DOON UNIVERSITY   **DEHRADUN**

Final Semester Examination: December, 2017

School of Social Sciences   M Sc Fifth Semester
Course: ECONOMETRICS I Course Code – SSEI 312

Time Allowed : Three Hours   Maximum Marks : 50

Note: Attempt all sections.

Section: A (Short Answer Type Questions).

Write short notes on any Ten Questions.

(Marks : 1X10=10)

1. The Econometric Society (1930) definition of Econometrics
2. Dummy Variable
3. Multicollinearity
4. Type I Error   5. Variance   6. Type II Error   7. Stochastic Variables
   8. Inferential Statistics   9. Descriptive Statistics   10. R^2 11. OLS 12. Confidence Intervals

SECTION : B (Short Answer Type Questions to be answered in about 250 words each)

Attempt any Five Questions.

(Marks : 5X4=20)

1. What is meant by random sampling? What is its importance?
2. Discuss steps in hypotheses testing.
3. (a) What does the correlation coefficient measure? What is its range of values?
   (b) What is the relationship between correlation and regression analysis?
4. State each of the five assumptions of the classical regression model (OLS) and give an intuitive explanation of the meaning and need for each of them.
5. (a) What is a normal distribution? What is its usefulness?
   (b) What is the standard normal distribution? What is its usefulness?

6. What is meant by (a) A point estimate? (b) Unbiased estimator? (c) An interval estimate

SECTION: C (Long Answer Type Questions)

Attempt Question 1 [compulsory] any one from the remaining two Questions.

(Marks : 2X10=20)

1. Derive steps for first normal equation and second normal equation in a Regression Equation Estimation.
2. (a) What is meant by perfect multicollinearity? What is its effect ? (b) What is meant by high, but not perfect, multicollinearity? What problems may result? (c) How can multicollinearity be detected? What can be done to overcome or reduce the problems resulting from multicollinearity?
3. Explain Functional forms of Regression Models