22ECU515

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BA DEGREE EXAMINATION MAY 2025
(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 Which statistical concept is widely used in econometrics?
(i) Regression analysis (ii) Standard deviation
(iii) Mean deviation (iv) Quartiles

2 In a three-variable regression model, which term represents interaction effects?
(i) Constant term (ii) Interaction term
(iii) Error term (iv) Slope coefficient

3 Durbin-Watson test value close to 2 indicate
(i) Strong positive autocorrelation (ii) Strong negative autocorrelation
(iii) No autocorrelation (iv) Multicollinearity

4 How many dummy variables are needed for a qualitative variable with three categories?
(i) 1 (ii) 2
(iii) 3 (iv) 4

5 Which method is commonly used for estimating over-identified equations in SEM?
(i) Ordinary Least Squares (OLS) (ii) Indirect Least Squares (ILS)
(iii) Maximum Likelihood Estimation (iv) Principal Component Analysis

SECTION - B (15 Marks)

Answer **ALL** Questions
ALL Questions Carry **EQUAL** Marks (5 x 3 = 15)

6 a. Explain the nature of econometrics in detail.

OR

b. Outline the assumptions of the Two-Variable Regression Model

7 a. Summarize the significance of the 't' test in regression models.

OR

b. Analyze the principles of ordinary least squares.

8 a. Describe the consequences of heteroskedasticity on hypothesis testing in regression models.

OR

b . Explain the remedial measures of autocorrelation in a regression model.

Cont...

9 a Show the elements of double log model in regression analysis.

OR

b Analyzethe basic structure of a linear regression model.

10 a. Narrate the role of lag in Economics.

OR

b Describe the experimental methods in economics.

SECTION -C (30 Marks)

Answer **ALL** questions

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

11 a Examine the scope of econometrics in detail.

OR

b Discuss the major divisions of econometrics and their applications.

12 a . Identify the properties of an unbiased estimator.

(OR)

b. Enumerate the importance of unbiasedness in OLS estimators.

13 a. Analyze the consequences of multicollinearity in a regression model.

OR

b. Discuss the role of the Durbin-Watson test in detecting autocorrelation.

14 a. Elucidate the uses of dummy variables in regression analysis.

OR

b. Summarize the regression with one quantitative and one qualitative variable (Two Categories)

15 a. Point out the problems in forecasting.

OR

b Examine the nature of Simultaneous Equation Models

Z-Z-Z END