

# MBA -105 BUSINESS ANALYTICS

(2023-24)

**Total: 100 Marks**

**External Evaluation: 50 Marks**

**Internal Evaluation: 50 Marks**

**Total Credits:-5**

**Total Pass marks: 40 Marks**

**Pass marks in external: 20 Marks**

**Pass marks in internal: 20 Marks**

**Objective:** Objective of this course is to acquaint the students for managerial issues relating to business analytics so that they can apply these tools especially in the field of Commerce and Industry. These quantitative methods not only guarantee a deeper insight into the subject but will also lead towards exact and analytical solutions to problems treated.

After successful completion of this course, the students shall be able to.

Sr. No	Course Outcomes
1.	Apply basic statistical techniques and their applications in managerial decision making
2.	Deepen the knowledge in probability theory and types of distributions
3.	Have a deeper understanding of fundamental concepts of statistics in business decision making under subjective conditions

## Unit I

Business Analytics: Definition, Evolution, advantages and application of business analytics for decision making. Data Analysis: Measure of Central Tendency. Measures of Dispersion: Range, Quartile Deviation, Mean Deviation, and Standard Deviation and Coefficient of Variation. Correlation Analysis: Rank Method & Karl Pearson's Coefficient of Correlation and Properties of Correlation. Regression Analysis: Fitting of a Regression Line and Interpretation of Results, Properties of Regressor Coefficients and Relationship between Regression and Correlation.

## Unit II

Probability concepts: Theory of Probability, Addition and Multiplication Law. Theoretical Distributions: Binomial, Poisson and Normal Distribution. Linear Programming: Concepts, Formulation of LP models, Solution of LP Models using Graphical techniques and Simplex Method. Transportation Problems: Concepts and solutions; Optimality Tests – MODI Method & Stepping Stone technique. Game theory: Concepts, Solutions of 2-person games, Pure & Mixed strategy games, Odds method. Dominance Method, Sub Games method, Equal Gains Method, Graphical Solution. Assignments Problems: Concepts and solutions, unbalanced problems.

### Recommended Texts

- Levins, Krehbiel, Business Statistics, Pearson Education Asia.
- Levin & Rubin, Statistics for Management, Prentice Hall of India.
- Sancheti & Kapoor, Business Mathematics, Sultan Chand & Sons.
- Gupta SP, Statistical Methods, Sultan Chand & sons.
- Baruah, Srinath, *Basic Mathematics and its Application in Economics*, Macmillan India Ltd, Hillier, Fredrick S. and Lieberman, Gerald J., *Operations Research*, Tata McGraw Hill,.
- Saha, Suranjan, *Practical Business Mathematics and Statistics*, Tata McGraw Hill.
- Swarup, K., Gupta, P. K. and Mohan, M., *Operations Research*, Sultan Chand & Sons.

### Instructions

The external paper will carry 50 marks and would be of three hours duration. The question paper will be divided into three Units, i.e., I, II, III. The question paper will consist of four questions each in Unit I and II. Each question in these Units carries 10 marks. Candidates will be required to attempt four questions in all from section I and II selecting not more than two questions from each of these Unit. The III Unit shall be 5 short answer questions, 2 marks each and shall be compulsory.

The internal paper will carry 50 marks and it will be distributed as follows:

- Two Mid-Semester Tests each carrying 10 marks
- Two Assignments each carrying 10 marks
- Class Participation and Attendance to be of 10 marks

  
Ms. Namita Berry

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