I Semester M.B.A. (FE) Examination, June/July 2010
STATISTICS AND ECONOMETRICS (OS)

Time : 3 Hours   Max. Marks : 80

SECTION – A

Answer **all** sub questions. **Each** question carries **2** marks :   **(2×5=10)**

1. a) Define Econometrics.

   b) Define Non-linear regression.

   c) What is conditional probability ?

   d) Define discrete random variable.

   e) Define one factor analysis of variance.

SECTION – B

Answer **any five** questions. **Each** question carries **7** marks :   **(7×5=35)**

2. Explain methods of moments. What are the advantages and disadvantages of this method ?

3. What is chebyshev's inequality ?

4. What is law of large numbers ?

5. State the difference between linear and non-linear regression analysis.

6. In a class, 50 students play hockey and 30 students play football. If the class strength is 90, and 30 students do not play both. Find out how many students play both. Draw Venn diagram to substantiate your answer.

7. State the rules of expectation.

8. Explain central limit theorem.

SECTION – C

Answer **any two** questions. **Each** question carries **10** marks : **(10×2=20)**

9. Calculate the co-efficient of correlation between the values of X and Y.

X	60	61	64	65	68	69	72
Y	35	30	28	26	25	30	18

10. A machine producing widgets averages one bad in a production run of 100 parts. Suppose we produce n = 200, what is the probability of there being no defects ?

11. Explain the autoregressive models.

12. Explain the steps in hypothesis testing.

SECTION – D

Answer **any one** question. **Each** question carries **15** marks : **(15×1=15)**

13. Describe the relation between statistics and probability.

14. Explain the binomial probability distribution.

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