

CIVIL ENGINEERING CONSTRUCTION MATERIALS

FIRST EDITION

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PRODUCTION AND OPERATION MANAGEMENT

FIRST EDITION

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APPLIED AND ENGINEERING PHYSICS

FIRST EDITION

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Any attempt at any level can't be satisfactorily completed without our students' collaborative effort, resulting in our Book being unique.

PREFACE

This book is designed for use in courses on Applied and Engineering Physics at the undergraduate/postgraduate level, particularly designed for the structured curriculum of Bachelor of Arts and Science.

Although the contents of the book follows the essential content of complete concepts of Applied and Engineering Physics is sufficiently broad in scope and rigorous in coverage to satisfy any undergraduate and postgraduate requirements in the field of Arts and Science.

The book is organized into Seven Sections:

Section 1, Describes about the Interference and its types, Conditions of Interference Fringes, Newton's Ring, Diffraction, Polarization, Propagation of Light Waves and its types, Double Refraction, Nicol's Prism, Quarter Wave Plate, Half Wave Plate etc.,

Section 2, Covers the Lasers and its Characteristics, Fundamental terms of Lasers, Types of Lasers, Applications of Laser, Fiber Optics, Structure & Principle of Optical Fiber, Numerical Aperture (NA), Advantages of Optical Fiber in Communication system etc.,

Section 3, Delivers the Introduction to Crystallography, Solids, Fundamental Terms of Crystal structure, Crystal System and Bravais Lattice, Crystal Structures & its types, X-Ray Diffraction, Miller Indices, Bragg's Law etc.,

Section 4, Includes the Introduction to Magnetism, Magnetic Dipole, Magnetic moment, Magnetic Field, Magnetic permeability, Relative permeability, Magnetic susceptibility, Types of Magnetic materials, Hysteresis Loop, Super Conductivity & its Properties, Types of super conductors, Applications of Super conductors etc.,

Section 5, Includes the Introduction to Acoustics, Sound Absorption, Reverberation, Measurement of absorption coefficient, Sabine Formula,

Eyring Equation, Detail about Ultrasonics & its Properties, Production of Ultrasonic Waves & its Applications etc.,

The analyses and discussion, covering these seven sections in the various units of this book, are based on the readings recommended for this course.

However, wherever required, we have supplemented from other sources reference. A select bibliography is given at the end of the book for reference to the authors cited in the text I hope this thoroughly book on Applied and Engineering Physics will prove handy and useful to students and teachers on the same.

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A TEXTBOOK OF ANALYTICAL CHEMISTRY

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BASIC KNOWLEDGE IN CIVIL ENGINEERING

FIRST EDITION

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ELECTRICAL MACHINES

FIRST EDITION

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