

M.Sc. IV SEMESTER [MAIN/ATKT] EXAMINATION JUNE - JULY 2024

STATISTICS

Paper - IV

[Econometrics]

[Max. Marks : 75]

[Time : 3:00 Hrs.]

[Min. Marks : 26]

Note : Candidate should write his/her Roll Number at the prescribed space on the question paper.
Student should not write anything on question paper.
Attempt five questions. Each question carries an internal choice.
Each question carries **15 marks**.

Q. 1 a) Explain the "Maximum likelihood method" for classical linear model.

b) What is Heteroscedastic Disturbance.

OR

Explain the use of dummy variable in seasonal adjustment.

Q. 2 Explain the methods for removing multicollinearity in short.

OR

Explain Autocorrelation with its consequences. For autocorrelated disturbance derive the formula for $\text{Var}(\hat{B})$

Q. 3 Describe errors in Variables. For errors in variables the least square estimators are inconsistent. Explain the Wald's method for obtaining consistent estimator.

OR

Describe principal component method.

Q. 4 What do you mean by Identification Problem ? Give one example each of under identified just or exact identified simultaneous equation.

OR

Discuss in detail restrictions on variance and covariances.

Q. 5 What is meant by a simultaneous equation econometric model ? When such a model is used ? Give an account of the two stage least square method in estimating the structural coefficients of such a model.

OR

Describe the three stage least square estimation procedure in detail.