Syllabus

B.A. (General) PART—II (P.U.)

ECONOMICS

FOURTH SEMESTER

QUANTITATIVE METHODS

Time Allowed : 3 Hours **Maximum Marks : For Regular candidates = 90**
For Private/unassessed candidates = 100

INSTRUCTIONS FOR THE PAPER SETTER AND THE CANDIDATES

The syllabus has been divided into four units.

Note :1. There shall be 9 questions in all. All questions carry equal marks. The first question shall be short answer type containing 12 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 09 short answer type questions *i.e.* 2 marks of each. It shall carry 18 marks and shall be compulsory question. Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice *i.e.* the candidates shall attempt one question from each Unit—4 in all.

2. Use of simple calculator is allowed.
3. The paper setter may in general stick to the distribution of marks of 1/3 to the theory and 2/3 to numericals.

UNIT—I

Elementary idea of Sets and Functions : Simple and Partial Derivative, Differentiation of Simple functions – Polynomial (x), Exponential functions. Maxima and Minima of functions of one variable only. Their applications of Micro and Macro Economics.

UNIT—II

Matrices : Definition and Types, Operations (Sum, Difference, Product and Transpose) Adjoint and inverse of a matrix (up to 3×3), Solution of equation (up to 3) by matrix methods and Crammer's rule.

Measures of Central Tendency : Mean, Median, Partition values, Mode, Measures of Dispersion, Skewness.

UNIT—III

Correlation Analysis : Karl Pearson's (except grouped data) and Spearman's formula, Simple Regression Analysis.

Interpolation : Binomial Expansion, Newton's (Advancing difference Method) and Lagrange's Method.

UNIT—IV

Index Numbers : Concepts, Problems and Importance; Simple Index Number, Laspeyre's and Fisher's Index Numbers only (among weighted index numbers), Reversibility Tests.

Time Series Analysis : Components of time series, Determination of Trend, Least Square and Moving Average Method.