonal analysis.
33. Explain errors of measurement in econometric models.

(7 × 2 = 14 Weightage)

Part D (Essay questions)

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

34. State and prove Guass Markov theorem.
35. Explain the nature, causes, detection and remedial measures of heteroscedasticity.
36. Explain the tests to detect the specification errors in econometric analysis?
37. Explain the qualitative response regression models.

(2 × 4 = 8 Weightage)

****