AQ – 1016

Third Semester M. A./M. Sc. (Part – II) Examination

STATISTICS

Paper – XII

Econometrics – I Elective I/ II : 4

P. Pages : 3

Time : Three Hours] [Max. Marks : 80

Note : All questions are compulsory.

1. (A) (a) Explain how to maximize utility function by Lagrange's method.

(b) Discuss the problem of consumer behavior in detail. (8 + 8)

OR

(B) (i) Derive slutsky equation.

(ii) Define utility function. State and prove first order and second order condition of utility maximization. (8 + 8)

2. (A) (a) Explain the nature of hetero-scadasticity, with an example. How is it detected by using Park–test ?

(b) Explain the problem of single equation regression model. (8 + 8)

OR

(B) (i) What is multicollinearity ? Explain two methods of solving multicollinearity problem.

(ii) Explain the necessity of disturbance term in single equation regression model. (8 + 8)

3. (A) (a) What is autocorrelation ? Describe the remedial measure for detection of autocorrelation.

(b) Explain role of dummy variables in regression analysis. How are they used in de-seasonalization in time series ? (8 + 8)

OR

(B) (i) Explain the nature of autocorrelation. How is it detected ? Differentiate between autocorrelation and serial correlation.

(ii) Describe the concept of Errors of measurement in econometrics. (9 + 7)

4. (A) (a) Describe Koych approach to distributed lag models.

(b) Explain the method of instrumental variable with an example. (8 + 8)

OR

(B) (i) Explain General Linear Model (GLM) in econometrics.

(ii) Describe Ordinary Least Square (OLS) method of estimation in detail. (8 + 8)

5. (A) (a) Explain two stage least square method (2SLS) with an example.

(b) Describe rank and order conditions in identification problem. (8 + 8)

OR

(B) (i) Explain indirect least square method (ILS) with an example.

(ii) Describe the problem of just identification with an example. (8 + 8)