

F. Y. B. Com. Accounting and Finance

Semester - II

**Business
Mathematics**

SYLLABUS OBJECTIVES

- To teach the mathematical concepts and principles of multivariate calculus, vector and matrix algebra, differential equations and their applications in business and economics.
- To teach application of business mathematics in professional / real life.

Module I

Ratio, Proportion and Percentage

- **Ratio- Definition, Continued ratio, Inverse Ratio,**
- **Proportion - Continued proportion, Direct proportion, Inverse proportion,**
- **Variation - Inverse variation, Joint variation**
- **Percentage- Meaning and computation of percentage**

Module II

Profit and Loss

Terms and formulae, Trade discount, Cash discount, problems involving cost price, selling price, trade discount, cash discount. Introduction to Commission and brokerage – problems on commission and brokerage

Module III

Interest and Annuity

- **Simple interest, compound interest,**
- **Equated monthly instalments, reducing balance and flat rate of interest**
- **Annuity immediate- present value and future value**
- **Stated annual rate and effective annual rate**

Module IV

Shares and Mutual Fund

Shares- Concept, face value, market value, dividend, Equity shares, preference shares, bonus shares, Mutual Fund- Simple problems on calculation of net income after considering entry load, exit load, dividend, change in net asset value

SYLLABUS OUTCOMES

- Demonstrate an understanding of the foundations and history of mathematics.
- Perform computations in higher mathematics.
- Read and understand middle-level proofs.
- Write and understand basic proofs.
- Develop and maintain problem-solving skills.
- Use mathematical ideas to model real-world problems.