B.COM. SEMESTER – 6

3	Core	Business Mathematics and Statistics - 2

Name of the Course: **Business Mathematics and Statistics - 2**
Course credit: **03**
Teaching Hours: **45 (Hours)**
Total marks: **100**

Objectives:

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

Unit	Content	No. of Lectures
1	**PROBABILITY DISTRIBUTION-2:** - Meaning of Normal Distribution - Properties and its application (without proof) - Examples	12
2	**TIME SERIES ANALYSIS:** - Meaning and Use of Time Series - Component of Time Series - Methods of Finding Trend by ➢ Moving Average ➢ Least Square (Linear ($y = a+bx$) , ➢ Second Degree $y = a + bx + cx^2$) - Short Term Variation - Seasonal Variation By Moving Average Method - Computation of Seasonal Index number - Examples	13
3	**ASSOCIATION OF ATTRIBUTES:** - Association of Two Attributes - Types of Association of Two Attributes - Order classes, - Consistency of data for two attributes - Methods of studying Association attributes ➢ Comparison of Expected Frequency ➢ Proportion method ➢ Yule's method ➢ Co-efficient of Colignation method - Examples	10
4	**SAMPLING:** - Idea of Population and sample - Advantage of sampling, limitation of sampling - Characteristics of Good sample - With and without replacement sampling	10

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		- **Sampling method**
		  ➢ Simple random sampling
		  ➢ Stratified simple random sampling
		  ➢ Systematic Sampling
		  ➢ Drawing of all possible random sampling of given size (Two or Three) from a population (with and without replacement)
		  ➢ Calculation of variance of sampling random, sample Mean. Stratified sample Mean(Two or Three strata only) and systematic sampling
		  ➢ Examples	

		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
5. Operations Research   By J.K. Sharma

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