1. Record Nr. UNINA9910153097403321

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| Titolo | Physics for scientists and engineers (chs 1-37) / / Douglas C. Giancoli |
| Pubbl/distr/stampa | Harlow, England : , : Pearson Education, Limited, , [2014]<br>Â©2014 |
| ISBN | 1-292-03731-8 |
| Edizione | [Fourth edition.] |
| Descrizione fisica | 1 online resource (1,206 pages) : illustrations (some color) |
| Collana | Always learning |
| Disciplina | 530 |
| Soggetti | Physics |
| Lingua di pubblicazione | Inglese |
| Formato | Materiale a stampa |
| Livello bibliografico | Monografia |
| Note generali | Includes index. |
| Nota di contenuto | Cover -- Table of Contents -- Preface -- 1. Introduction, Measurement, Estimating -- Problem Set (4/e): Introduction, Measurement, Estimating -- 2. Describing Motion: Kinematics in One Dimension -- Problem Set (4/e): Describing Motion: Kinematics in One Dimension -- 3. Kinematics in Two or Three Dimensions -- Vectors -- Problem Set (4/e): Kinematics in Two or Three Dimensions -- Vectors -- 4. Dynamics: Newton's Laws of Motion -- Problem Set (4/e): Dynamics: Newton's Laws of Motion -- 5. Using Newton's Laws: Friction, Circular Motion, Drag Forces -- Problem Set (4/e): Using Newton's Laws: Friction, Circular Motion, Drag Forces -- 6. Gravitation and Newton's Synthesis -- Problem Set (4/e): Gravitation and Newton's Synthesis -- 7. Work and Energy -- Problem Set (4/e): Work and Energy -- 8. Conservation of Energy -- Problem Set (4/e): Conservation of Energy -- 9. Linear Momentum -- Problem Set (4/e): Linear Momentum -- 10. Rotational Motion -- Problem Set (4/e): Rotational Motion -- 11. Angular Momentum -- General Rotation -- Problem Set (4/e): Angular Momentum -- General Rotation -- 12. Static Equilibrium -- Elasticity and Fracture -- Problem Set (4/e): Static Equilibrium -- Elasticity and Fracture -- 13. Fluids -- Problem Set (4/e): Fluids -- 14. Oscillators -- Problem Set (4/e): Oscillators -- 15. Wave Motion -- Problem Set (4/e): Wave Motion -- 16. Sound -- Problem Set (4/e): Sound -- 17. Temperature, Thermal Expansion, and the Ideal Gas Law -- Problem Set (4/e): Temperature, Thermal Expansion, and the Ideal Gas Law -- 18. Kinetic Theory of Gases -- Problem Set (4/e): Kinetic Theory of Gases |

-- 19. Heat and the First Law of Thermodynamics -- Problem Set (4/e): Heat and the First Law of Thermodynamics -- 20. Second Law of Thermodynamics -- Problem Set (4/e): Second Law of Thermodynamics -- 21. Electric Charge and Electric Field.
Problem Set (4/e): Electric Charge and Electric Field -- 22. Gauss's Law -- Problem Set (4/e): Gauss's Law -- 23. Electric Potential -- Problem Set (4/e): Electric Potential -- 24. Capacitance, Dielectrics, Electric Energy Storage -- Problem Set (4/e): Capacitance, Dielectrics, Electric Energy Storage -- 25. Electric Currents and Resistance -- Problem Set (4/e): Electric Currents and Resistance -- 26. DC Circuits -- Problem Set (4/e): DC Circuits -- 27. Magnetism -- Problem Set (4/e): Magnetism -- 28. Sources of Magnetic Field -- Problem Set (4/e): Sources of Magnetic Field -- 29. Electromagnetic Induction and Faraday's Law -- Problem Set (4/e): Electromagnetic Induction and Faraday's Law -- 30. Inductance, Electromagnetic Oscillations, and AC Circuits -- Problem Set (4/e): Inductance, Electromagnetic Oscillations, and AC Circuits -- 31. Maxwell's Equations and Electromagnetic Waves -- Problem Set (4/e): Maxwell's Equations and Electromagnetic Waves -- 32. Light: Reflection and Refraction -- Problem Set (4/e): Light: Reflection and Refraction -- 33. Lenses and Optical Instruments -- Problem Set (4/e): Lenses and Optical Instruments -- 34. The Wave Nature of Light -- Interference -- Problem Set (4/e): The Wave Nature of Light -- Interference -- 35. Diffraction and Polarization -- Problem Set (4/e): Diffraction and Polarization -- 36. Special Theory of Relativity -- Problem Set (4/e): Special Theory of Relativity -- 37. Early Quantum Theory and Models of the Atom -- Problem Set (4/e): Early Quantum Theory and Models of the Atom -- Appendix: Gravitational Force due to a Spherical Mass Distribution -- Appendix: Differential Form of Maxwell's Equations -- Periodic Table of the Elements -- Index.

Sommario/riassunto

For the calculus-based General Physics course primarily taken by engineers and science majors (including physics majors). This long-awaited and extensive revision maintains Giancoli's reputation for creating carefully crafted, highly accurate and precise physics texts. Physics for Scientists and Engineers combines outstanding pedagogy with a clear and direct narrative and applications that draw the student into the physics. The new edition also features an unrivaled suite of media and on-line resources that enhance the understanding of physics. This book is written for students. It aims to explain physics in a readable and interesting manner that is accessible and clear, and to teach students by anticipating their needs and difficulties without oversimplifying. Physics is a description of reality, and thus each topic begins with concrete observations and experiences that students can directly relate to. We then move on to the generalizations and more formal treatment of the topic. Not only does this make the material more interesting and easier to understand, but it is closer to the way physics is actually practiced.  .