DEGREE STANDARD

UNIT-I INTRODUCTION TO ECONOMETRICS

Definition – Scope – Economic Theory - Mathematical Economics - Economic Statistics - Mathematical Statistics – Divisions – Theoretical Econometrics – Applied Econometrics – Goals of Econometrics – Methodology of Econometric Research – concepts used in Econometrics – Parameter – Statistic - Explanatory and Explained Variables – Stochastic and deterministic variables - Lagged variables – Estimator and Estimates – Standard error - Hypotheses - Simple, Composite, Null and Alternate - Level of significance - Critical region - Type-I and Type-II errors

UNIT-II SIMPLE LINEAR REGRESSION MODEL

Specification – Assumptions – Least squares criterion – Ordinary least squares method of estimation.

UNIT-III PROPERTIES OF ESTIMATORS

Properties of good estimators – Small and large samples - Properties of OLS estimators in the classical linear regression model – Gauss Markov theorem (without proof)

UNIT -IV STATISTICAL SIGNIFICANCE OF ESTIMATORS

Testing of hypotheses – 't' and 'F' tests - Confidence interval - Test of goodness of fit (R^2) – Inference – Interpretation – Simple applications.

UNIT –V FUNCTIONAL FORMS OF MODEL

Linear trend - Double log – Semi log – Reciprocal – Polynomial forms

UNIT -VI MULTIPLE LINEAR REGRESSION ANALYSIS :

Model – Assumptions – Estimation – Testing – R^2 and adjusted R^2 – Statistical inference – Interpretation – Partial correlation –Simple economic applications.

UNIT-VII MULTICOLLINEARITY

Definition – Reasons – Consequences – Tests – Remedial measures.

UNIT –VIII HETROSCEDASTICITY

Definition – Reasons - Consequences – Tests – Spearman's rank correlation test - Goldfeld and Quandt test – Likelihood ratio test

UNIT -IX AUTO CORRELATION

Definition – Reasons – Consequences – First order auto regressive model – Durbin and Watson test – Remedial measures

UNIT –X DUMMY INDEPENDENT VARIABLE MODEL

Concept – Uses – Dummy variable trap – Estimation – Inference – Interpretation.

REFERENCE:

I. 1. Damodar Gujarati 'Essentials of Econometrics' Irwin Mcgraw Hill, Newyork, 1998.

2. A Koutsoyiannis 'Theory of Econometrics' Palgrave, 1999.

3. Robert S. Pindyck & Daniel L. Rubinfeld Econometric Models and Economic Forecasts' Irwin Mcgraw Hill. Newyork – International Student Edition, 1998.