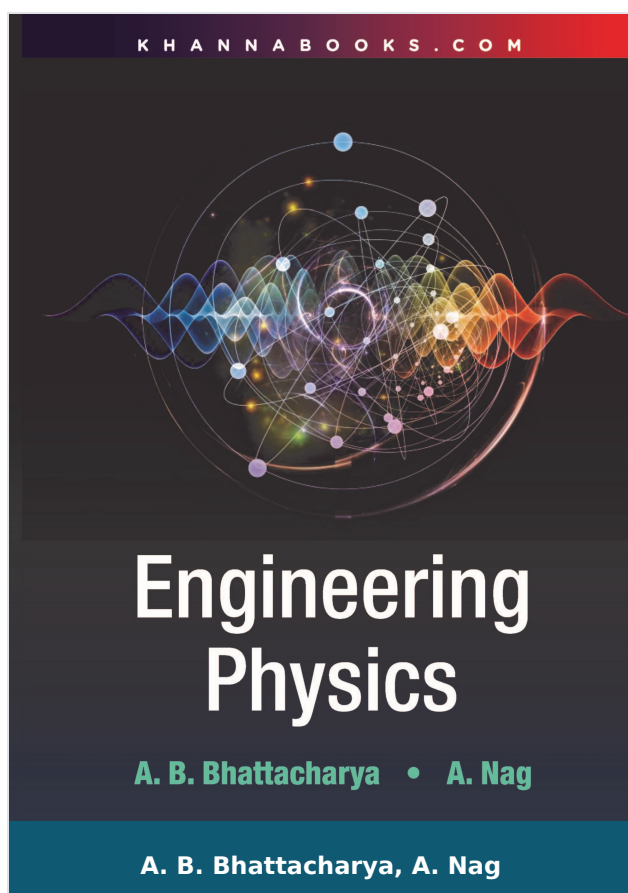




## Engineering Physics

|                         |                                                               |
|-------------------------|---------------------------------------------------------------|
| <b>Author :</b>         | A. B. Bhattacharya, A. Nag                                    |
| <b>ISBN 13 :</b>        | 978-93-89139-07-5                                             |
| <b>ISBN 10 :</b>        | 9389139074                                                    |
| <b>E-ISBN 13 :</b>      | 978-93-89139-07-5                                             |
| <b>Edition :</b>        | First                                                         |
| <b>Pages :</b>          | 686                                                           |
| <b>Type of book :</b>   | Physical                                                      |
| <b>Year :</b>           | 2025                                                          |
| <b>Language :</b>       | English                                                       |
| <b>Publisher :</b>      | Khanna Publishing House                                       |
| <b>M.R.P :</b>          | Rs 695.00                                                     |
| <b>Categories :</b>     | <a href="#">Book Store, Applied Sciences &amp; Humanities</a> |
| <b>Condition Type :</b> | New                                                           |
| <b>Country Origin :</b> | India                                                         |

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## Product Description

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In this book titled 'Engineering Physics,' the authors have given sincere efforts to explain the concepts of Physics in a very judicial way for the Engineering students of different branches so that they can acquire a reasonably good knowledge on the subject without devoting much time. In order to implement it successfully, the authors have maintained the following two features throughout:

1. Learning objectives are outlined at the beginning of each chapter followed by their item-wise presentation lucidly for a better understanding of the readers.
2. Each chapter is enriched with solved numerical problems including exercises and supplementary problems for the routine practice helpful for the examinations.

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  - Motion of a Rigid Body
  - Oscillations
- SECTION II: WAVES AND OPTICS
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  - Chapter (: Lasers & Holography
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  - Quantum Physics
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  - Introduction to Molecular Bonding
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  - Introduction to Solids

## Author

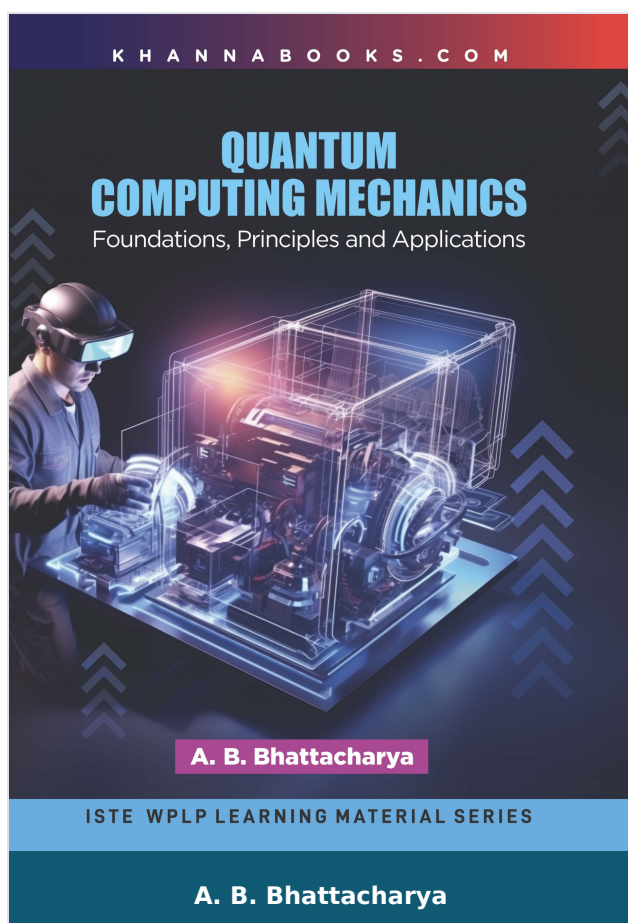
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## Quantum Computing Mechanics(Foundations, Principles and Applications)

|                         |                                                                              |
|-------------------------|------------------------------------------------------------------------------|
| <b>Author :</b>         | A. B. Bhattacharya                                                           |
| <b>ISBN 13 :</b>        | 978-93-55388-85-8                                                            |
| <b>ISBN 10 :</b>        | 9355388853                                                                   |
| <b>E-ISBN 13 :</b>      | 978-93-55388-85-8                                                            |
| <b>Edition :</b>        | First                                                                        |
| <b>Pages :</b>          | 312                                                                          |
| <b>Type of book :</b>   | Physical                                                                     |
| <b>Year :</b>           | 2026                                                                         |
| <b>Language :</b>       | English                                                                      |
| <b>Publisher :</b>      | Khanna Publishing House                                                      |
| <b>M.R.P :</b>          | Rs 548.00                                                                    |
| <b>Categories :</b>     | <a href="#">New Arrivals, Emerging Technologies, Book Store, ISTE Series</a> |
| <b>Condition Type :</b> | New                                                                          |
| <b>Country Origin :</b> | India                                                                        |

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- A rigorous yet accessible introduction to the principles of quantum mechanics and how they power next-generation computation.
- Core topics like qubits, quantum gates, superposition, entanglement, and interference, laid out clearly with diagrams, examples, and circuit design.
- Step-by-step walkthroughs of groundbreaking quantum algorithms including Grover's, Shor's, and the Quantum Fourier Transform.
- Essential coverage of error correction, fault tolerance, and the global push toward quantum supremacy.
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From the roots of classical logic to the surreal domain of entangled qubits, **Quantum Computing Mechanics** brings clarity to complexity. It does not merely teach you what quantum computing is—it shows you why it matters.

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- QUANTUM ENTANGLEMENT AND NONLOCALITY
- QUANTUM ALGORITHMS
- QUANTUM ERROR CORRECTION AND FAULT TOLERANCE
- APPENDICES

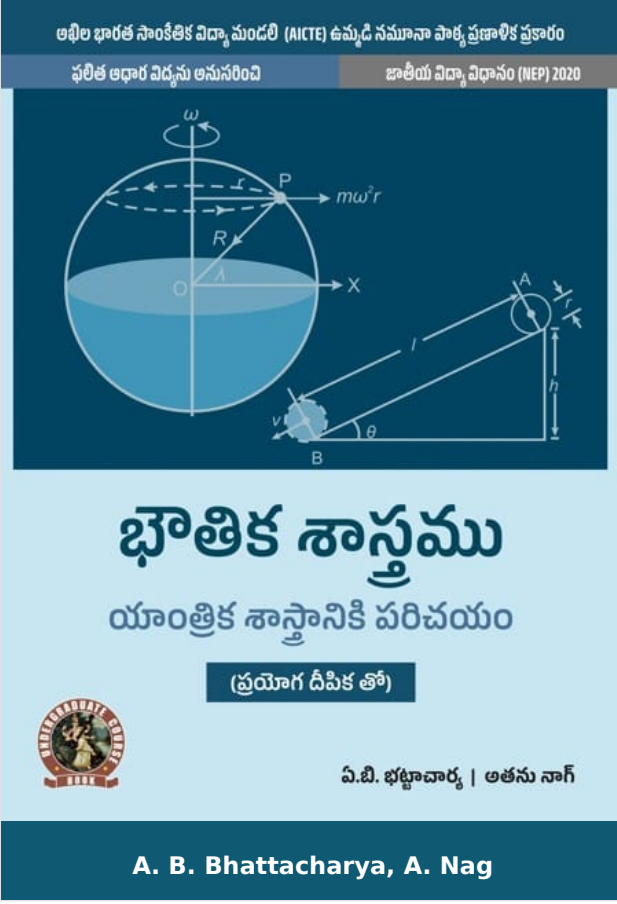
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received their doctoral degree. He is a fellow of the Institute of Electronics and Telecommunication Engineers and member of many scientific organizations. India International Friendship Society awarded him the prestigious "Shiksha Ratna Award" and Certificate of Excellence for meritorious services, outstanding performance and significant contribution to education. The International Institute of Success Awareness honored him with their globally recognized "Glory of India Gold Medal" for his outstanding contribution to the national stature of India. A few words from the certificate issued by Prof. Williams of MIT may be quoted "Our collaborative effort was directed at the wavelength dependence of radar echoes observations with the Millstone Hill UHF radar in Westford. He made use of the Charles River Data System computer in the Weather Radar Laboratory for these calculations. His results help to make a convincing case that the volume reflectivity associated with lighting is a diminishing function of radar wavelength, contrary to contemporary thinking". Dr.



## Physics (Introduction to Mechanics) with Lab Manual

**Author :** A. B. Bhattacharya, A. Nag

**ISBN 13 :** 978-93-91505-96-7

**ISBN 10 :** 9391505961

**E-ISBN 13 :** 978-93-91505-96-7

**Edition :** 1

**Pages :** 256

**Type of book :** Physical

**Year :** 2025

**Language :** English

**Publisher :** Khanna Publishing House

**M.R.P :** Rs 295.00

**Categories :** [AICTE Prescribed Textbooks,](#)  
[Telugu Books, Book Store, Ebooks](#)

**Condition Type :** New

**Country Origin :** India

## Product Description

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Physics: Introduction to Mechanics 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 Mechanics to tackle 21 century and onward engineering challenges and address the related questions.

Some Salient features of the book:

- Expose basic science to the engineering students to the fundamentals of physics and to enable them to get an insight of the subject.
- To develop knowledge on critical questions solved and supplementary problems covering all type of medium and advanced level
- Under problems in a very logical and systematic manner.
- Some essential information for the user the heading "Know more" for clarifying some basic information as well as comprehensive synopsis of formulae for a quick revision of the basic principles.
- Constructive manner of presentation so that an Engineering degree students can prepare to work in different sectors or in national laboratories at the very forefront of technology.

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- Maxwell's Equations.
- Electromagnetic Waves.
- Table of Physical Constants
- Appendices
- Annexures
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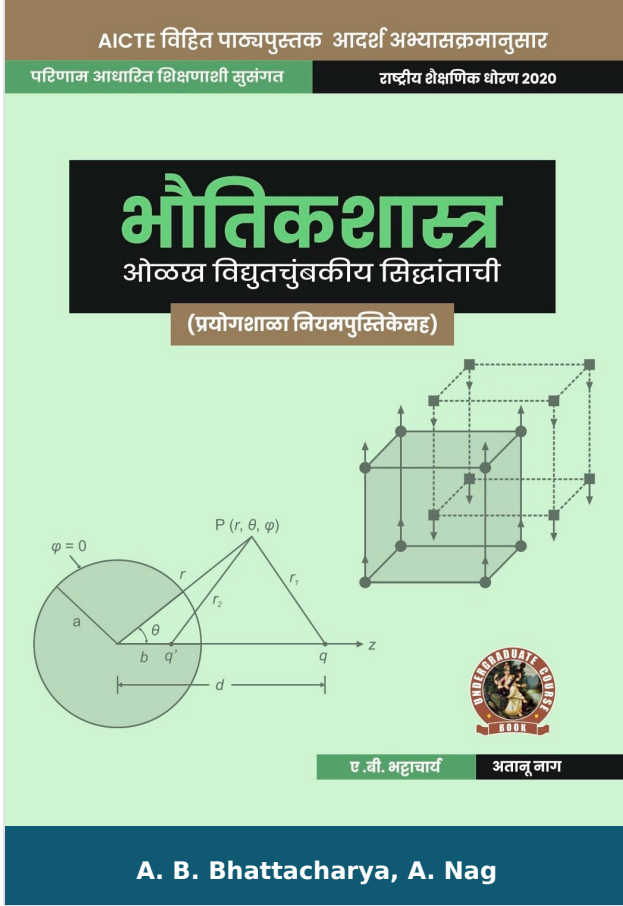
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## Physics (Introduction to Electromagnetic Theory with Lab Manual)

**Author :** A. B. Bhattacharya, A. Nag

**ISBN 13 :** 978-93-55380-29-6

**ISBN 10 :** 9355380291

**E-ISBN 13 :** 978-93-55380-29-6

**Edition :** First

**Pages :** 340

**Type of book :** Physical

**Year :** 2022

**Language :** English

**Publisher :** Khanna Publishing House

**M.R.P :** Rs 395.00

**Categories :** [AICTE Prescribed Textbooks,](#)  
[Marathi Books, Book Store,](#)  
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**Condition Type :** New

**Country Origin :** India

## Product Description

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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.

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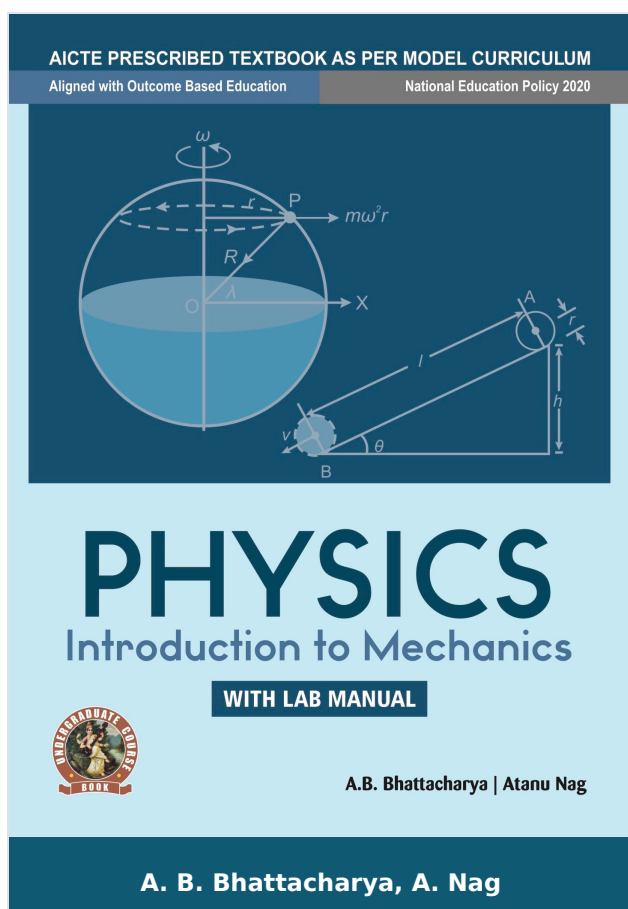
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## Physics (Introduction to Mechanics) (with Lab Manual)

**Author :** A. B. Bhattacharya, A. Nag

**ISBN 13 :** 978-93-91505-05-9

**ISBN 10 :** 9391505058

**E-ISBN 13 :** 978-93-91505-05-9

**Edition :** First

**Pages :** 228

**Type of book :** Physical

**Year :** 2024

**Language :** English

**Publisher :** Khanna Publishing House

**M.R.P :** Rs 295.00

**Categories :** [AICTE Prescribed Textbooks,](#)  
[English Books, Book Store,](#)  
[Ebooks, Applied Sciences &](#)  
[Humanities](#)

**Condition Type :** New

**Country Origin :** India

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- Oscillations
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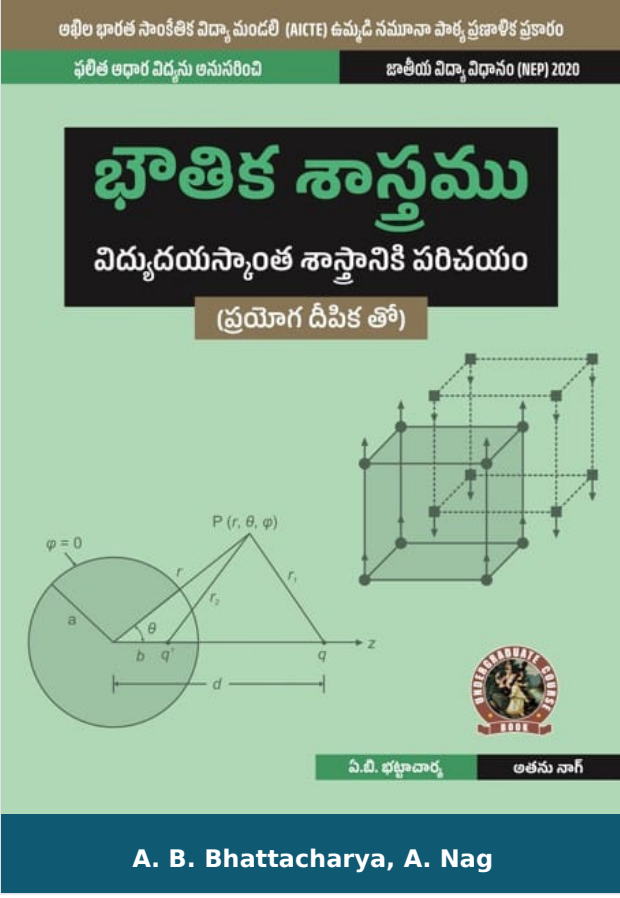
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|                         |                                                                                                 |
|-------------------------|-------------------------------------------------------------------------------------------------|
| <b>Author :</b>         | A. B. Bhattacharya, A. Nag                                                                      |
| <b>ISBN 13 :</b>        | 978-93-91505-88-2                                                                               |
| <b>ISBN 10 :</b>        | 9391505880                                                                                      |
| <b>E-ISBN 13 :</b>      | 978-93-91505-88-2                                                                               |
| <b>Edition :</b>        | 1                                                                                               |
| <b>Pages :</b>          | 384                                                                                             |
| <b>Type of book :</b>   | Physical                                                                                        |
| <b>Year :</b>           | 2025                                                                                            |
| <b>Language :</b>       | English                                                                                         |
| <b>Publisher :</b>      | Khanna Publishing House                                                                         |
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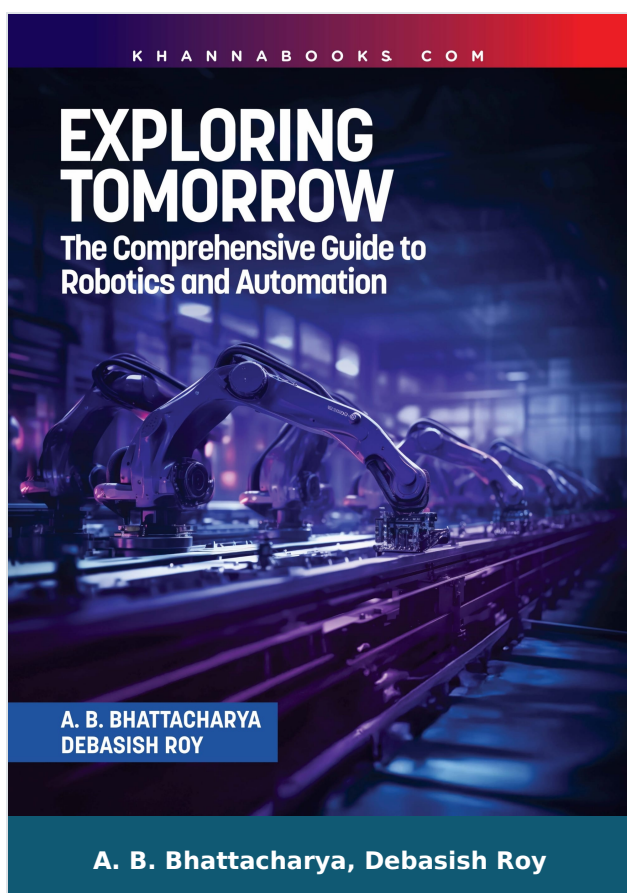
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## Exploring Tomorrow (The Comprehensive Guide to Robotics and Automation)

**Author :** A. B. Bhattacharya, Debasish Roy

**ISBN 13 :** 978-93-55387-25-7

**ISBN 10 :** 9355387253

**E-ISBN 13 :** 978-93-55387-25-7

**Edition :** 1

**Pages :** 416

**Type of book :** Physical

**Year :** 2025

**Language :** English

**Publisher :** Khanna Publishing House

**M.R.P :** Rs 575.00

**Categories :** [Emerging Technologies, Book Store](#)

**Condition Type :** New

**Country Origin :** India

## Product Description

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2. Focuses on human-robot collaboration, ethical challenges, privacy, and job displacement issues.
3. Details the technologies behind self-driving cars and autonomous drones. Covering AI, sensor fusion, computer vision, and control systems.
4. Explores surgical robots, rehabilitation robotics, telemedicine, and their contributions to healthcare.
5. Discusses agricultural robots for tasks like planting, weeding, harvesting, and livestock management.
6. Examines educational robots like LEGO Mind storms, Ozobot, and Sphero, and their integration into curricula.
7. Highlights the role of robotics in space missions, including rovers, unmanned spacecraft, and teleportation.
8. Explores robots used in search and rescue, hazard environments, mapping, and medical assistance.
9. Discusses robots inspired by biological systems, focusing on design, locomotion, and sensory systems.
10. Looks at the use of robots in theme parks, robotic performers, customer service, and logistics.

11. Discusses trends in automation, collaborative robotics, and their impact on the workforce.
12. Focuses on automation in manufacturing, robotic arms, robots, and cyber security.
13. Addresses technical challenges, research efforts, and the future of robotics.
14. Envisions future developments like swarm robotics and human- like androids.
15. Numerical problems, short questions, MCQs, project works, and others for all the chapters.

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- Human-Robot Collaboration: Ethics and Social Implications of Robotics.
- Autonomous Vehicles and Drones: Part of the broader of Robotics and AI.
- Robotics in Healthcare.
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- Robotics in Space Exploration.
- Role of Robotics in Disaster Response.
- Biologically-Inspired Robotics.
- Robotics in Entertainment and Service Industries.
- Automation and the Workforce: Emerging Trends.
- Interconnected Domains of Industrial Automation and Robotics.
- Robotics and Automation Technologies used in Modern Warfare.
- Challenges in Robotics and Automation.

## Author

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### A. B. Bhattacharya

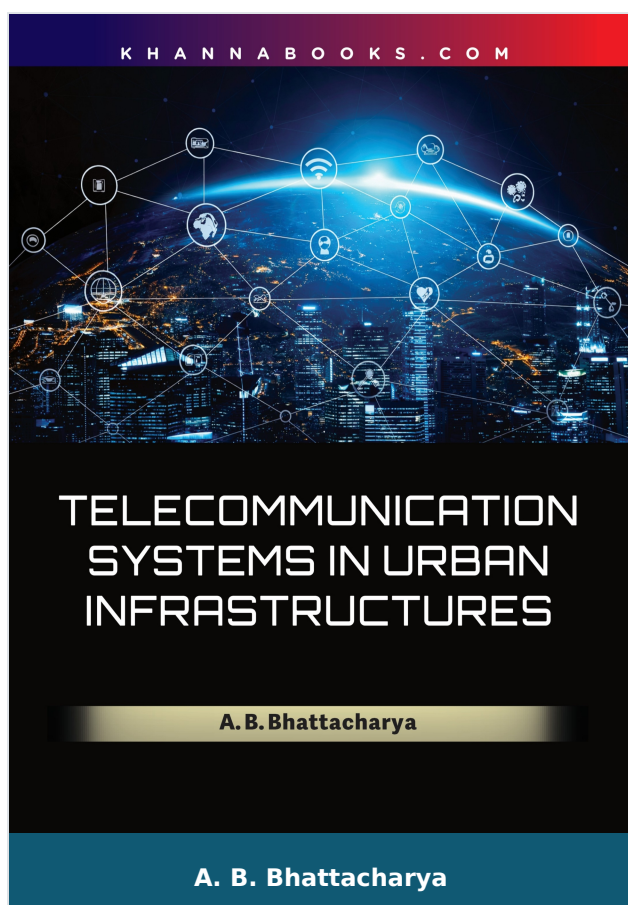
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#### **Debasish Roy**

Dr. Debasish Roy is a highly accomplished and motivated professional with a robust academic background in Information Technology, including an MCA, MBA M. Tech, and PhD. He was currently the Director General( Railways) at a top-level position in the Indian Police Service ( IPS). He received the Indian Police Medal and President's Police Medal in 2000 and 2010. He is well known for pioneering contributions in land mobile radio systems. He is highly recognized for spearheading strategic planning and execution of security measures for the railways network, implementing innovative technologies to enhance railway security and counteract emerging day-to-day operations efficiently. He has provided expert guidance on implementing land mobile radio system for public safety agencies and conducted groundbreaking research in cryptanalysis, leading to

development of advanced techniques for enhancing cyber security. He successfully led a team in designing and implementing secure communication protocols for land mobile radio systems, ensuring robust and encrypted communication. He has published numerous research papers in reputed conferences. He mentored and guided students at the postgraduate and doctoral levels. He has a proven track record of effective leadership and team management, besides all his strategies planning and execution in high-stakes environments. He received many honors and awards for his outstanding contributions to the field and was recognized for exceptional leadership and innovation in technology-driven security initiatives. He completed an Executive Program in Quantum Computing and Machine Learning from IIT Delhi in 2023. He participated in the Workshop on Machine Learning for Cryptology (ML4Crypto 2023) at ISI, Kolkata from November 8-10, 2023, organized by SAG, DRDO. His recent paper on " Iterative Quantum Algorithm for Linear System Solving" has been accepted at the International Conference SAI, Computing, 2024 London, organized by Microsoft Corporation.



## Telecommunication Systems In Urban Infrastructures

|                         |                                                                                                   |
|-------------------------|---------------------------------------------------------------------------------------------------|
| <b>Author :</b>         | A. B. Bhattacharya                                                                                |
| <b>ISBN 13 :</b>        | 978-93-74542-78-1                                                                                 |
| <b>ISBN 10 :</b>        | 9374542781                                                                                        |
| <b>E-ISBN 13 :</b>      | 978-93-74542-78-1                                                                                 |
| <b>Edition :</b>        | First                                                                                             |
| <b>Pages :</b>          | 344                                                                                               |
| <b>Type of book :</b>   | Physical                                                                                          |
| <b>Year :</b>           | 2026                                                                                              |
| <b>Language :</b>       | English                                                                                           |
| <b>Publisher :</b>      | Khanna Publishing House                                                                           |
| <b>M.R.P :</b>          | Rs 495.00                                                                                         |
| <b>Categories :</b>     | <a href="#">Electrical, Electronics &amp; Communication Engineering, New Arrivals, Book Store</a> |
| <b>Condition Type :</b> | New                                                                                               |
| <b>Country Origin :</b> | India                                                                                             |

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### Telecommunication Systems In Urban Infrastructures

Modern cities run on connectivity. From smart transport and energy grids to IoT-enabled homes and resilient emergency networks, telecommunication on systems form invisible backbone of urban life. Telecommunication systems in Urban Infrastructure delivers a comprehensive, practical, and future-focused exploration of how communication technologies design, support, and transform smart cities.

This book bridges theory and real-world application, guiding students, engineers, planners, and policymakers through the full ecosystem of urban telecommunication – from foundational signal principles to emerging 6G, AI- driven networks, and cyber-resilient infrastructure.

#### Readers will explore:

- Core principles of wired and wireless telecommunication systems
- Smart city connectivity for transport, utilities, building, and public spaces
- IoT integration, cyber security, and urban data privacy
- Planning, deployment, and economic challenges in dense urban environments
- Cutting-edge technologies including AI optimization, edge/cloud computing, and quantum communication
- Global smart city case studies and future sustainability trends

#### Each chapter is carefully structured with:

- Concept explanations grounded in real urban scenarios
- Numerical problems and technical exercises
- Short questions and multiple-choice assessments
- Projects ideas with guided solution

- Practical insights into standards, regulations, and infrastructure planning

With coverage spanning telecom fundamentals, smart utilities, mobility systems, urban IoT, security frameworks, and next-generation networks, this book provides a complete roadmap for designing and managing connected cities. Whether you are preparing for academic study, professional deployment, or research in smart infrastructure, this text equips you with the technical depth, analytical tools, and systems perspective required building the cities of tomorrow.

Build smarter networks. Design resilient cities. Shape the connected future.

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- Telecommunication in Buildings and Urban Spaces
- Internet of Things (IoT) in Urban Infrastructure
- Cyber Security and Data Privacy in Urban Telecom Systems
- Planning and Deployment of Telecom Infrastructure in Cities
- Emerging Technologies In Urban Telecommunications
- Case Studies of Telecommunication in Smart Cities
- Future Trends and Challenges
- Visual Architectures and System Diagrams In Urban Telecommunication Infrastructure
- Appendix

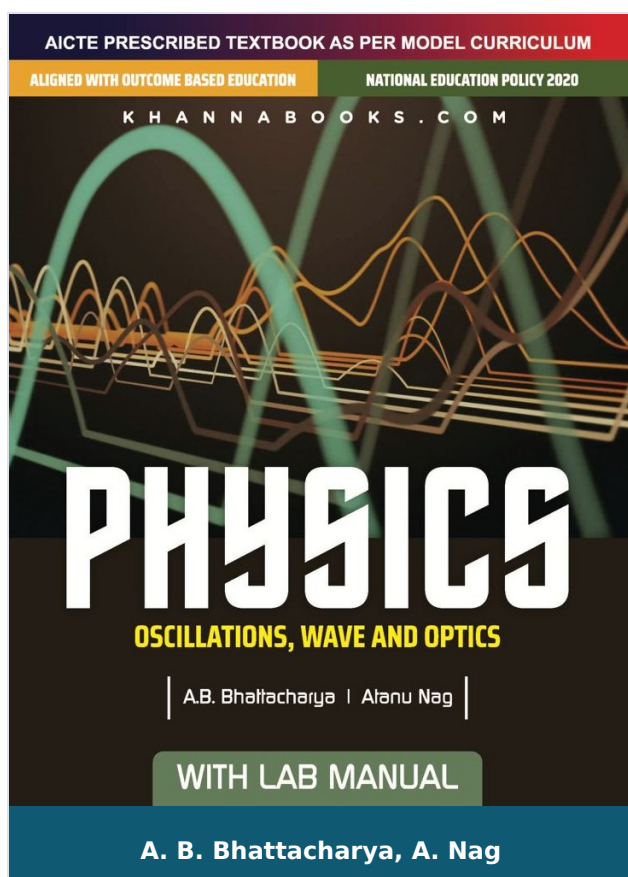
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## Physics (Oscillations, Waves and Optics) With Lab Manual

**Author :** A. B. Bhattacharya, A. Nag

**ISBN 13 :** 978-93-91505-13-4

**ISBN 10 :** 9391505139

**E-ISBN 13 :** 978-93-91505-13-4

**Edition :** 1

**Pages :** 272

**Type of book :** Physical

**Year :** 2025

**Language :** English

**Publisher :** Khanna Publishing House

**M.R.P :** Rs 295.00

**Categories :** [AICTE Prescribed Textbooks,](#)  
[English Books, Ebooks](#)

**Condition Type :** New

**Country Origin :** India

## Product Description

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For the implementation of an outcome based education the first requirement is to develop an outcome based curriculum and incorporate an outcome based assessment in the education system. By going through outcome based assessments evaluators will be able to evaluate whether the students have achieved the outlined standard, specific and measurable outcomes. With the proper incorporation of outcome based education there will be a definite commitment to achieve a minimum standard for all learners without giving up at any level. At the end of the Programme running with the aid of outcome based education, a student will be able to arrive at the following outcomes

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- Units 4: Wave Optics
- Lasers
- Table of Physical Constants
- Appendices
- Annexures
- Reference for Future learning
- CO and PO Attainments Table
- Index

## Author

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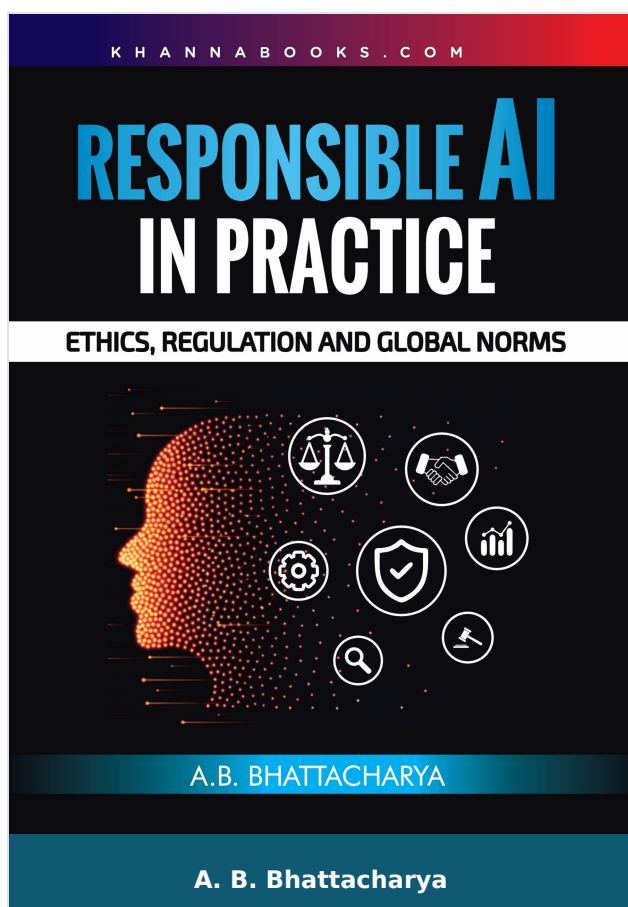
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## Responsible AI in Practice (Ethics, Regulation and Global Norms)

**Author :** A. B. Bhattacharya

**ISBN 13 :** 978-93-74541-46-3

**ISBN 10 :** 9374541467

**E-ISBN 13 :** 978-93-74541-46-3

**Edition :** First

**Pages :** 424

**Type of book :** Physical

**Year :** 2026

**Language :** English

**Publisher :** Khanna Publishing House

**M.R.P :** Rs 590.00

**Categories :** [New Arrivals, Emerging Technologies, Book Store](#)

**Condition Type :** New

**Country Origin :** India

## Product Description

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

Responsible AI 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 AI 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 AI governance, from the European Union's AI 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 AI represents. By weaving together case studies, ethical checklists, and comparative legal insights, the book empowers readers to act as responsible custodians of transformative technology.

### Salient Features: -

- **Practical Frameworks for Ethical Design:** The book moves beyond theory to provide a "roadmap" for embedding fairness and accountability directly into AI architecture. It offers technical toolkits for mitigating bias and solving the "Black Box" problem through Explainable AI (XAI), ensuring systems are both transparent and trustworthy.

- **Global Regulation and Human Rights:** It provides a comprehensive analysis of the international regulatory landscape, including the EU AI Act and UNESCO guidelines. This focus extends to protecting fundamental human rights against risks like mass surveillance, profiling, and the unethical use of autonomous systems.
- **Sustainable and Future-Ready Innovation:** The text prepares readers for emerging shifts-such as Generative AI and deepfakes-while advocating for "Green AI." 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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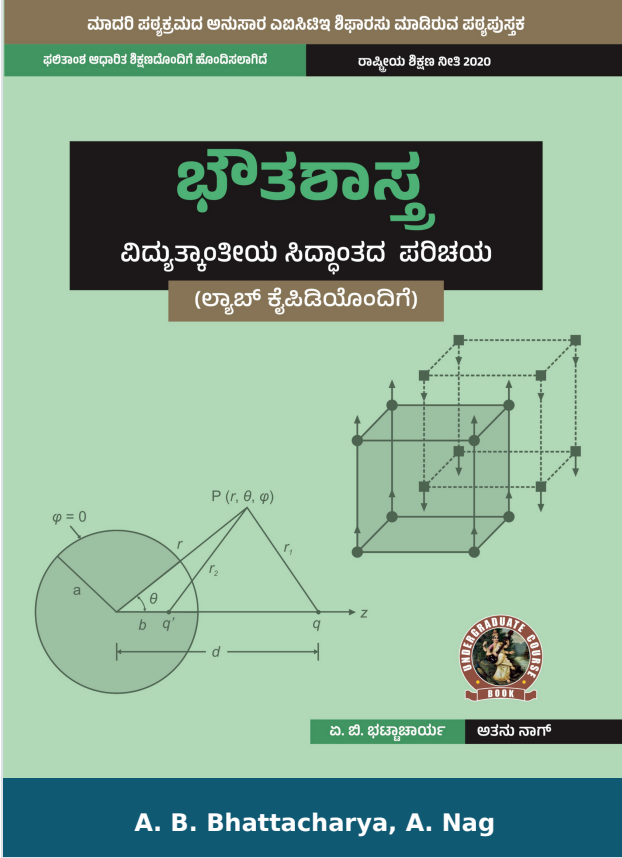
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## Physics (Introduction to Electromagnetic Theory) (with Lab Manual)

**Author :** A. B. Bhattacharya, A. Nag

**ISBN 13 :** 978-93-91505-86-8

**ISBN 10 :** 9391505864

**E-ISBN 13 :** 978-93-91505-86-8

**Edition :** 1

**Pages :** 320

**Type of book :** Physical

**Year :** 2025

**Language :** English

**Publisher :** Khanna Publishing House

**M.R.P :** Rs 395.00

**Categories :** [AICTE Prescribed Textbooks,](#)  
[Kannada Books, Book Store,](#)  
[Ebooks](#)

**Condition Type :** New

**Country Origin :** India

## Product Description

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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.
2. To develop knowledge on critical questions, solved and supplementary problems covering all types of medium and advanced level problems in a very logical and systematic manner.
3. Some essential information for the users under the heading "know More" for clarifying some basic
4. Information as well as comprehensive synopsis of formulae for a quick revision of the basic principles.
5. Constructive manner of presentation so that an Engineering degree students can prepare to work in different sector or in national laboratories at the very forefront of technology.

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- Acknowledgement
- Preface
- Outcome Based Education
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- Guidelines for Students
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- Electrostatics in Linear Dielectric Medium
- Magnetostatics
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- Faraday's Law
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- Electromagnetic Waves
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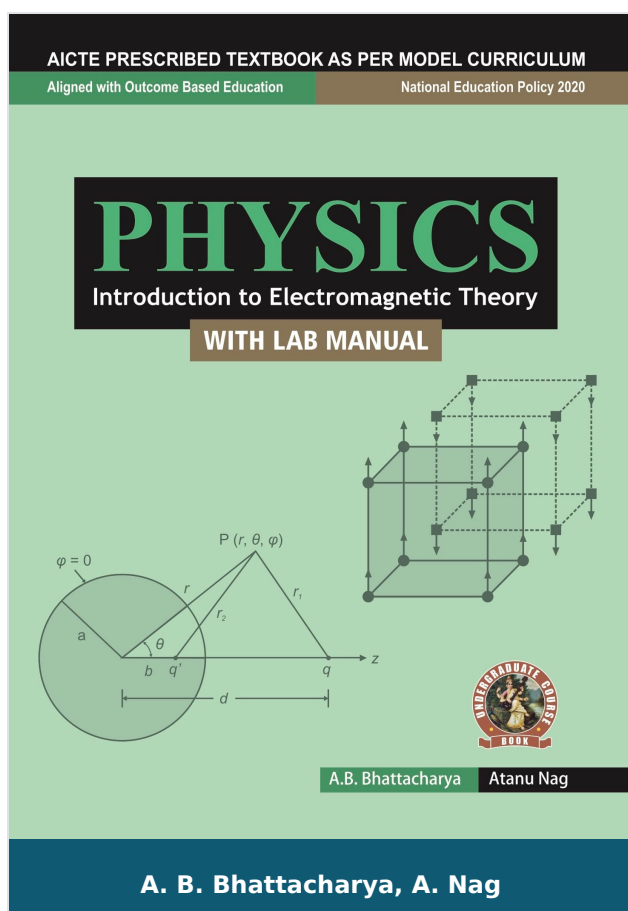
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## Physics (Introduction to Electromagnetic Theory) (with Lab Manual)

**Author :** A. B. Bhattacharya, A. Nag

**ISBN 13 :** 978-93-91505-16-5

**ISBN 10 :** 9391505163

**E-ISBN 13 :** 978-93-91505-16-5

**Edition :** First

**Pages :** 308

**Type of book :** Physical

**Year :** 2022

**Language :** English

**Publisher :** Khanna Publishing House

**M.R.P :** Rs 295.00

**Categories :** [AICTE Prescribed Textbooks](#), [English Books](#), [Book Store](#), [Ebooks](#), [Applied Sciences & Humanities](#)

**Condition Type :** New

**Country Origin :** India

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