2019

MA/MSc

2nd Semester Examination

ECONOMICS

PAPER – ECO-201(Old Syllabus)

Full Marks : 50

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.

Group- A

1. Answer any **TWO** questions: 2x2

   a) Give the dual meaning of the term 'statistics'.

   b) Distinguish between 'census survey' and 'sample survey'.

   c) Distinguish between 'sampling error' and 'non-sampling error'.

   d) Explain the concepts of Rejection region and Non-rejection region. Use graphs to explain them.

2. Answer any **ONE** question: 1x6

   a) What are the properties of a good estimator?

   b) State and prove the sum law of expectation.

3. Answer any **ONE** question :   1x10

   a) Find the sampling mean and sampling variance of the sample mean for a SRSWR drawn from a population with finite mean μ and finite variance σ^2.

   b) Explain the concept of Maximum Likelihood Estimators (MLEs) of the parameters α and β of population in the regression equation : $Y_i = \alpha + \beta X_i + U_i$ (i= 1, ...,n). Find the MLE of the variance of the disturbance term σ^2. Show that it is not an unbiased estimator of σ^2.

         (Continued)

Group-B

4. Answer any **TWO** questions: 2x2

   a) Present a real life example of Heteroscedasticity.

   b) Distinguish clearly between mathematical economics, statistics, and econometrics with regard to their basic purposes.

   c) What is dummy variable trap?

   d) Define the concept of Simultaneous- equations model. Also explain what simultaneous-equation bias means.

5. Answer any **ONE** question: 1x6

   a) Show that in a general linear econometric model the OLS estimators are BLUEs.

   b) Consider the following dummy variable model:
   $C_t = \alpha + \beta_1 Y_t + \beta_2 D_t + U_t$, where D_t is a dummy variable. Discuss the features of the above model.

6. Answer any **ONE** question: 1x10

   a) Describe the basic consequences of the presence of multicollinearity in an econometric model. How would you solve this problem? 7+3=10

   b) What is meant by heteroscedasticity? Describe the Goldfeld Quandt test. What are its remedial measures? 2+5+3=10

(Internal Assessment = 10 Marks)