

- | | |
|-------------------------|--|
| 1. Record Nr. | UNINA990002020750403321 |
| Autore | Zahradnik, Jiri |
| Titolo | Schildlaue unserer gewachshauser. / Jiri Zahradnik |
| Pubbl/distr/stampa | Wittenberg : A. Ziemsen, 1968 |
| Descrizione fisica | 44 p. ; 20 cm |
| Disciplina | 595.752 |
| Locazione | DAGEN |
| Collocazione | 61 IV F.2/54 |
| Lingua di pubblicazione | Italiano |
| Formato | Materiale a stampa |
| Livello bibliografico | Monografia |
-
- | | |
|-------------------------|---|
| 2. Record Nr. | UNINA9910154942503321 |
| Autore | Giancoli Douglas C. |
| Titolo | Physics : principles with applications / / Douglas C. Giancoli |
| Pubbl/distr/stampa | Harlow, England : , : Pearson, , [2016]
©2016 |
| ISBN | 9781292066851 (electronic book) |
| Edizione | [Global edition.] |
| Descrizione fisica | 1 online resource (1,058 pages) : illustrations |
| Disciplina | 530 |
| Soggetti | Physics |
| Lingua di pubblicazione | Inglese |
| Formato | Materiale a stampa |
| Livello bibliografico | Monografia |
| Note generali | Includes index. |
| Nota di contenuto | Cover -- Contents -- Applications List -- Preface -- Dedication -- To Students -- Use of color -- Chapter 1: Introduction, Measurement, Estimating -- 1-1 The Nature of Science -- 1-2 Physics and its Relation to Other Fields -- 1-3 Models, Theories, and Laws -- 1-4 Measurement and Uncertainty -- Significant Figures -- Uncertainty -- Significant Figures -- Scientific Notation -- Percent Uncertainty vs. |

Significant Figures -- Approximations -- Accuracy vs. Precision -- 1-5
 Units, Standards, and the SI System -- Length -- Time -- Mass -- Unit
 Prefixes -- Systems of Units -- Base vs. Derived Quantities -- 1-6
 Converting Units -- 1-7 Order of Magnitude: Rapid Estimating -- A
 Harder Example-But Powerful -- 1-8 Dimensions and Dimensional
 Analysis -- Summary -- Questions -- MisConceptual Questions --
 Problems -- General Problems -- Search and Learn -- Chapter 2:
 Describing Motion: Kinematics in One Dimension -- 2-1 Reference
 Frames and Displacement -- 2-2 Average Velocity -- 2-3
 Instantaneous Velocity -- 2-4 Acceleration -- Deceleration -- 2-5
 Motion at Constant Acceleration -- 2-6 Solving Problems -- 2-7 Freely
 Falling Objects -- Additional Example-Using the Quadratic Formula --
 2-8 Graphical Analysis of Linear Motion -- Velocity as Slope -- Slope
 and Acceleration -- Summary -- Questions -- MisConceptual
 Questions -- Problems -- General Problems -- Search and Learn --
 Chapter 3: Kinematics in Two Dimensions -- Vectors -- 3-1 Vectors
 and Scalars -- 3-2 Addition of Vectors-Graphical Methods -- 3-3
 Subtraction of Vectors, and Multiplication of a Vector by a Scalar -- 3-4
 Adding Vectors by Components -- Components -- Adding Vectors --
 3-5 Projectile Motion -- 3-6 Solving Projectile Motion Problems --
 Level Horizontal Range -- 3-7 Projectile Motion Is Parabolic -- 3-8
 Relative Velocity -- Summary -- Questions -- MisConceptual Questions
 -- Problems.
 General Problems -- Search and Learn -- Chapter 4: Dynamics:
 Newton's Laws of Motion -- 4-1 Force -- 4-2 Newton's First Law of
 Motion -- Inertial Reference Frames -- 4-3 Mass -- 4-4 Newton's
 Second Law of Motion -- 4-5 Newton's Third Law of Motion -- 4-6
 Weight-the Force of Gravity -- and the Normal Force -- 4-7 Solving
 Problems with Newton's Laws: Free-Body Diagrams -- Tension in a
 Flexible Cord -- 4-8 Problems Involving Friction, Inclines -- Friction --
 Inclines -- Summary -- Questions -- MisConceptual Questions --
 Problems -- General Problems -- Search and Learn -- Chapter 5:
 Circular Motion -- Gravitation -- 5-1 Kinematics of Uniform Circular
 Motion -- 5-2 Dynamics of Uniform Circular Motion -- 5-3 Highway
 Curves: Banked and Unbanked -- 5-4 Non uniform Circular Motion --
 5-5 Newton's Law of Universal Gravitation -- 5-6 Gravity Near the
 Earth's Surface -- 5-7 Satellites and "Weightlessness" -- Satellite
 Motion -- Weightlessness -- 5-8 Planets, Kepler's Laws, and Newton's
 Synthesis -- Kepler's Laws -- Kepler's Third Law Derived, Sun's Mass,
 Perturbations -- Other Centers for Kepler's Laws -- Distant Planetary
 Systems -- Newton's Synthesis -- Sun/Earth Reference Frames -- 5-9
 Moon Rises an Hour Later Each Day -- 5-10 Types of Forces in Nature
 -- Summary -- Questions -- MisConceptual Questions -- Problems --
 General Problems -- Search and Learn -- Chapter 6: Work and Energy
 -- 6-1 Work Done by a Constant Force -- 6-2 Work Done by a Varying
 Force -- 6-3 Kinetic Energy, and the Work-Energy Principle -- 6-4
 Potential Energy -- Gravitational Potential Energy -- Potential Energy
 Defined in General -- Potential Energy of Elastic Spring -- Potential
 Energy as Stored Energy -- 6-5 Conservative and Nonconservative
 Forces -- Work-Energy Extended -- 6-6 Mechanical Energy and Its
 Conservation -- 6-7 Problem Solving Using Conservation of Mechanical
 Energy.
 6-8 Other Forms of Energy and Energy Transformations -- The Law of
 Conservation of Energy -- 6-9 Energy Conservation with Dissipative
 Forces: Solving Problems -- Work-Energy versus Energy Conservation
 -- 6-10 Power -- Summary -- Questions -- MisConceptual Questions
 -- Problems -- General Problems -- Search and Learn -- Chapter 7:
 Linear Momentum -- 7-1 Momentum and Its Relation to Force -- 7-2

Conservation of Momentum -- 7-3 Collisions and Impulse -- 7-4
 Conservation of Energy and Momentum in Collisions -- 7-5 Elastic
 Collisions in One Dimension -- 7-6 Inelastic Collisions -- 7-7
 Collisions in Two Dimensions -- 7-8 Center of Mass (CM) -- 7-9 CM
 for the Human Body -- 7-10 CM and Translational Motion -- Summary
 -- Questions -- MisConceptual Questions -- Problems -- General
 Problems -- Search and Learn -- Chapter 8: Rotational Motion -- 8-1
 Angular Quantities -- 8-2 Constant Angular Acceleration -- 8-3
 Rolling Motion (Without Slipping) -- 8-4 Torque -- Forces that Act to
 Tilt the Axis -- 8-5 Rotational Dynamics -- Torque and Rotational
 Inertia -- 8-6 Solving Problems in Rotational Dynamics -- 8-7
 Rotational Kinetic Energy -- Work Done by Torque -- 8-8 Angular
 Momentum and Its Conservation -- 8-9 Vector Nature of Angular
 Quantities -- Summary -- Questions -- MisConceptual Questions --
 Problems -- General Problems -- Search and Learn -- Chapter 9: Static
 Equilibrium -- Elasticity and Fracture -- 9-1 The Conditions for
 Equilibrium -- The First Condition for Equilibrium -- The Second
 Condition for Equilibrium -- 9-2 Solving Statics Problems -- A More
 Difficult Example-The Ladder -- 9-3 Applications to Muscles and Joints
 -- 9-4 Stability and Balance -- 9-5 Elasticity -- Stress and Strain --
 Elasticity and Hooke's Law -- Young's Modulus -- Stress and Strain --
 Tension, Compression, and Shear Stress -- Volume Change-Bulk
 Modulus -- 9-6 Fracture.
 9-7 Spanning a Space: Arches and Domes -- Summary -- Questions --
 MisConceptual Questions -- Problems -- General Problems -- Search
 and Learn -- Chapter 10: Fluids -- 10-1 Phases of Matter -- 10-2
 Density and Specific Gravity -- 10-3 Pressure in Fluids -- 10-4
 Atmospheric Pressure and Gauge Pressure -- Atmospheric Pressure --
 Gauge Pressure -- 10-5 Pascal's Principle -- 10-6 Measurement of
 Pressure -- Gauges and the Barometer -- 10-7 Buoyancy and
 Archimedes' Principle -- 10-8 Fluids in Motion -- Flow Rate and the
 Equation of Continuity -- 10-9 Bernoulli's Equation -- 10-10
 Applications of Bernoulli's Principle: Torricelli, Airplanes, Baseballs,
 Blood Flow -- Airplane Wings and Dynamic Lift -- Sailboats -- Baseball
 Curve -- Lack of Blood to the Brain-TIA -- Other Applications -- 10-11
 Viscosity -- 10-12 Flow in Tubes: Poiseuille's Equation, Blood Flow --
 10-13 Surface Tension and Capillarity -- Capillarity -- 10-14 Pumps,
 and the Heart -- Summary -- Questions -- MisConceptual Questions
 -- Problems -- General Problems -- Search and Learn -- Chapter 11:
 Oscillations and Waves -- 11-1 Simple Harmonic Motion-Spring
 Oscillations -- 11-2 Energy in Simple Harmonic Motion -- 11-3 The
 Period and Sinusoidal Nature of SHM -- Period and Frequency-
 Derivation -- Position as a Function of Time -- Sinusoidal Motion --
 Velocity and Acceleration as Functions of Time -- 11-4 The Simple
 Pendulum -- 11-5 Damped Harmonic Motion -- 11-6 Forced
 Oscillations -- Resonance -- 11-7 Wave Motion -- 11-8 Types of
 Waves and Their Speeds: Transverse and Longitudinal -- Speed of
 Transverse Waves -- Speed of Longitudinal Waves -- Other Waves --
 11-9 Energy Transported by Waves -- Intensity Related to Amplitude
 and Frequency -- 11-10 Reflection and Transmission of Waves -- 11-
 11 Interference -- Principle of Superposition -- 11-12 Standing Waves
 -- Resonance -- 11-13 Refraction.
 11-14 Diffraction -- 11-15 Mathematical Representation of a Traveling
 Wave -- Summary -- Questions -- MisConceptual Questions --
 Problems -- General Problems -- Search and Learn -- Chapter 12:
 Sound -- 12-1 Characteristics of Sound -- 12-2 Intensity of Sound:
 Decibels -- Sound Level -- Intensity Related to Amplitude -- 12-3 The
 Ear and Its Response -- Loudness -- The Ear's Response -- 12-4

Sources of Sound: Vibrating Strings and Air Columns -- Stringed Instruments -- Wind Instruments -- 12-5 Quality of Sound, and Noise -- Superposition -- 12-6 Interference of Sound Waves -- Beats -- Interference in Space -- Beats-Interference in Time -- 12-7 Doppler Effect -- Doppler Effect for Light -- 12-8 Shock Waves and the Sonic Boom -- 12-9 Applications: Sonar, Ultrasound, and Medical Imaging -- Sonar -- Ultrasound Medical Imaging -- Summary -- Questions -- MisConceptual Questions -- Problems -- General Problems -- Search and Learn -- Chapter 13: Temperature and Kinetic Theory -- 13-1 Atomic Theory of Matter -- 13-2 Temperature and Thermometers -- Temperature Scales -- Standard Temperature Scale -- 13-3 Thermal Equilibrium and the Zeroth Law of Thermodynamics -- The Zeroth Law of Thermodynamics -- 13-4 Thermal Expansion -- Linear Expansion -- Volume Expansion -- Anomalous Behavior of Water Below 4°C -- Thermal Stresses -- 13-5 The Gas Laws and Absolute Temperature -- 13-6 The Ideal Gas Law -- 13-7 Problem Solving with the Ideal Gas Law -- 13-8 Ideal Gas Law in Terms of Molecules: Avogadro's Number -- 13-9 Kinetic Theory and the Molecular Interpretation of Temperature -- Kinetic Energy Near Absolute Zero -- 13-10 Distribution of Molecular Speeds -- 13-11 Real Gases and Changes of Phase -- 13-12 Vapor Pressure and Humidity -- Evaporation -- Vapor Pressure -- Boiling -- Partial Pressure and Humidity -- 13-13 Diffusion -- Summary -- Questions. MisConceptual Questions.

Sommario/riassunto

Elegant, engaging, exacting, and concise, Giancoli's Physics: Principles with Applications, Seventh Edition, helps students view the world through eyes that know physics. Giancoli's text is a trusted classic, known for its elegant writing, clear presentation, and quality of content. Using concrete observations and experiences students can relate to, the text features an approach that reflects how science is actually practiced: it starts with the specifics, then moves to the great generalizations and the more formal aspects of a topic to show students why we believe what we believe. Written with the goal of giving students a thorough understanding of the basic concepts of physics in all its aspects, the text uses interesting applications to biology, medicine, architecture, and digital technology to show students how useful physics is in their own everyday lives and in their future professions.
