

**PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)**

**BCom DEGREE EXAMINATION MAY 2025
(Third Semester)**

Branch – COMMERCE (BUSINESS ANALYTICS)

ECONOMETRICS

Time: Three Hours

Maximum: 75 Marks

SECTION-A (10 Marks)

Answer ALL questions

ALL questions carry EQUAL marks

(10 × 1 = 10)

Module No.	Question No.	Question	K Level	CO
1	1	Indicate the discipline that studies the use of statistical tools to estimate economic models. (a) Mathematical Economics (b) Econometrics (c) Macro Economics (d) Micro Economics	K1	CO1
	2	Expand OLS. (a) Optimally Linearized Solution (b) Ordinary Linear Standard (c) Optimal Linear Solution (d) Ordinary Least Squares	K2	CO1
2	3	What is the order of an ARIMA model? (a) p, d, q (b) p, q, d (c) d, p, q (d) q, p, d	K1	CO2
	4	What is the difference between a univariate and a multivariate time series? (a) A univariate time series has only one variable, while a multivariate time series has multiple variables. (b) A univariate time series has multiple variables, while a multivariate time series has only one variable. (c) Both univariate and multivariate time series have only one variable. (d) Both univariate and multivariate time series have multiple variables.	K2	CO2
3	5	What is panel data? (a) Data collected on a single unit over time (b) Data collected on multiple units at a single point in time (c) Data collected on multiple units over multiple time periods (d) Data collected from different sources	K1	CO2
	6	What is the purpose of the Dickey-Fuller test? (a) To test for heteroscedasticity in a time series model (b) To test for autocorrelation in a time series model (c) To test for stationarity in a time series model (d) To test for normality in a time series model	K2	CO2
4	7	What is the basic concept of input-output analysis? (a) A method for analyzing the production and consumption of goods and services in an economy. (b) A method for forecasting future economic trends (c) A method for measuring inflation (d) A method for evaluating the effectiveness of government policies	K1	CO3
	8	What are the two primary types of input-output models? (a) Open and Closed models (b) Static and Dynamic models (c) Linear and Non-linear models (d) Deterministic and Probabilistic models	K2	CO3

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5	9	What is autocorrelation? (a) The correlation between variables at different points in time (b) The correlation between variables at the same point in time (c) The variance of a variable over time (d) The mean of a variable over time	K1	CO3
	10	What does ARCH stand for in time series analysis? (a) Autoregressive Conditional Heteroskedasticity. (b) Autoregressive Integrated Moving Average. (c) Autocorrelation and Regression. (d) Autoregressive Conditional Homoskedasticity.	K2	CO3

SECTION - B (35 Marks)Answer **ALL** questions**ALL** questions carry **EQUAL** Marks (5 × 7 = 35)

Module No.	Question No.	Question	K Level	CO
1	11.a.	Evaluate the Errors of measurement.	K5	CO1
		(OR)		
	11.b.	Explain the various types of forecasting methods.		
2	12.a.	Examine the Nature of Multicollinearity.	K4	CO2
		(OR)		
	12.b.	Analyze the bivariate econometric modeling.		
3	13.a.	Compare how dummy variables can model interaction effects.	K4	CO2
		(OR)		
	13.b.	List out the key concepts in univariate time series modeling.		
4	14.a.	Construct the assumptions of Input output analysis.	K3	CO3
		(OR)		
	14.b.	Develop the Closed/Open Input output Model.		
5	15.a.	Identify the Causes of Auto Correlation.	K3	CO3
		(OR)		
	15.b.	Construct the ARIMA Modelling.		

SECTION - C (30 Marks)Answer **ANY THREE** questions**ALL** questions carry **EQUAL** Marks (3 × 10 = 30)

Module No.	Question No.	Question	K Level	CO
1	16	Examine the Method of Ordinary Least Square estimation.	K4	CO1
2	17	Evaluate the Multivariate Modelling.	K5	CO2
3	18	Analyze the Panel Data Modelling.	K4	CO2
4	19	Estimate the Leontief's Input-Output Analysis.	K5	CO3
5	20	Compare the Concepts and Applications of ARCH and GARCH Modeling.	K4	CO3

Z-Z-Z END