

2023

ECONOMICS

B.A. 5th Semester Examination - 2023

PAPER - DSE -1

(Applied Economics)

Full Marks : 60

Time - 3 hours

The figures in the right-hands margin indicate marks.

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

Illustrate the answera wherever necessary.

Group - A

Q No.1 Answer any ten question of the following : 10 x 2 = 20

- a) Distinguish between partial correlation and ortho-partial correlation (Mondal, 2008).
- b) What intormaton does R^2 provide ?
- c) Briefly present the concept of degress of freedom

(Turn Over)

(2)

- d) What are the effects of model misspecification?
- e) What probable problems may arise when lagged values of explanatory variables are included in a regression model?
- f) What is the meaning of the term regression?
- g) Write the functional forms of linear and log linear regression models.
- h) What is distributed lag model? Give an example.
- i) Define simultaneous equation bias.
- j) Distinguish between endogenous variable and exogenous variable.
- k) What is the difference between R^2 & adjusted R^2 .
- l) State the rank condition of identification of simultaneous equation system.
- m) Which methods are usually used to estimate simultaneous equation system?

(3)

- n) Mention two usefulness of panel data.
- o) What do you mean by balanced panel?

Group - B

Answer any four questions of the following : 4 x 5 = 20

- 2 What is co-efficient of correlation (r)? What are the properties of it?
- 3 What is a dummy variable? Explain why dummy variable trap occurs.
- 4 Derive the order condition for identification ($K^{**} \geq G^A - 1$) of simultaneous equation system.
- 5. Describe briefly the effects of omitting a relevant explanatory variable in the regression model.
- 6. What are the criteria of selecting a good model in an econometrics?
- 7. What is auto-regressive model? State the properties of auto-regressive model.
- 8. Explain the random effects model. Why is it called error component model?

Group - C

Answer any two questions of the following : **2 x 10 = 20**

9. State the rules of identification of the simultaneous equation models. When an equation of a simultaneous equation model is over identified, exact identified and under identified.
10. Discuss the partial adjustment model and show that such a model leads to a geometric lag formation. What is the advantage of this model over the adaptive expectation model.
11. The structural form of a simultaneous equation system is given by -

$$C_t = a_0 + a_1 y_t + U_{1t}$$

$$I_t = b_0 + b_1 Y_t + b_2 y_{t-1} + U_{2t}$$

$$Y_t = C_t + I_t + G_t$$
 The endogenous variables are C_t , I_t & Y_t . The exogenous variable is G_t . Find the reduced form of this model.
12. Discuss the Fixed effect Model of panel data regression with suitable examples.