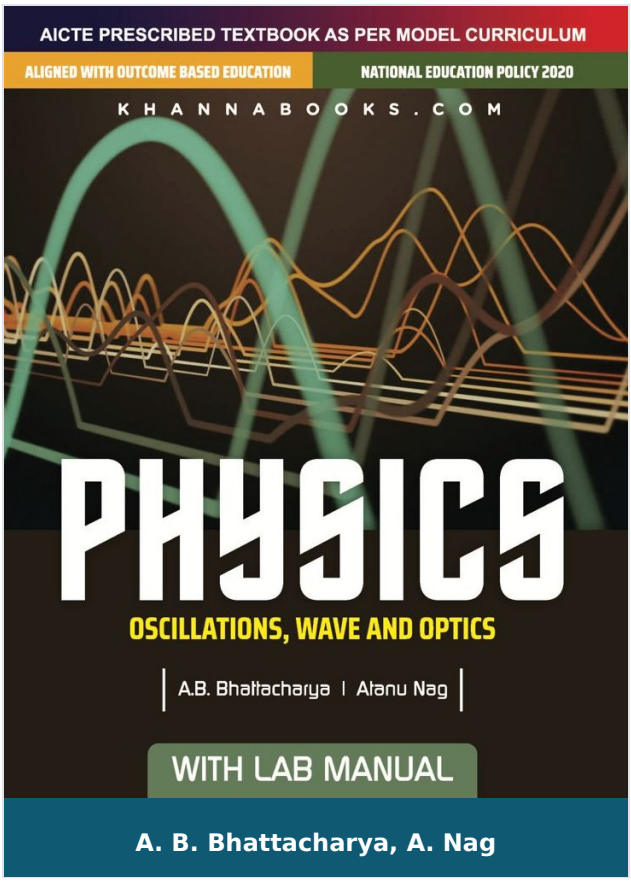


Physics (Oscillations, Waves and Optics) With Lab Manual

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Prof. A. B. Bhattacharya did his MSc and PhD degree from the University of Calcutta in Physics and Post-doc from the Massachusetts Institute of Technology (MIT), Cambridge, USA. He worked in close collaboration with the leading laboratories like Lincoln Laboratory; Milestone Hill Observatory; Earth, Atmospheric and Planetary Sciences division of MIT and many other well recognized laboratories in India and abroad. He served as Professor & Head of the Department of Physics, University of Kalyani; Dean of Research and Head of the ECE Department, Techno India University; Pro Vice Chancellor of JIS University and Director of Brainware University. He has published 32 text books for Science and Engineering students, two popular books for general readers and over 400 research articles in reputed International Journals. Under his supervision 24 scholars

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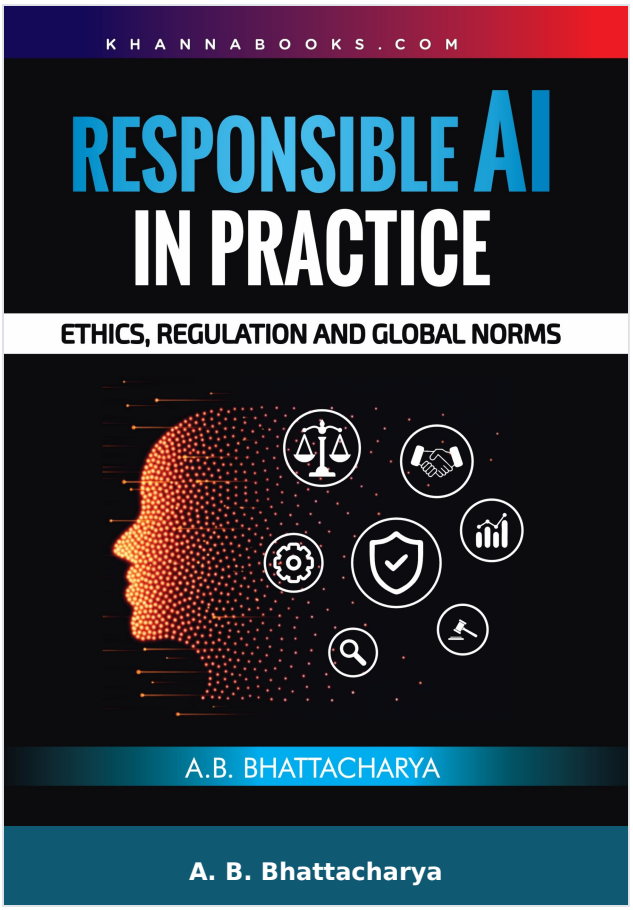
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Product Description

Responsible AI in Practice (Ethics, Regulation and Global Norms)

Responsible Al in Practice: Ethics, Regulation and Global Norms serves as a vital compass for navigating the complex intersection of cutting-edge technology and human values. In an era where Artificial Intelligence has moved from science fiction to a pervasive social force, this book addresses the urgent question of how to ensure Al serves humanity rather than undermining it. It transcends abstract academic debate by bridging the gap between philosophical reflection and real-world implementation, offering a practical guide to transforming high- level ethical principles into actionable product designs and regulatory enforcement.

The text meticulously explores the evolving tapestry of global Al governance, from the European Union's Al Act to UNESCO's global guidelines, providing a multidimensional view of how different nations are crafting a shared ethical language for machines. Designed for a broad audience, it speaks directly to policymakers drafting laws, engineers embedding ethics into code, researchers probing machine learning boundaries, and engaged citizens seeking to understand the societal mirror that Al represents. By weaving together case studies, ethical checklists, and comparative legal insights, the book empowers readers to act as responsible custodians of transformative technology.

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- **Sustainable and Future-Ready Innovation**: The text prepares readers for emerging shifts-such as Generative Al and deepfakes-while advocating for "Green Al." This vision balances technological advancement with ecological sustainability and the promotion of equitable economic opportunities worldwide.

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- Building Ethical AI: Frameworks, Tools and Best Practices
- AI and the Future of Work: Ethics and Social Justice
- The Road Ahead: Future Challenges and Ethical Imperatives
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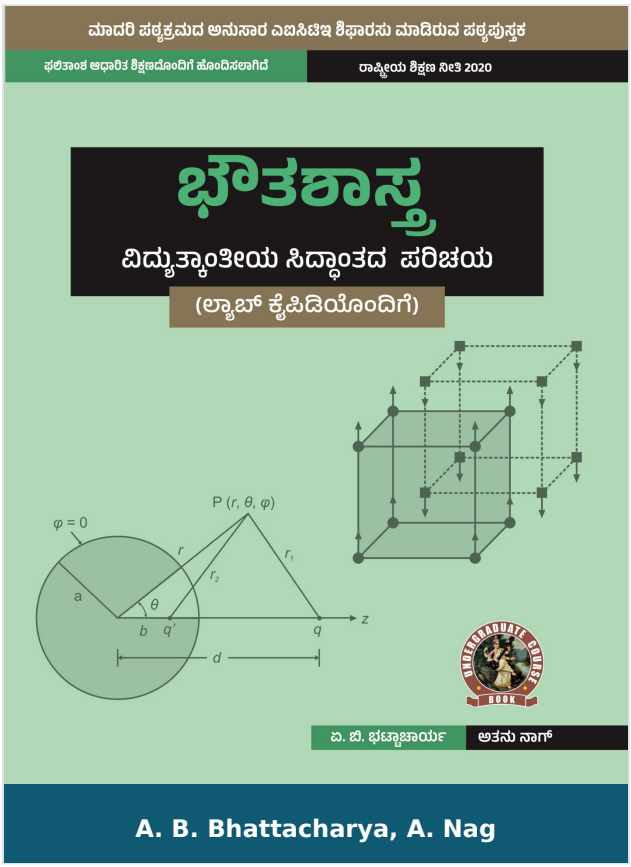
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Engineering Physics: Introduction to Electromagnetic Theory has been written for the first year students of B. Tech Engineering Degree Courses of all Indian Universities following the guideline and syllabus as recommended by AICTE. The book, written in a very simple and lucid way, will be very much helpful to reinforce understanding of different aspects to meet the engineering student’s needs Writing a text-cum manual of this category poses several challenges providing enough content without sacrificing the essentials, highlighting the key features, presenting in a novel format and building informative assessment. This book on engineering physics will prepare students to apply the knowledge of Electromagnetic Theory to tackle 21st century and onward engineering challenges and address the related questions.

Some Salient Features of the Book:

1. Expose basic science to the engineering students to the fundamentals of physics and to enable them to get an insight of the subject.

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4. Information as well as comprehensive synopsis of formulae for a quick revision of the basic principles.

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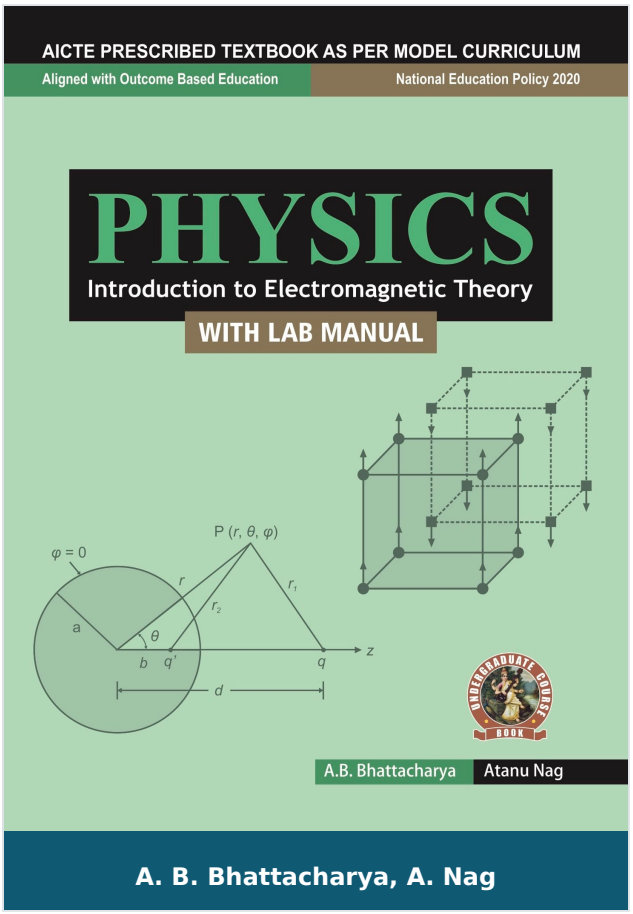
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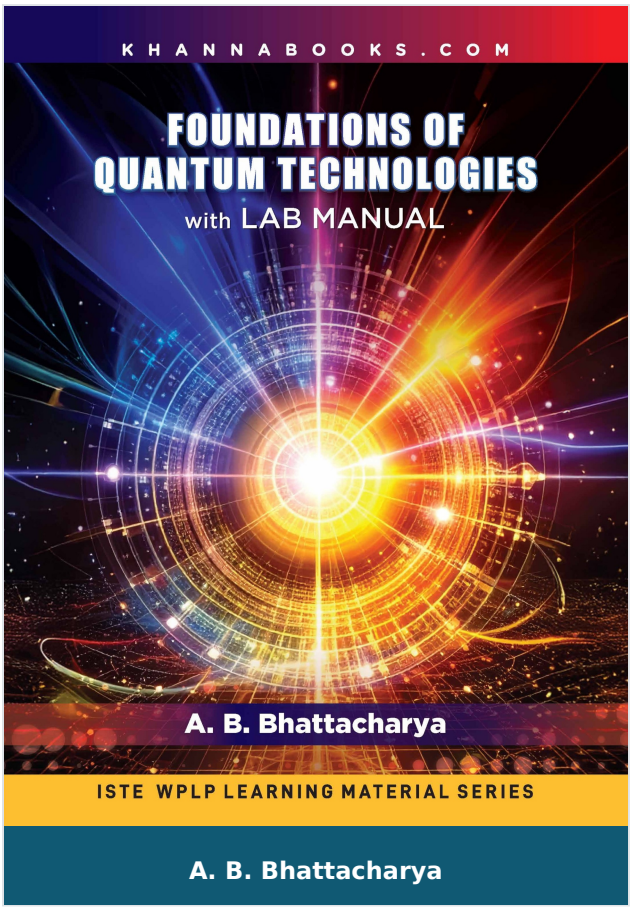
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Product Description

Foundations of Quantum Technology with Lab Manual

Explore the Future — Learn the Fundamentals — Master the Tools

Step into the next revolution in science and technology with Foundations of Quantum Technologies (with Lab Manual) — an all-encompassing guide designed for students, educators, and researchers aiming to understand and work with the principles and real-world applications of quantum mechanics.

WHAT'S INSIDE

Part I: Fundamentals of Quantum Mechanics

Begin your journey with a deep dive into the origin and evolution of quantum theory. Understand wave-particle duality, measurement postulates, and the ground-breaking concept of quantum entanglement. Enrich your learning with multiple-choice questions, solved numerical problems, and project ideas at the end of each chapter.

Part II: Core Quantum Technologies

From quantum computing and cryptography to teleportation and metrology, discover how abstract quantum principles power the innovations shaping tomorrow. Learn algorithms like Shor's and Grover's, and explore secure communication via the BB84 Protocol.

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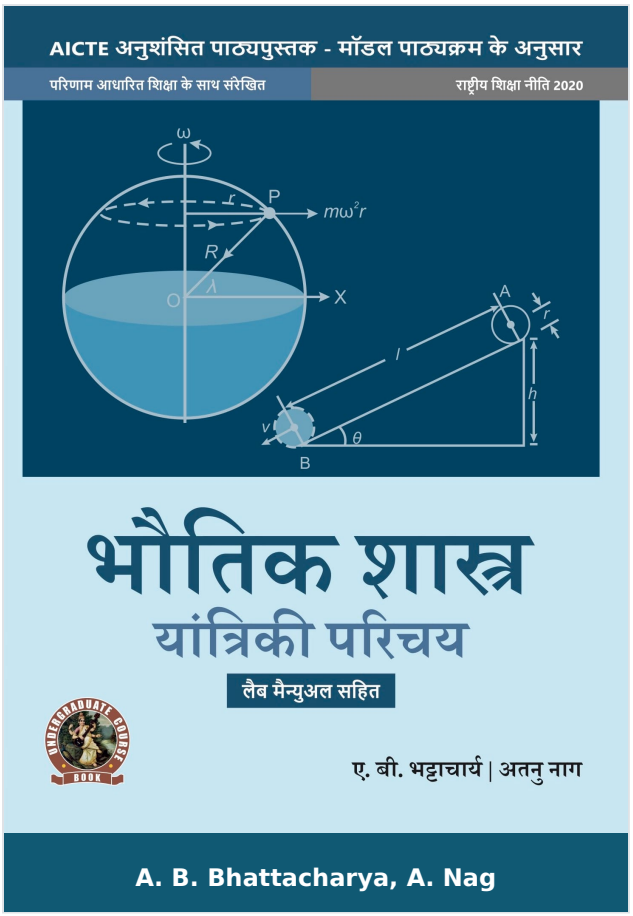
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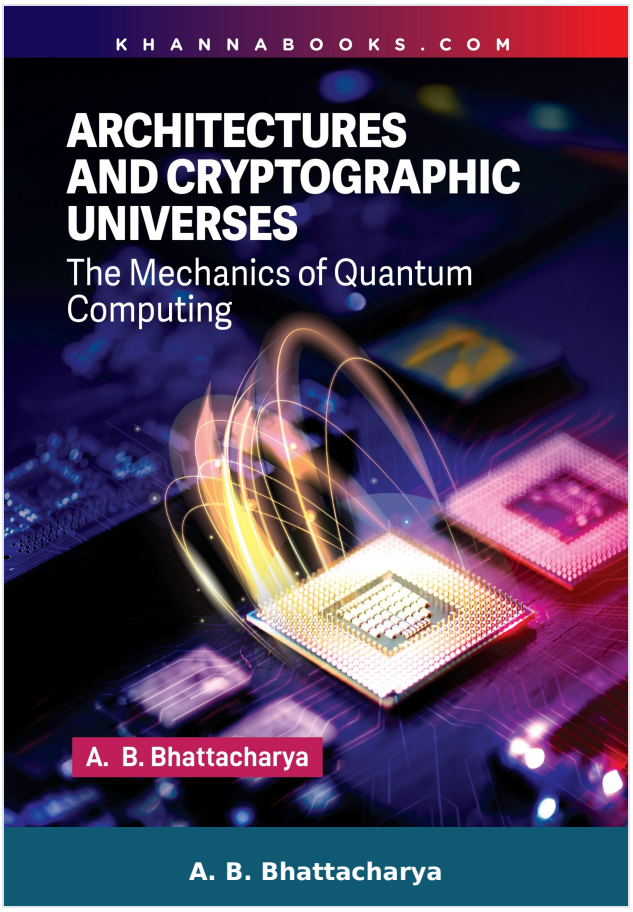
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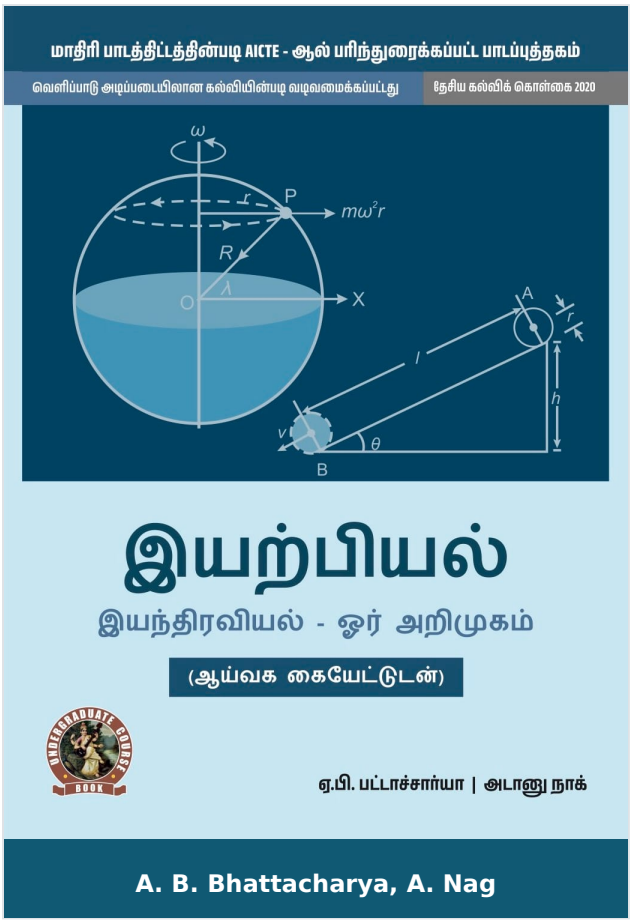
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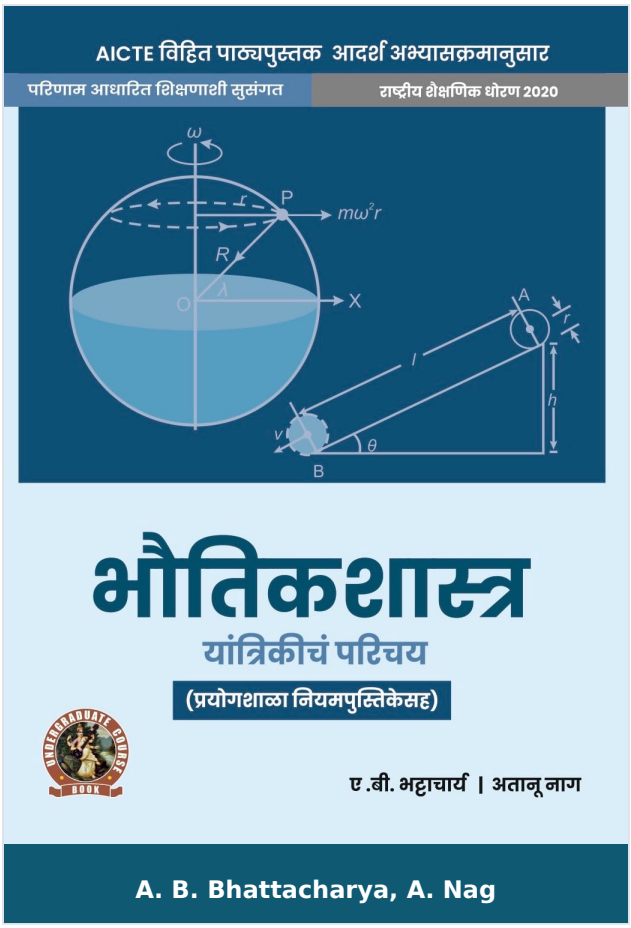
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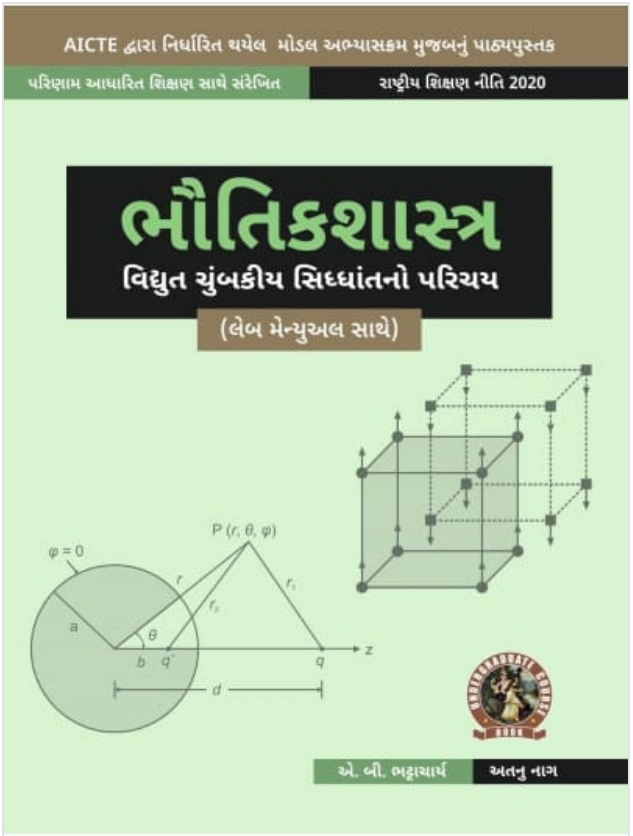
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