

| Third Edition Textbook – Assigned Readings | Conceptual Question and Exercise & Problems: | Second Edition Textbook – Assigned Readings | Conceptual Question and Exercise & Problems: |
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| Chapter 20: <ul style="list-style-type: none"> • 20.1 The Wave Model • 20.2 One Dimensional Waves • 20.3 Sinusoidal Waves • 20.4 Sound and Light • 20.5 Index of Refraction • 20.6 Power, Intensity, and Decibels • 20.7 The Doppler Effect | Conceptual: #3, 6, 9, 11 Exercise & Problems: #1, 25, 35, 39, 53, 69 & 71 | Chapter 20: <ul style="list-style-type: none"> • 20.1 The Wave Model • 20.2 One Dimensional Waves • 20.3 Sinusoidal Waves • 20.4 Waves in Two and Three Dimensions • 20.5 Sound and Light • 20.6 Power, Intensity and Decibels • 20.7 The Doppler Effect | Conceptual: #3,7,9,11 Exercise & Problems: #2,25,35,39,54,68&70 |
| Chapter 21: <ul style="list-style-type: none"> • 21.1 The Principle of Superposition • 21.2 Standing Waves • 21.3 Standing Waves on a String • 21.4 Standing Waves and Musical Acoustics • 21.5 Wave Interference • 21.5 Interference in One Dimension • 21.6 The Mathematics of Interference • 21.7 Interference in 2 and 3 dimensions • 21.8 Beats | Conceptual: #3, 9 Exercise & Problems: #7, 19, 25, 31, 49, 65 & 71 | Chapter 21: <ul style="list-style-type: none"> • 21.1 The Principle of Superposition • 21.2 Standing Waves • 21.3 Transverse Standing Waves • 21.4 Standing Sound Waves and Musical Acoustics • 21.5 Interference in One Dimension • 21.6 The Mathematics of Interference • 21.7 Interference in 2 and 3 dimensions • 21.8 Beats | Conceptual: #3, 9 Exercise & Problems: #7, 18, 23, 33, 48, 69 & 75 |
| Chapter 23: <ul style="list-style-type: none"> • 23.1 Reflection • 23.2 Refraction • 23.3 Total Internal Reflection • 23.4 Image Formation • 23.5 Colour and Dispersion • 23.6 The Thin Lens Equation • 23.7 The Lens-Maker Equation • 23.8 Image Formation with Spherical Mirrors | Conceptual: #3, 9, 10 Exercise & Problems: #11, 13, 17, 19, 23, 27, 49, 55 & 73 | Chapter 23: <ul style="list-style-type: none"> • 23.1 The Ray Model of Light • 23.2 Reflection • 23.3 Refraction • 23.4 Image Formation by Refraction • 23.5 Color and Dispersion • 23.6 Thin Lenses: Ray Tracing • 23.7 Thin Lenses: Refraction Theory • 23.8 Image Formation with Spherical Mirrors | Conceptual: #3, 9, 10 Exercise & Problems: #11, 15, 19, 21,25,29, 52, 60 & 74 |

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| Chapter 24: <ul style="list-style-type: none"> • 24.1 Lenses in Combination • 24.2 The Camera • 24.3 Vision • 24.4 Microscopes, Telescopes | Conceptual: #3 Exercise & Problems: #7, 13, 15, 19, 23, 31 & 35 | Chapter 24: <ul style="list-style-type: none"> • 24.1 Lenses in Combination • 24.2 The Camera • 24.3 Vision • 24.4 Optical Systems that Magnify | Conceptual: #3 Exercise & Problems: #7, 13, 15, 20, 26, 35 & 39 |
| Chapter 25: <ul style="list-style-type: none"> • 25.1 Developing a Charge Model • 25.2 Electric Charge • 25.3 Insulators and Conductors • 25.4 Coulomb's Law • 25.5 The Field Model | Conceptual: #5, 8,10 Exercise & Problems: #11, 15, 21, 47, 53, & 63 | Chapter 26: <ul style="list-style-type: none"> • 26.1 Developing a Charge Model • 26.2 Charge • 26.3 Insulators and Conductors • 26.4 Coulomb's Law • 26.5 The Field Model | Conceptual: #6,10,12 Exercise & Problems: #11, 33, 21, 52, 53, & 64 |
| Chapter 26: <ul style="list-style-type: none"> • 26.1 The Electric Field of a Point Charge • 26.2 The electric field of Multiple Point Charges • 26.3 Electric field of Continuous Charge Distribution • 26.4 Electric Field of Rings, Planes, and Spheres • 26.5 Electric field of Parallel Plate Capacitor • 26.6 Motion of a Charged Particle in an Electric Field • 26.7 Motion of a Dipole in an Electric Field | Conceptual: #3, 6, 11, 14 Exercise & Problems: #1, 13, 17, 25, 49, 59, & 61 | Chapter 27: <ul style="list-style-type: none"> • 27.1 Electric Field Models • 27.2 The Electric Field of Multiple Point Charges • 27.3 Electric field of Continuous Charge Distribution • 27.4 The Electric Fields of Rings, Disks, Planes and Spheres • 27.5 The Parallel-Plate Capacitor • 27.6 Motion of a Charged Particle in an Electric Field • 27.7 Motion of a Dipole in an Electric Field | Conceptual: #3, 6, 12, 15 Exercise & Problems: #1, 13, 18, 25, 49, 62, & 64 |

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| Chapter 28: <ul style="list-style-type: none"> • 28.1 Electric Potential • 28.2 Energy of Point Charges • 28.3 Energy of Dipoles • 28.4 Electric Potential • 28.5 Electric Potential of Parallel Plate Capacitor • 28.6 Electric Potential of Point Charge • 28.7 Electric Potential of Many charges | Conceptual: #3, 4, 5, 8 Exercise & Problems: #1, 9, 11, 19, 21, 37 & 53 | Chapter 29: <ul style="list-style-type: none"> • 29.1 Electric Potential Energy • 29.2 The Potential Energy of Point Charges • 29.3 The Potential Energy of a Dipole • 29.4 The Electric Potential • 29.5 The Electric Potential Inside a Parallel-Plate Capacitor • 29.6 The Electric Potential of a Point Charge • 29.7 The Electric Potential of Many Charges | Conceptual: #4, 5, 6, 9 Exercise & Problems: #1, 9, 10, 19, 23, 41 & 55 |
| Chapter 29: <ul style="list-style-type: none"> • 29.1 Connecting Potential and Field • 29.2 Sources of Electric Potential • 29.3 Finding the Electric Field from the Potential • 29.4 <i>A Conductor in Electrostatic Equilibrium</i> • 29.5 Capacitors and Capacitance • 29.6 <i>The Energy Stored in a Capacitor</i> • 29.7 <i>Dielectrics</i> | Conceptual: #1, 3, 4, 5, 6, 7 Exercise & Problems: #1, 3, 9, 11, 13, 23, 29, 33, 35, 55, 57, 63 | Chapter 30: <ul style="list-style-type: none"> • 30.1 Connecting Potential and Field • 30.2 Sources of Electric Potential • 30.3 Finding the Electric Field from the Potential • 30.4 A Conductor in Electrostatic Equilibrium • 30.5 Capacitance and Capacitors • 30.6 The Energy Stored in a Capacitor • 30.7 Dielectrics | Conceptual: #1, 3, 4, 5, 7, 8 Exercise & Problems: #1, 3, 9, 11, 13, 25, 32, 36, 38, 62, 65, 71 |
| Chapter 30: <ul style="list-style-type: none"> • 30.1 Electron Current • 30.2 Creating a Current • 30.3 Current and Current Density • 30.4 Conductivity and Resistivity • 30.5 Resistance and Ohm's Law | Conceptual: #3, 4, 6, 7, 8, 10 Exercise & Problems: #1, 7, 21, 27, 43, 45, 61 | Chapter 31: <ul style="list-style-type: none"> • 31.1 The Electron Current • 31.2 Creating a Current • 31.3 Current and Current Density • 31.4 Conductivity and Resistivity • 31.5 Resistance and Ohm's Law | Conceptual: #5, 6, 9, 10, 12 Exercise & Problems: #2, 9, 24, 30, 44, 47, 61 |

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| Chapter 31: <ul style="list-style-type: none"> • 31.1 Circuit Elements and Diagrams • 31.2 Kirchhoff's Laws and the Basic Circuit • 31.3 Energy and Power • 31.4 Series Resistors • 31.5 Real Batteries Getting Grounded • 31.6 Parallel Resistors • 31.7 Resistor Circuits • 31.8 Getting Grounded • 31.9 RC Circuits --SKIP | Conceptual: #3, 4, 5, 7, 9, 10, 11 Exercise & Problems: #5, 11, 19, 21, 23, 35, 39, 41, 49, 53, 59 | Chapter 32: <ul style="list-style-type: none"> • 32.1 Circuit Elements and Diagrams • 32.2 Kirchhoff's Laws and Basic Circuit • 32.3 Energy and Power • 32.4 Series Resistors • 32.5 Real Batteries • 32.6 Parallel Resistors • 32.7 Resistor Circuits • 32.8 Getting Grounded • 32.9 RC Circuits --SKIP | Conceptual: #3, 4, 5, 7, 10, 11, 13 Exercise & Problems: #4, 11, 21, 23, 26, 35, 40, 42, 50, 55, 61 |
| Chapter 32: <ul style="list-style-type: none"> • 32.1 Magnetism • 32.2 The Discovery of the Magnetic Field • 32.3 The Sources of the Magnetic Fields: Moving Charges • 32.4 The Magnetic Field of a Current • 32.5 Magnetic Dipoles • 32.6 Ampère's Law and Solenoids • 32.7 Magnetic Force on a Moving Charge • 32.8 Magnetic Forces on Current-Carrying Wires • 32.9 Forces and Torques on Current Loops • 32.10 Magnetic Properties of Matter | Conceptual: #2, 4, 5, 6, 7, 8, 9, 11 Exercise & Problems: #13, 17, 19, 21, 23, 25, 27, 33, 35, 37, 41, 63 | Chapter 33: <ul style="list-style-type: none"> • 33.1 Magnetism • 33.2 The Discovery of the Magnetic Field • 33.3 The Sources of the Magnetic Fields: Moving Charges • 33.4 The Magnetic Field of a Current • 33.5 Magnetic Dipoles • 33.6 Ampère's Law and Solenoids • 33.7 Magnetic Force on a Moving Charge • 33.8 Magnetic Forces on Current-Carrying Wires • 33.9 Forces and Torques on Current Loops • 33.10 Magnetic Properties of Matter | Conceptual: #2, 4, 5, 6, 7, 8, 9, 13 Exercise & Problems: #13, 17, 19, 21, 23, 25, 27, 34, 37, 39, 41, 61 |
| Chapter 33: <ul style="list-style-type: none"> • 33.1 Induced Currents • 33.2 Motional emf • 33.3 Magnetic Flux • 33.4 Lenz's Law • 33.5 Faraday's Law • 33.6 Induced Fields • 33.7-33.10 <i>SKIP</i> | Conceptual: #1, 4, 5, 6, 8 Exercise & Problems: #3, 5, 7, 9, 11, 13, 27, 29, 31, 37, 39 | Chapter 34: <ul style="list-style-type: none"> • 34.1 Induced Currents • 34.2 Motional emf • 34.3 Magnetic Flux • 34.4 Lenz's Law • 34.5 Faraday's Law • 34.6 Induced Fields • 34.7 Induced Currents: Three Applications -SKIP • 34.8 Inductors – SKIP • 34.9 LC Circuits - SKIP • 34.9 LR Circuits - SKIP | Conceptual: #1, 5, 6, 7, 9 Exercise & Problems: #3, 5, 7, 9, 11, 13, 27, 29, 33, 39, 41 |

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| Chapter 36 <ul style="list-style-type: none"> • 36.1 Relativity: What's it all about? • 36.2 Galilean Relativity • 36.3 Einstein's Principle of Relativity • 36.4 Events and Measurements • 36.5 The Relativity of Simultaneity • 36.6 Time Dilation • 36.7 Length Contraction • 36.8-36.9 <i>SKIP</i> • 36.10 Relativistic energy | Conceptual: #1, 2, 3, 4, 6, 8 Exercise & Problems: #15, 17, 19, 23, 25, 39, 53 | Chapter 37: <ul style="list-style-type: none"> • 37.1 Relativity: What's it all about? • 37.2 Galilean Relativity • 37.3 Einstein's Principle of Relativity • 37.4 Events and Measurements • 37.5 The Relativity of Simultaneity • 37.6 Time Dilation • 37.7 Length Contraction • 37.8-37.9 <i>SKIP</i> • 37.10 Relativistic energy | Conceptual: #1, 2, 3, 4, 6, 8 Exercise & Problems: #15, 17, 19, 23, 25, 39, 55 |

Note: Any crossed out numbers appear in the 3rd edition only, however does not appear in the 2nd edition