Paper Code: 43325B

M.A. ECONOMICS 2011-12
SEMESTER – III
Paper – V B
ECONOMETRICS I

Unit – I

Nature, Meaning and Scope of Econometrics, Goals of Econometrics, Methodology of Econometric Research, The Simple Linear Regression Model Ordinary Least-Squares Method, Assumptions and Properties of OLS Estimations, Gauss Markov's Theorem, Numerical Application of Regression Analysis.

Unit – II

Goodness of fit R^2, Concept and Derivation of R^2 and Adjusted R^2, (i.e. $\overline{R}^2$ and Numerical Application, Confidence Intervals of the Parameters, Statistical Tests of Significance of the OLS Estimates – t and F test and its importance.

Unit – III

Multiple Regression Model with Two Explanatory Variables, Statistical Properties of OLS Parameters in Multiple Regression Model, Relation between Simple and Multiple Regression Co-efficients, An application in Multiple Regression Model, Generalised Least Square Model (GLS). Matrix Approach to Linear Regression Model and Numerical Application.

Unit – IV

Problems in Regression Analysis, Autocorrelation – Assumptions and Sources of Autocorrelation, Nature and Consequences, Tests of Autocorrelation – Dubin-Watson 'd' statistic, Measures to solve the problem of autocorrelation, Hetroscedasticity – Nature Test, Consequences and Remedial Steps of Problems Hetroscedasticity.

Unit – V

Multicollinearity – Causes and Consequences, Tests detecting Multicollinearity, Solutions for Multicollinearity, Errors of Measurement, Consequences of the Violation of the Assumption of Number of Errors of Measurement Solutions for the Case of Errors in Variables.

Basic Reading List

1. Gujrati, D. (1995) – Basic Econometrics, (3rd Edition), McGraw Hill, New Delhi.

2. Johnston, J. (1985) – Econometric Methods, McGraw Hill, New York.

3. Koutsoyiannis, A. (1977) – Theory of Econometrics, (2nd Edition), The Macmillan Press Ltd., Hampshire.

4. Maddala, G. S. (1993) – Econometrics: An Introduction, McGraw Hill, New York.

5. Shyamala, S., Navdeep Kaur and T. Arul Pragasam – A Text Book on Econometrics – Theory and Applications, Vishal Publishing Co., Jalandhar.

6. Madnani, G.M.K. – Introduction to Econometrics: Principles and Applications, Oxford and IBH Publishing Co. Pvt. Ltd., New Delhi.

7. Chow, G. C. (1983) – Econometrics, McGraw Hill, New York.

8. Dhrymes, P. J. (1970) – Econometrics – Statistical Foundations and Applications, Harper and Row Publishers, New York.

9. Intriligator, M. D. (1978) – Econometric Methods, Techniques and Applications, Prentice Hall, Englewood Cliffs, New Jersey.

10. Pindyck, R. S. and D. L. Rubinfield (1976) – Econometric Models and Econmetric Models and Economic Forecasts, McGraw Hill, Kogakusha, Tokyo.

11. Franses, P. H. (1998) – Time Series Models for Business and Economic Forecasting, Cambridge University Press, Cambridge.

12. Kmenta, J. (1997) – Elements of Econometrics, University of Michigan Press, New York.

13ण मदनानी, जी. एम. के. (1996) – अर्थमिति: अवधारणाएं एवं विधियां, ऑक्सफोर्ड एवं आई.बी.एच. कम्पनी प्रा. लि., नई दिल्ली।

14ण अग्रवाल, एच. एस. (1998) – अर्थमितिय निदर्श, आर.बी.एस.ए. पब्लिशर्स, जयपुर।