



3-6-013

**DOON UNIVERSITY, DEHRADUN**  
**Semester Final Examination, Second Semester 2013**  
**School of Social Sciences**

**M.A. (Economics)**  
**Course: SSE -532:Econometrics**

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**Time Allowed: 2 Hours**

**Total Marks 30**

**SECTION-A**

**(3 marks X 5 =15)**

Q-1: Explain the following concepts in words and notations

- (a) Heterosc(k)edasticity as a violation of OLS assumptions
- (b) Endogeneity
- (c) Serial Correlation
- (d) Additive and Multiplicative Dummy
- (e) Table value of 't'

**SECTION-B**

**(5 marks X 3 = 15)**

Answer any three questions

Q-1: What do you mean by the problem of multicollinearity? What are the causes and consequences of the problem in an OLS system?

Q-2: What do you mean by the issue of heterosc(k)edasticity? How do you test heteroskedasticity in an OLS estimation process? What remedial measures you may take for a dataset affected with heteroskedasticity?

Q-3: Briefly examine the basic assumptions of Classical Linear Regression Model?

Q-4: What are the causes and consequences of auto-correlation in an OLS Estimation process? How do you detect autocorrelation and what steps you may take to overcome autocorrelation in estimating a model?

Q-5: In a typical simple regression model  $y = a + b x + u$  (where,  $y$  is the dependent and  $x$  is the independent variable), find the value of regression coefficients through OLS. Clearly mention the assumptions you make.