Applied Mathematics-I

Code: EDSC-101 Marks: 100
L T P Theory:50
4 0 0 Practical:50

Objectives:

1. Acquire knowledge in sets, relations and functions, sequence and series which has wider application in engineering problems.
2. To make the student knowledgeable in the area algebra functions and to solve engineering problems based on the above concepts
3. To make the student knowledgeable with basic and applied mathematics for further application

Learning Outcomes:

1. Become precise, exact and logical.
2. Acquire knowledge of mathematical terms, symbols, facts and formulae.
3. Understand basic Arithmetic and calculation methods.
4. Develop problem solving ability.
5. Acquire skills in applying the learning to situation including reading charts, tables, graphs
6. Understand the engineering applications.

Unit	KEY LEARNING
Unit-I Sets, Relations and Functions	• Theory of Sets • Relations • Functions • Polynomials and Graphical Representation
Unit-II Sequence and Series	• Introduction to Sequence and Series • Arithmetic Progression (A.P.) • Geometric Progression (G.P.) • Harmonic Progression (H.P.)
Unit-III Algebra-I	• Partial Fraction • Permutation • Combination • Binomial Theorem
Unit-IV Trigonometry	• Trigonometric Ratio • Compound Angles • Multiple and sub multiple angles • Transformations of products into sums or differences and vice versa
Unit-V Straight Lines	• Cartesian and Polar Coordinate • Different Forms of a Straight Line • General Equation of a Line • Distance of a Point from a Line

Suggested Readings:

1. Mathematics for class XI Part I and II NCERT.
2. Mathematics for class XII Part I and II NCERT.

Web URLs:

1. www.ncert.nic.in
2. www.nios.ac.in