

M.A (ECONOMICS)
(MAEC24104T) QUANTITATIVE METHODS I
SEMESTER - I

MAX. MARKS:100
EXTERNAL:70
INTERNAL:30
PASS:40%
CREDITS:6

OBJECTIVES:

- To define the type and quantity of data that need to be collected.
- To Organize and summarize the data.
- To analyze the data and conclude it.
- This course introduces the students to applying mathematical techniques to economic theory also

INSTRUCTIONS FOR THE PAPER SETTER/EXAMINER:

1. The syllabus prescribed should be strictly adhered to.
2. The question paper will consist of three sections: A, B, and C. Sections A and B will have four questions each from the respective sections of the syllabus and will carry 10 marks each. The candidates will attempt two questions from each section.
3. Section C will have fifteen short answer questions covering the entire syllabus. Each question will carry 3 marks. Candidates will attempt any 10 questions from this section.
4. The examiner shall give clear instructions to the candidates to attempt questions only at one place and only once. Second or subsequent attempts, unless the earlier ones have been crossed out, shall not be evaluated.
5. The duration of each paper will be three hours.

INSTRUCTIONS FOR THE CANDIDATES:

Candidates are required to attempt any two questions each from sections A, and B of the question paper, and any ten short answer questions from Section C. They have to attempt questions only at one place and only once. Second or subsequent attempts, unless the earlier ones have been crossed out, shall not be evaluated.

Section - A

Unit 1: Unit 1: Differentiation of Functions: Simple and Partial Derivatives, Differentiation of Simple Functions – Polynomial (x) and Exponential Functions. Maxima and Minima of functions of one variable only and its applications.

Unit 2: Matrices: Definition and Types, Operations, Adjoint and inverse of a matrix (up to 3x3) Solution of simultaneous equations (up to 3) by matrix methods and Cramer's Rule.

Unit 3: Statistics: definition, importance and Scope, limitations, Distrust

Unit 4: Types of Data Collection and its Sources

Section – B

Unit 5: Classification and Tabulation of Data

Unit 6: Diagrammatic and Graphical presentation of data (with MS-Excel)

Unit 7: Sample, Population, Characteristics of good sample, type of sampling techniques, Sampling errors.

Unit 8: Index Numbers: Concepts, Simple Index Numbers, Laspeyre's, Paasche's and Fisher's index numbers only (among weighted index numbers) and Reversibility Tests.

Suggested Readings:

- A.M Goon, M.K Gupta and B. Dasgupta, fundamental of statistics Vol-I, World press Calcutta
- Gupta SC: Fundamental of statistics, S. Chand & Company. New Delhi
- Gupta, SP: Statistical Methods, S. Chand & Company. New Delhi
- Monga, GS: Mathematics and Statistics for Economics, Vikas Publishing House, New Delhi.
- Singh, D. and Chaudhary, F.S. (1986): Theory and Analysis of Sample Survey Designs. New Age International Publishers.