MBA107: QUANTITATIVE SKILLS

Teaching Scheme	Examination Scheme
Lectures: 4 hrs./Week Tutorials: 1 hrs./Week Credits: 4	Class Test -12Marks Teachers Assessment - 6Marks Attendance – 12 Marks End Semester Exam – 70 marks

Course Objectives:

- *To compute and understand Ratios, Compound interest, Matrix, Derivative, the measures of central tendency, symmetrical and asymmetrical distribution, patterns.*
- *Performing Correlation & Compute the equation of simple regression line from a sample data and interpret the slope and the intercept of the equation*
- *To understand the probability concepts and perform probability theoretical distributions*
- *Use Estimation Theory and Hypothesis Testing concepts & perform various parametric and non-parametric tests.*

Hours:50

Unit I (8 Hrs): Ratio & Proportion, Percentage, Simple & Compound Interest, Concepts of Factorial, Permutations & Combinations; Simple Arithmetic and Geometric Progression; Concepts of Mathematical Induction. Introduction to set theory.

Unit II (10 Hrs): Definition and Types of Matrix, Algebra of Matrices, input-output analysis Transpose, Adjoint and Inverse of a Matrix; Determinants, Applications of Matrix in Business Problem. Derivative from first principle, derivative of sum, Product and Quotient of two functions, Basics of Integration, Integration by Parts, Applications of Integration in Business Problem.

Unit III (10 Hrs): Diagrammatic and Graphical presentation of data, Measures of centraltendency, Measures of Dispersion, Skewness, Kurtosis. Basic concepts of correlation and regressions, Basic concept of Probability, Bayes' Theorem and its applications. ProbabilityTheoretical Distributions: Concept and application of Binomial; Poisson and Normal distributions

Unit IV (22 Hrs): Estimation Theory and Hypothesis Testing: Sampling theory; Formulation of Hypotheses; Application of Z test, t-test, F-test and Chi-Square test. Association of attributes, Time series, Components of time series and it's measurement. Introduction to Index Number.

Suggested Reading:

1. Fundamental of mathematical statistics - V K Kapoor and S C Gupta - Sultan Chand & Sons
2. Fundamental of Statistics (Vol. 1 and Vol. 2) - Goon Gupta and Dasgupta by Calcutta Press

Dean Academics
Faculty of Management
Invertis University

Registrar
Invertis University
Bareilly

Head
Department of Management (MBA)
Faculty of Management
Invertis University, Bareilly (UP)