

Subject	QUANTITATIVE TECHNIQUES - I
Subject Code	UCMAL01/BL01/CL01
Nature	Allied Subject
SEMESTER	I
Maximum Marks	75

Unit I

Algebra : Indices, Logarithms - Simple problems. **Permutation and combination** - Basic concept of permutation and combination - Simple problems.

Unit II

Sequence and series: Arithmetic Progression, sum to n terms, Properties of AP (without proof), Geometric Progression, Sum to n terms, Properties of GP (without proof) - Simple Problems.

Unit III

Descriptive Statistics: Measures of Central Tendency – Mean, Median, Mode, GM, HM. Measures of Dispersion – QD, MD, SD, Variance, Coefficient of Variation. Skewness - Karl Pearson's Coefficient and Bowley's Coefficient of Skewness.

Unit IV

Probability: Definition, Mutually exclusive events, Independent events, Addition theorem, Conditional probability, Multiplication theorem, Baye's theorem (without proof) -Simple problems.

Random Variable: Mathematical Expectation for Discrete and Continuous random variable – simple problems. **Theoretical Distributions:** Binomial, Poisson, Normal Distribution (without proof) - Simple problems.

Unit V

Operations research: OR Definition, Scope of OR, Limitations of OR, Linear Programming problem (LPP), Mathematical formulation, Graphical method, Simplex method (standard form of Maximization problems only)

Books For References:

1. Business Mathematics and Statistics by Dr P.R.Vittal Margham Publication.
2. Business Statistics and operations research by Dr P.R.Vittal Margham Publication.
3. Business Mathematics and Statistics by B.M.Agarwal Sultan chand Publication.

Question Paper Pattern:

Pattern	Theory	Problems	Total Questions	To answer	Marks per Question	Total Marks
Section A	5	7	12	10	2	20
Section B	1	6	7	5	5	25
Section C	0	4	4	2	15	30

Instructions to Paper Setter:

Section-A: Minimum 2 Questions to be asked from each of the five Units

Section-B: Minimum 1 Question to be asked from each of the five Units

Section-C: Minimum 1 Question to be asked from any four Units