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| **B.COM. SEMESTER – 5** | | |
| **3** | **Core** | **Business Mathematics and Statistics - 1** |

Name of the Course: **Business Mathematics and Statistics - 1**

Course credit: **03**

Teaching Hours: **45 (Hours)**

Total marks: **100**

**Objectives:**

To familiarize the students with various statistics & mathematical tools and their application in the business decision making.

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| **Unit** | **Content** | **No. of Lectures** |
| 1 | **LINEAR CORRELATION:**   * Definition of variables * Meaning and Definition of Correlation * Types of Correlation * Properties of Correlation coefficient * **Method of Correlation:**   + Scatter Diagram   + Karl Pearson’s method   + Spearman’s Rank method * Probable Error of Coefficient of Correlation * Co-efficient of Correlation from bivariate Frequency distribution * Examples | **12** |
| 2 | **LINEAR REGRESSION:**   * Meaning and Definition of Regression * Definition of Regression coefficient * Properties of Regression coefficients & Relation between Correlation and Regression coefficient * Two lines of Regression * Regression Co-efficient from bivariate frequency distribution * Examples | **13** |
| 3 | **PROBABILITY:**   * Concept of Probability * Mathematical & Statistical Definition of probability * Definition of Different Terms ( Random Experiment, Sample Space, Types of Events…etc) * Addition Theorem, Condition Law, Multiplication Theorem For Two Events With Proof * Examples | **10** |
| 4 | **PROBABILITY DISTRIBUTION-1:**   * Concept of Discrete Random Variable & Continuous variable and Its Probability Distribution * Mathematical Expectation of Discrete Random Variable. * Mean & Variance of Discrete probability distribution * Properties and Application of Binomial without proof * Examples | **10** |
|  | **Total Lectures** | **45** |

**Suggested Readings and Reference Books:**

1. Statistics By D.S. sancheti and V.K. Kapoor
2. Fundamentals of mathematical statistics By V.K. Kapoor and S.C. Gupta
3. Basic Statistics By B.L. Agarwal
4. Fundamentals of Statistics By S.C. Srivastva and Sangya Srivastava

**Note: Latest edition of the reference books should be used.**