

Course: OE
Basics of Mathematics and Statistics

Semester: I	Credits: 2	Subject Code: OE2 12306	Lectures: 30
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Course Outcomes:

At the end of this course, the learner will be able to:

- CO1- Relate the basic concepts in Finance and Business Mathematics like Interest, shares and dividends etc. and interpret data intelligently through numerical means
- CO2- Discuss applications of Mathematical concepts like progressions in Business
- CO3- Examine modern day concerns pertaining to investments, interests, purchasing, comparison of various schemes, time value of money, loans, installment plans etc.
- CO4- Analyze data through elementary statistical methods like condensation and representation of data and diagrams such as histograms, ogive curves.
- CO5- Calculate various types of averages and variation.

Unit 1: Commercial Arithmetic

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- Shares and Dividend: Concept of shares, Dividend, Equity shares, Preferential shares, Bonus shares, Face Value, Market value, Dividend, Problems on Dividend.
- Commission & Brokerage.
- Interest: Simple interest, Compound interest (Nominal and effective rate of interest), Equated monthly installments (EMI) Flat interest system.

Unit 2: Statistics and Progressions

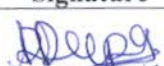
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- Representation of Data: Data Condensation and Representation: Raw data, Attributes, Variables, Classification, Frequency Distribution, Cumulative Frequency Distributions, Histogram and Ogive Curves.
- Measures of Central Tendency: Mean, Median and Mode of grouped and ungrouped data.
- Index Numbers: Concept of Index Number, Price Index Number, quantity index number Laspeyre's, Paasche's and Fisher's Method for finding Index numbers.
- Progressions : Arithmetic Progression (A.P.) Geometric Progression (G.P.) with simple practical applications in real life business environment.

Recommended Text Books:


- Rayarikar A. V. and Dixit P. G., *Business Mathematics*, Nirali Prakashan, June 2019
- Bari, *Business Mathematics*, New Literature Publishing Company



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Chairperson (HoD)	Mathematics and Statistics	Dr. Deepa Krishnamurthy	 18/4/24

Reference Books:

- V. K. Kapoor, *Business Mathematics*. Sultan Chand and Sons: New Delhi; 1991.
- Bari, S.A. *Practical Business Mathematics*. New Literature Publishing: New Delhi.
- Gupta, S.P. *Statistical Methods*. Sultan Chand and Sons: New Delhi; 2011.
- Gupta, S.C. *Fundamentals of Statistics*. Himalaya Publishing House: Mumbai; 2004.
- Agrawal, B.L. *Basic Statistics*. New Age International Publishers: New Delhi; 2006.
- Kapoor, V.K. *Operations Research Techniques for Management*. Sultan Chand and Sons: New Delhi; 2011.

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