

20602016

DOON UNIVERSITY, DEHRADUN
Final Semester Examination, 2016
(Special Back Paper)
Department of Economics
M.Sc. Fourth Semester
SSEI- 222: Econometrics II

Time Allowed: 3 hrs.

Max. Marks: 50

Note: Attempt All Questions from Sections A,B,C.

SECTION : A

Answer the following

(Marks: 2x5=10)

1. Statistically define a biased and an unbiased estimator.
2. Who developed the 2SLS method? When is a 2SLS method used?
3. A white noise error term is a random term that has multiple variances.
4. If an omitted variable is correlated with an included variable in a model then the parameters of the model will be unbiased.
5. Multicollinearity problem arises mostly in cross section data. True or false?

SECTION : B

Answer any FOUR.

(Marks: 4x5=20)

1. Assume an econometric model with k explanatory variables. If due to some reason, r explanatory variables have been wrongly excluded from this model. Examine the consequences of specification error in such a case.
2. Define recursive models. Why recursive models are also called triangular systems? Explain using suitable equations.
3. Discuss the several challenges faced by econometricians while dealing with time series data.
4. Discuss the method of Indirect Least Squares (ILS)
5. Define the necessary and sufficient conditions for identification of a system of simultaneous equations.

SECTION : C

Answer any TWO.

(Marks: 2x10=20)

1. Assume the Keynesian model of income determination

Consumption function: $C_t = a_0 + a_1 Y_t - a_2 T_t + u$

Investment function: $I_t = b_0 + b_1 Y_{t-1} + v$

Taxation function: $T_t = c_0 + c_1 Y_t + w$

Definition equation: $Y_t = C_t + I_t + G_t$

Where C is consumption, I is investment, T is tax, Y is income, Y_{t-1} is income in previous period and G is government expenditure.

- a) Is the model mathematically complete? Why or why not?

2

- b) Identify the consumption function and the investment function using the criteria for identification.

4+4

2. Define a non-stationary stochastic process. Using suitable equations distinguish between random walk with drift and random walk without drift.

2+4+4

3. Define model specification error. Discuss the different types of specification errors.

10
