



Symbiosis College of Arts and Commerce
(An Autonomous College Affiliated to University of Pune)

Subject code _____ Semester **I** _____

Title of Subject **BUSINESS MATHEMATICS AND STATISTICS 1**
(From 2019-2020)

- Objectives:
1. To understand some important methods in Business Mathematics and Statistics and their applications to Commerce, Economics and Industry through examples and case studies.
 2. To understand different methods of calculating E.M.I
 3. To understand the concept of Nominal and Effective Rate of Interest.

 4. To understand the concept of investment in Shares and Mutual Funds
 5. To understand the concept of Measures of Central Tendency and their applications.
 6. To understand the concept of Measures of Dispersion and their applications

Detailed Syllabus

Unit	Contents of the Syllabus	Number of Lectures
1	Interest Simple Interest, Compound Interest, Nominal and Effective Rate of Interest, Concept of Annuity, Equated Monthly Installment (EMI), Calculation of E.M.I. by Monthly and Yearly Reducing Balance Methods and by Flat Rate of Interest Method. Problems.	12
2	Shares and Dividend Concept of Shares, Stock Exchange, Face Value, Market Value, Dividend, Equity Shares, Preferential Shares, Bonus Shares and Rate of Return. Problems on Calculation of Rate of Return.	5
3	Mutual Funds Concept of Investment in Mutual Funds , Types of Funds ,Concept of Number of Units, NAV and Exit Load. Problems on Calculation of Net Income and Rate of Return. Averaging of Price under the Systematic Investment Plan.(SIP)	10
4	Collection, Representation and Interpretation of Statistical Data (Some topics from this unit can be given for self-study) Scope of Statistical Methods in Economics, Commerce and Industry. Concept of Population and Sample with Illustrations. Methods of Sampling , Raw Data, Attributes and Variables , Classification of Data, Frequency Distribution and Cumulative Frequency Distributions. Histogram, Frequency Curve and Cumulative Frequency Curves.	7

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5	Measures of Central Tendency Concept of Central Tendency, Measures of Central Tendency: Arithmetic Mean, Median and Mode for Grouped and Ungrouped Data, Combined Mean for two groups. Appropriate choice of Measures.	10
6	Measures of Dispersion Concept of Dispersion. Measures of Dispersion: Range, Variance, Standard deviation(S.D.) for Grouped and Ungrouped Data, Combined S.D. Measures of Relative Dispersion: Coefficient of Range, Coefficient of Variation.	10
Total Number of Lectures		54

Reference Books:

- 1) Business Mathematics by Dr. Amarnath Dikshit and Dr. Jitendra Kumar Jain.
- 2) Business Mathematics by V. K. Kapoor – Sultan Chand and Sons, Delhi.
- 3) Fundamentals of Statistics by S.C. Gupta – Sultan Chand and Sons, Delhi.
- 4) Business Mathematics and Statistics by N.G.Das and Dr.J.K.Das
- 5) Mutual Funds in India by Joydeep Sen
- 6) Statistics by Sancheti and Kapoor – Sultan Chand and Sons, Delhi
- 7) Mathematics for Economics by Schaum's Series
- 8) Manual of BSE on Mutual Funds
- 9) Web sites of BSE ,NSE and SEBI

Text Books

- 1) Text Book for F.Y.B.Com. SSPU for Business Mathematics and Statistics
- 2) Text Book for F.Y.B. Com Mumbai University for Mathematical and Statistical Techniques (Sem I and II)

Assignment (20 Marks)

Students can select any topic related to the syllabus or can do the assignment on solving problems related to syllabus using Excel.

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