

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)
BA DEGREE EXAMINATION DECEMBER 2024
(Fifth Semester)
Branch - ECONOMICS
ECONOMETRICS

Time: Three Hours

Maximum: 50 Marks

SECTION-A (5 Marks)

Answer ALL questions

ALL questions carry EQUAL marks

(5 x 1 = 5)

1. Economics is pioneered by _____
(i) Goldberger (ii) Samuelson
(iii) Ragnar Frisch (iv) Jan Tinbergen
2. $E(U_i U_j) = 0$, then _____
(i) Autocorrelation (ii) Multicollinearity
(iii) Non – Autocorrelation (iv) Heteroscedasticity
3. One of the consequences of perfect multicollinearity is the standard error of the estimates are _____
(i) Small (ii) Large
(iii) Zero (iv) Infinitely large
4. If a qualitative variable has m categories dummies to introduce must be _____
(i) M + 1 (ii) M + 2
(iii) M – 1 (iv) M – 2
5. If the dependent (endogenous) variables are expressed as a function of the exogenous variables alone, then the model is called _____
(i) Structural model (ii) Reduced form model
(iii) Recursive model (iv) Endogenous model

SECTION - B (15 Marks)

Answer ALL Questions

ALL Questions Carry EQUAL Marks

(5 x 3 = 15)

6. (a) Explain the Sample Regression Function with suitable example.
OR
(b) Show the main divisions of econometrics.
7. (a) Bring out the assumptions of U_i .
OR
(b) Prove that $R^2 = r^2$.
8. (a) State the consequences of autocorrelation.
OR
(b) Describe the difference between heteroscedasticity and homoscedasticity.
9. (a) Produce the uses of dummy variables.
OR
(b) Summarize the uses of double log model in economic analysis.
10. (a) Outline the reasons for the inclusion of lag variable in the model.
OR
(b) Narrate the consequences of simultaneous equation bias.

Cont...

SECTION -C (30 Marks)

Answer **ALL** questions

ALL questions carry **EQUAL** Marks (5 x 6 = 30)

11. (a) Examine the nature and scope of econometrics.
OR
(b) Justify the important goals of econometrics.
12. (a) Outline the principle and assumptions of method of least squares.
OR
(b) Derive the formula of $\widehat{\beta}_0$, $\widehat{\beta}_1$ and $\widehat{\beta}_2$ with OLS method for the model $Y_i = \beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + u_i$.
13. (a) Identify remedial measures to overcome the heteroscedasticity.
OR
(b) Elucidate the causes for autocorrelation.
14. (a) Summarize the semi log model with suitable example.
OR
(b) Highlight the regression on one quantitative variable and one qualitative variable with two categories.
15. (a) Print out the Koyck approach to distributed lag models.
OR
(b) Trace the rules for identification with suitable example.

Z-Z-Z

END