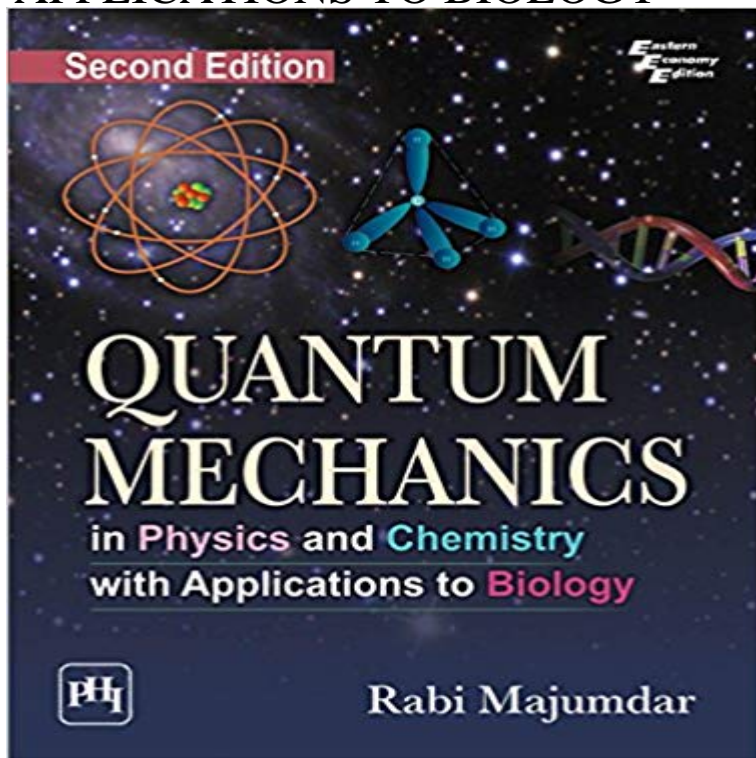


QUANTUM MECHANICS IN PHYSICS AND CHEMISTRY WITH APPLICATIONS TO BIOLOGY



This book provides a comprehensive treatment of the principles and applications of quantum mechanics with equal emphasis on concept building and problem solving. The book follows an integrated approach to expose the students to applications of quantum mechanics in both physics and chemistry streams. A chapter is devoted to biological applications as well, to evince the interest of the students pursuing courses in Biotechnology and Bioinformatics. Such unique organization of the book makes it suitable for both Quantum Mechanics and Quantum Chemistry courses, where the common areas like molecular structure and spectroscopy are emphasized. The book, in its second edition, continues to serve as an ideal textbook for the first-year postgraduate students of both physics and chemistry as well as for senior undergraduate students pursuing honours courses in these disciplines. It has been thoroughly revised and enlarged with the introduction of a new chapter on Quantum Statistics and Plancks Law of Black-Body Radiation, some important sections in various chapters and more worked-out examples. The book helps students learn difficult concepts of quantum mechanics with simpler mathematics and intuitive language, but without sacrificing rigour. It has informal classroom type approach suitable for self-learning. Key Features

- Gives about 200 worked-out examples and chapter-end problems with hints and answers related to different areas of modern science including biology.
- Highlights important technological developments based on Quantum Mechanics, such as electron microscope, scanning tunnelling microscope, lasers, Raman spectroscopy and Nuclear Magnetic Resonance (NMR).
- Provides adequate number of illustrations.
- Includes detailed mathematical derivations separately in Appendices for a more rigorous approach.

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