2009

M.A./M.Sc.

2nd Semester Examination

ECONOMICS

PAPER—VIII (EC-1204)

Full Marks : 40

Time : 2 Hours

The figures in the right-hand margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

Illustrate the answers wherever necessary.

Answer *all* questions.

1. Answer any *five* questions : 2×5

(a) Distinguish between an economic and an econometric model.

(b) What are the consequences of perfect multicollinearity.

(c) Distinguish between endogeneous variables and pre-determined variables.

(d) What are reduced form equations of a simultaneous equation system.

(e) Why is homoscedasticity assumptions required for comparing means of two populations ?

(f) Define the term goodness of fit.

(g) In autocorrelation what are implied by $\hat{p} = 0$ and $d = 2$?

(h) Explain the assumption $u \sim N(0, \sigma_u^2)$

(i) What is a random number table ?

(j) Show that under usual assumptions the distribution functions F(x) is always right continuous.

2. Answer any *two* questions : 5×2

(a) What are the desirable properties of the estimates for small samples ?

(b) Explain the consequences of the problem of Multicollinearity in an Econometric Model.

(c) Show why one can not use the OLS technique to the structural model in the estimation of the parameters in a simultaneous equation framework.

(d) Under what condition is V(x − y) equal to V(x) − V(y) ?

3. Answer any *two* questions : 10×2

(a) State and explain the assumption underlying a standard linear regression model involving k-1 regressors. Show that the OLS estimators of the parameters of the above model are BLUEs.

(b) How would you detect the problem of heteroscedasticity in an econometric model ? Explain the method of solving the above mentioned problem.

(c) Write short notes on :

(i) Dummy variable trap ;

(ii) Durbin-watson test.

(d) Prove that under SRSWR from a normal population $X \sim N(\mu, \sigma^2)$ the sampling distribution of the sample mean $\bar{x} \sim N(\mu, \sigma^2/n)$.

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