

Fluctuations 168 / Monetary Factors 170	Business Fluctuations Be Forecasted? 171 / 23	Aggregate Models 173 / Econometric Models 176	Forecasts: The Track Record 175 / Examples 176	Greenspan's Forecasts? 176 / Test Yourself 176	Concepts for Review 178 / Appendix: The Acceleration Principle 178	GNP 20 / Market Value of Output 23 / Two Approaches to GNP 24 / The Goodness of GNP 24 / GNP Edges the Total Gains on Output 25 / Total Income and GNP 26 / Test Yourself 26 / Concepts for Review 28
---	---	---	--	--	--	---

CONTENTS

PART ONE INTRODUCTION TO ECONOMICS

Chapter 1 / ECONOMIC PROBLEMS AND ANALYSIS 1

Economic Problems: A Sampler 1 / What Is Economics? 5 / Test Yourself 8 / Opportunity Cost: A Fundamental Concept 8 / <i>Totting Up the Costs of the War against Saddam Hussein</i> 10 / The Impact of Economics on Society 11 / Example 1.1: How Much Does It Cost to Go to College? 13 / Adam Smith on the "Invisible Hand" 14 / Example 1.2: The Assessment of Damages 16 / Test Yourself 16 / Summary 17 / Concepts for Review 17

Chapter 2 / ECONOMIC MODELS AND CAPITALISM, AMERICAN-STYLE 18

The Methodology of Economics 18 / Graphs and Relationships 20 / The Tasks of an Economic System 22 / Test Yourself 23 / The Economic System: A Simple Introductory Model 23 / Example 2.1: Hay and Grain in Iowa 25 / Capitalism: An Economic System 30 / <i>The Role of Saving in the Industrial Revolution and Japanese Economic Growth</i> 31 / <i>Trade, Specialization, and Comparative Advantage</i> 34 / Our Mixed Capitalist System 35 / Test Yourself 36 / Summary 37 / Concepts for Review 37

Chapter 3 / THE PRICE SYSTEM 38

Consumers, Firms, and Markets 38 / The Demand Side of a Market 39 / The Supply Side of a Market 42 / Equilibrium Price 43 / Actual Price 45 / Example 3.1: How the Orange Market Works 45 / Test Yourself 46 / The Effects of Shifts in the Demand Curve 47 / The Effects of Shifts in the Supply Curve 48 / How the Price System Determines What Is Produced 49 / <i>How Asymmetric Information Affects the Market for Used Cars</i> 50 / How the Price System Determines How Goods Are Produced 51 / How the Price System Determines Who Gets What 52 / How the Price System Determines the Rate of Economic Growth 53 / Two Case Studies 53 / <i>Central Economic Issues: How to Make the Transition from Communism to Capitalism: The Case of Poland</i> 54 / Price Ceilings and Price Supports 59 / The Circular Flows of Money and Products 60 / Test Yourself 62 / Summary 62 / Concepts for Review 63

PART TWO NATIONAL OUTPUT, INCOME, AND EMPLOYMENT

Chapter 4 / NATIONAL INCOME AND PRODUCT 65

Gross National Product 65 / <i>The First Estimates of GNP in the United States</i> 67 / Adjusting GNP for Price Changes 68 / Using Value-Added to Calcu-
--

late GNP 70 / Net National Product 71 / The Limitations of GNP and NNP 71 / Test Yourself 73 / Two Approaches to GNP 73 / The Expenditures Approach to GNP 74 / The Income Approach to GNP 76 / GNP Equals the Total Claims on Output: A Proof 78 / National Income, Personal Income, and Disposable Income 80 / Test Yourself 82 / Summary 82 / Concepts for Review 83

Chapter 5 / UNEMPLOYMENT AND INFLATION: A FIRST LOOK 84

Unemployment 84 / The Measurement and Incidence of Unemployment 86 / Theories of Unemployment 92 / Example 5.1: Should We Look at Employment, Not Unemployment? 93 / *Why So Much Unemployment in Europe?* 95 / Test Yourself 98 / Inflation 98 / The Measurement of Inflation 99 / Impact of Inflation 101 / Example 5.2: Money Wages and Real Wages in Manufacturing 102 / *Unemployment and Inflation: An International Overview* 104 / Aggregate Demand and Aggregate Supply 105 / Test Yourself 106 / Summary 107 / Concepts for Review 107

Chapter 6 / AGGREGATE DEMAND: THE FOUNDATIONS 108

The Consumption Function 108 / The Saving Function 110 / The Permanent-Income and Life-Cycle Hypotheses 112 / Determinants of Investment 113 / The Investment Decision 114 / Test Yourself 116 / The Equilibrium Level of Gross National Product: A Closed Economy with No Government 117 / Aggregate Flows of Income and Expenditure 118 / Why GNP Must Equal Intended Spending: Three Cases 119 / Using a Graph to Determine Equilibrium GNP 120 / Effects of Changes in Intended Investment 121 / Example 6.1: Asking "What If" Questions 122 / The Multiplier 124 / Determinants of Consumption: Nonincome Factors 124 / Shifts in the Consumption Function 125 / Effects of Shifts in the Consumption Function 126 / *How a Shift in the Consumption Function Can Upset a Forecast* 127 / The Equilibrium Level of Gross National Product: An Open Economy with Government Spending 128 / Test Yourself 130 / Summary 131 / Concepts for Review 131 / Appendix 6.1: Using Basic Algebra to Derive the Multiplier 132 / Appendix 6.2: Effects of the Marginal Propensity to Import on the Multiplier 134

Chapter 7 / AGGREGATE DEMAND AND SUPPLY CURVES 136

Aggregate Demand and Supply 136 / The Aggregate Demand Curve 137 / The Aggregate Supply Curve in the Short Run 141 / National Output and the Price Level 144 / Test Yourself 145 / Why Shifts Occur in the Aggregate Demand Curve 145 / Effects of Shifts in the Aggregate Demand Curve 146 / Why Shifts Occur in the Short-Run Aggregate Supply Curve 147 / Effects of Shifts in the Short-Run Aggregate Supply Curve 148 / Example 7.1: A Ratchet Effect on Aggregate Supply 149 / What If There Is an Inflationary Gap? 149 / What If There Is a Recessionary Gap? 150 / The Aggregate Supply Curve and Equilibrium in the Long Run 151 / Test Yourself 153 / Summary 153 / Concepts for Review 153 / Appendix: The Effects of Changes in Exchange Rates on Aggregate Demand and Supply Curves 154

Chapter 8 / BUSINESS FLUCTUATIONS 158

Anatomy of the Business Cycle 158 / Business Fluctuations During 1929–91: A Brief Overview 161 / Variation in Investment Spending 164 / Inventory Cycles 166 / Variation in Government Spending 167 / The Political Business Cycle 167 / Net Exports and the International Transmission of Business

Fluctuations 168 / Monetary Factors 170 / Test Yourself 170 / Can Business Fluctuations Be Forecasted? 171 / Leading Indicators 172 / Simple Aggregate Models 173 / Econometric Models 175 / Econometric Forecasts: The Track Record 175 / Example 8.1: How Good Were Chairman Greenspan's Forecasts? 176 / Test Yourself 177 / Summary 177 / Concepts for Review 178 / Appendix: The Acceleration Principle 178

Chapter 9 / INTRODUCTION TO FISCAL POLICY 181

Strategies for Dealing with a Recessionary Gap 181 / Strategies for Dealing with an Inflationary Gap 182 / Expansionary Fiscal Policy and Budget Deficits 183 / Fiscal Policy: Closed versus Open Economies 184 / Example 9.1: How Budget Deficits are Related to Saving, Investment, and Net Exports 185 / Makers of Fiscal Policy 186 / *The Council of Economic Advisers* 187 / Automatic Stabilizers 188 / Discretionary Fiscal Policy 189 / *President Eisenhower and Automatic Stabilizers* 190 / Test Yourself 191 / Supply-Side Economics 191 / Fiscal Policy: Four Case Studies 193 / Recent American Experience with Fiscal Policy 195 / Test Yourself 197 / Summary 197 / Concepts for Review 198

PART THREE MONEY, BANKING, AND STABILIZATION POLICY

Chapter 10 / MONEY AND THE ECONOMY 199

What is Money? 199 / The Money Supply, Narrowly Defined 200 / The Money Supply, Broadly Defined 202 / The Value of Money 203 / Inflation and the Quantity of Money 204 / Unemployment and the Quantity of Money 205 / Determinants of the Quantity of Money 206 / The Demand for Money 206 / Example 10.1: Quantifying the Demand for Money 207 / Test Yourself 209 / Changes in the Money Supply and National Output 209 / Closing a Recessionary Gap 212 / Closing an Inflationary Gap 213 / Monetarism 214 / The Velocity of Money 215 / The Equation of Exchange 216 / The Crude Quantity Theory of Money and Prices 216 / Is Velocity Constant? 218 / Test Yourself 220 / Summary 220 / Concepts for Review 220

Chapter 11 / THE BANKING SYSTEM AND THE QUANTITY OF MONEY 221

The Federal Reserve System 221 / Functions of the Federal Reserve 222 / Commercial Banks in the United States 223 / How Banks Operate 225 / The Balance Sheet of an Individual Bank 226 / Fractional-Reserve Banking 227 / The Safety of the Banks 229 / *The Failure of the Knickerbocker Trust in 1907* 231 / Two Ways Banks Cannot Create Money 232 / Central Economic Issues: *Will the Banks Go the Way of the Savings and Loan Industry?* 234 / Test Yourself 238 / How Banks Can Create Money 238 / The Effect of Excess Reserves: A General Proposition 243 / The Effect of a Decrease in Reserves 244 / Currency Withdrawals 245 / Example 11.1: Currency Holdings of the Public 246 / Excess Reserves 247 / Test Yourself 248 / Summary 248 / Concepts for Review 249

Chapter 12 / MONETARY POLICY 250

What Is Monetary Policy? 250 / Makers of Monetary Policy 251 / The Federal Reserve Banks: Their Consolidated Balance Sheet 252 / Open Mar-

ket Operations 253 / Changes in Legal Reserve Requirements 255 / Changes in the Discount Rate 257 / Test Yourself 258 / When Is Monetary Policy Tight or Easy? 258 / Should the Fed Pay More Attention to Interest Rates or the Money Supply? 260 / The Saturday Night Special: A Case Study 261 / Example 12.1: How Quickly Does Monetary Policy Work? 262 / Monetary Policy in the United States 263 / *P-Star: A Useful Guide to Long-Run Inflation?* 264 / Problems in Formulating Monetary Policy 265 / *Is There an Independent Federal Reserve? Should There Be?* 266 / Monetary Policy in an Open Economy 267 / Should the Fed Be Governed by a Rule? 268 / Test Yourself 269 / Summary 270 / Concepts for Review 270

Chapter 13 / INFLATION, UNEMPLOYMENT, AND THE ROLE OF EXPECTATIONS 271

Demand-Side and Supply-Side Inflation 271 / The Phillips Curve 272 / Example 13.1: The Fed and Supply-Side Inflation 273 / The Phillips Curve Collapses 275 / The Transitory Nature of the Tradeoff between Inflation and Unemployment 276 / The Importance of Expectations 276 / How the Phillips Curve Self-Destructs: An Example 277 / Test Yourself 279 / Fighting Inflation with Monetary and Fiscal Policy: What Are the Costs? 279 / Are the Benefits Worth the Costs? 280 / *Expectations and Interest Rates* 281 / How Are Expectations Formed? 282 / The Phillips Curve under Correct Expectations 283 / The Theory of Rational Expectations 285 / The New Classical Macroeconomics and the Phillips Curve under Rational Expectations 286 / Controversy and Evidence during the 1980s 287 / Test Yourself 288 / Summary 288 / Concepts for Review 288 / Appendix: Attempts to Curb Inflation without Reducing Aggregate Demand 289

Chapter 14 / CONTROVERSIES OVER STABILIZATION POLICY: THE NEW CLASSICAL MACROECONOMICS AND THE NEW KEYNESIANS 292

Monetarists versus Keynesians: The Central Debate of the 1960s and 1970s 292 / Supply-Side Economics 293 / The New Classical Macroeconomists 294 / Unemployment and Business Fluctuations 294 / The Lucas Aggregate Supply Curve 295 / Can Stabilization Policies Work? 296 / Reactions Pro and Con 296 / Real Business Cycle Models 297 / The Effect of a Supply Shock 299 / The Relationship between Money and Output 299 / Enthusiasm and Skepticism 300 / Test Yourself 301 / The New Keynesians 301 / How Do New Keynesians Differ from Old Keynesians? 302 / Menu Costs and Sticky Prices 302 / Long-Term Labor Contracts and Sticky Wages 303 / Implicit Contracts 304 / Example 14.1: Can Profit-Sharing Be Used to Reduce Unemployment? 305 / Efficiency Wages 306 / The Insider-Outer Hypothesis 307 / Policy Activism: Pro and Con 307 / *The Design of Macroeconomic Policy: The CEA Criticizes Its Predecessors* 308 / Policy Rules and Time Inconsistency 310 / The New Keynesian Response 311 / Divergent Political Beliefs 311 / Test Yourself 312 / Summary 312 / Concepts for Review 313

Chapter 15 / THE BUDGET DEFICIT AND THE NATIONAL DEBT 314

How Big Are U.S. Budget Deficits? 314 / Controversies over Deficits 314 / Are Budget Deficits Inflationary? 315 / *How Inflation Distorts the Deficit* 316 / Do Budget Deficits "Crowd Out" Private Investment? 317 / Do Budget Deficits Matter? 319 / Test Yourself 321 / The Cyclically Adjusted Budget Balance 321 / *Should Eisenhower Have Tried to Balance the Budget?* 322 / The National Debt: Size and Growth 323 / Example 15.1: Interpreting Federal Budget Deficits 323 / *The Department of the Treasury and the National Debt* 326 / The Political Economy of Budget Deficits 327 / Alternative Policies Regarding the Federal Budget 327 / Changes in Public Attitudes 329 /

Attempts to Eliminate the Deficit 329 / Test Yourself 330 / Summary 331 / Concepts for Review 331

Chapter 16 / ECONOMIC GROWTH 332

What Is Economic Growth? 332 / Economic Growth and the Production Possibilities Curve 333 / The Aggregate Production Function 334 / The Law of Diminishing Marginal Returns 334 / Thomas Malthus and Population Growth 336 / Example 16.1: "Birth Rights" and Population Control 337 / Test Yourself 339 / David Ricardo and Capital Formation 340 / Capital Formation and Economic Growth 343 / The Role of Human Capital 344 / The Role of Technological Change 345 / Determinants of Technological Change 347 / *Central Economic Issues: Has the United States Lost Its Technological Edge?* 348 / Entrepreneurship and the Social Environment 351 / The Gap Between Actual and Potential Output 351 / Economic Growth and the Standard of Living 352 / Test Yourself 352 / Summary 353 / Concepts for Review 353

PART FOUR INTERNATIONAL ECONOMICS

Chapter 17 / INTERNATIONAL TRADE 355

America's Foreign Trade 355 / Advantages of Trade 356 / Comparative Advantage 357 / The Terms of Trade 359 / Incomplete Specialization 359 / International Trade and Individual Markets 360 / Economies of Scale and Learning 362 / Innovation and International Trade 363 / Multinational Firms 363 / Test Yourself 364 / Tariffs and Quotas 365 / Arguments for Tariffs and Quotas 368 / *Strategic Trade Policy* 369 / Tariffs in the United States 372 / Example 17.1: The Effects of a Tariff on Shoes 374 / Restrictions on U.S. Imports of Japanese Autos 375 / Test Yourself 376 / Summary 376 / Concepts for Review 377

Chapter 18 / EXCHANGE RATES AND THE BALANCE OF PAYMENTS 378

International Transactions and Exchange Rates 378 / Exchange Rates under the Gold Standard 379 / The Foreign Exchange Market 380 / Fixed Exchange Rates 383 / Balance-of-Payments Deficits and Surpluses 384 / The Balance-of-Payments Accounts 386 / Test Yourself 390 / Exchange Rates: Pre-World War II Experience 390 / The Gold Exchange Standard 391 / Fixed versus Flexible Exchange Rates 392 / How Well Have Floating Exchange Rates Worked? 392 / Should the Value of the Dollar Be Stabilized? 393 / *International Policy Coordination* 394 / The International Monetary Fund 395 / Are Foreigners Buying Up the United States at Bargain Prices? 397 / *Central Economic Issues: America's Chronic Trade Deficit* 398 / International Lending 400 / Test Yourself 401 / Summary 401 / Concepts for Review 402

PART FIVE CONSUMER BEHAVIOR AND BUSINESS DECISION MAKING

Chapter 19 / MARKET DEMAND AND PRICE ELASTICITY 403

Market Demand Curves 403 / Example 19.1: Speculation and the Demand Curve 406 / The Price Elasticity of Demand 406 / Determinants of the Price Elasticity of Demand 409 / *Henry Ford and the Price Elasticity of Demand for Autos* 410 / Price Elasticity and Total Money Expenditure 411 /

Test Yourself 412 / The Farm Problem and the Price Elasticity of Demand 412 / Industry and Firm Demand Curves 414 / Income Elasticity of Demand 415 / Example 19.2: The Demand for "Suds" 416 / Cross Elasticity of Demand 416 / Test Yourself 417 / Summary 418 / Concepts for Review 418

Chapter 20 / GETTING BEHIND THE DEMAND CURVE: CONSUMER BEHAVIOR 419

Consumer Expenditures 419 / Aggregate Data for the United States 420 / A Model of Consumer Behavior 421 / The Equilibrium Market Basket 423 / Example 20.1: The Diamond-Water Paradox 426 / Test Yourself 427 / The Consumer's Demand Curve 427 / Why Do Individual Demand Curves Generally Slope Downward? 429 / Example 20.2: Meat and Consumer's Surplus 430 / Deriving the Market Demand Curve 431 / Test Yourself 432 / *Recent Developments in Economics: The Role of Time in Consumption Decisions* 433 / Summary 434 / Concepts for Review 434 / Appendix: How Indifference Curves Can Be Used to Analyze Consumer Behavior 434

Chapter 21 / A GUIDED TOUR OF THE BUSINESS FIRM 441

The IBM Corporation: A Case Study 441 / American Firms, Big and Small 443 / Proprietorships 443 / Partnerships 444 / Corporations 444 / Corporate Securities 445 / *Buying and Selling Common Stocks* 446 / The Stock Market 447 / *Using Diversification to Reduce Risk* 449 / The Giant Corporation 450 / Test Yourself 451 / Motivation of the Firm 451 / Technology, Inputs, and the Production Function 452 / *The Principal-Agent Problem* 453 / Elements of Accounting: The Firm's Balance Sheet 454 / The Firm's Income Statement 456 / Example 21.1: How to Depreciate a Baseball Club 458 / Example 21.2: How Much Does a Hot Dog Vendor Make? 459 / Test Yourself 460 / Summary 460 / Concepts for Review 461

Chapter 22 / OPTIMAL INPUT DECISIONS BY BUSINESS FIRMS 462

The Production Function Revisited 462 / Types of Inputs 463 / The Short Run and the Long Run 464 / Average Product of an Input 465 / Marginal Product of an Input 465 / The Law of Diminishing Marginal Returns 466 / Example 22.1: Production Theory in the Milking Shed 467 / Test Yourself 468 / The Optimal Input Decision 468 / A More General Proof of the Rule 469 / *How to Make Money in Real Estate by Logic Alone* 470 / Producing Kansas Corn: A Case Study 471 / *The Coca-Cola Company and the Prices of Inputs* 472 / Test Yourself 473 / Summary 473 / Concepts for Review 473 / Appendix: Isoquants, Isocost Curves, and the Optimal Input Combination 474

Chapter 23 / COST ANALYSIS 477

What Are Costs? 477 / Short-Run Cost Functions 478 / Average Cost in the Short Run 480 / Marginal Cost in the Short Run 482 / Example 23.1: The Costs of a Small Machine Shop 485 / Short-Run Cost Functions of a Crude-Oil Pipeline: A Case Study 486 / Test Yourself 487 / Long-Run Cost Functions 487 / Returns to Scale 490 / Example 23.2: Economies of Scale in Cable Television? 491 / Measurement and Application of Cost Functions 491 / *Central Economic Issues: Can American Firms Compete?* 492 / Test Yourself 496 / Summary 497 / Concepts for Review 497

PART SIX MARKET STRUCTURE AND ANTITRUST POLICY

Chapter 24 / PERFECT COMPETITION 499

Market Structure and Economic Performance 499 / Perfect Competition 501 / The Output of the Firm 502 / The Market Supply Curve 507 / Deriving the Market Supply Curve 508 / Example 24.1: How Much Mercury Do We Have? 509 / Test Yourself 510 / The Price Elasticity of Supply 511 / Price and Output: The Market Period 512 / Price and Output: The Short Run 512 / Price and Output: The Long Run 513 / *Recent Developments in Economics: Laboratory Experimentation* 514 / The Allocation of Resources under Perfect Competition: A More Detailed View 516 / Example 24.2: How Many Apples Should Be Produced? 518 / Bituminous Coal: A Case Study 518 / Test Yourself 520 / Summary 520 / Concepts for Review 521 / Appendix: Constant, Increasing, and Decreasing Cost Industries 521

Chapter 25 / MONOPOLY AND ITS REGULATION 524

Causes of Monopoly 524 / Demand Curve and Marginal Revenue under Monopoly 526 / Price and Output: The Short Run 528 / Price and Output: The Long Run 531 / Perfect Competition and Monopoly: A Comparison 531 / Example 25.1: Another Newspaper for Haverhill? 533 / Test Yourself 534 / The Case against Monopoly 534 / Public Regulation of Monopoly 536 / Does Regulation Affect Prices? 537 / Example 25.2: Price Discrimination in Dentistry 538 / The Deregulation Movement: The Case of the Airlines 539 / Effects of Regulation on Efficiency 540 / Test Yourself 541 / Summary 542 / Concepts for Review 542 / Appendix: Marginal Cost Pricing 543

Chapter 26 / OLIGOPOLY, GAME THEORY, AND MONOPOLISTIC COMPETITION 545

Oligopoly 545 / Collusion and Cartels 547 / Price and Output of a Cartel 547 / Barriers to Collusion 548 / Example 26.1: The End of the Cozy Milk Oligopoly in New York 549 / Price Leadership 550 / Example 26.2: How Other Sources of Oil Influence OPEC's Price 551 / Nonprice Competition 551 / The Theory of Contestable Markets 552 / Test Yourself 553 / The Theory of Games 554 / A Simple Two-Person Game 554 / The Prisoners' Dilemma 555 / Example 26.3: What Will Be on the Covers of *Newsweek* and *Time*? 557 / What if the Game Is Repeated? 557 / When Is a Threat Credible? 558 / Making Resistance Credible 559 / The Advantages of Being First 561 / Comparison of Oligopoly with Perfect Competition 561 / Monopolistic Competition 562 / Price and Output under Monopolistic Competition 563 / Comparisons with Perfect Competition and Monopoly 565 / Test Yourself 566 / Summary 567 / Concepts for Review 567

Chapter 27 / INDUSTRIAL ORGANIZATION AND ANTITRUST POLICY 568

The Case against Oligopoly and Monopolistic Competition 568 / The Defense of Monopoly Power 569 / Monopoly Power, Big Business, and Technological Change 570 / How Much Monopoly Power is Optimal? 571 / Concentration of Economic Power 571 / Industrial Concentration in the United States 572 / The Antitrust Laws 573 / The Role of the Courts 574 / The Role of the Justice Department 575 / Landmark Decisions Since World War II 575 / The Growth of Private Antitrust Suits 577 / The Wave of Corporate Takeovers During the 1980s 577 / Antitrust in the Reagan and Bush Years 578 / Test Yourself 579 / Standards for Antitrust Policy 579 / The Effectiveness of Antitrust Policy 580 / The Pabst Case: Antitrust in

Action 580 / The Patent System 581 / Other Policies Designed to Restrict Competition 583 / Example 27.1: Resale Price Maintenance and Cosmetics 584 / Test Yourself 585 / Summary 585 / Concepts for Review 586

PART SEVEN DISTRIBUTION OF INCOME

Chapter 28 / DETERMINANTS OF WAGES 587

The Labor Force and the Price of Labor 587 / The Equilibrium Wage and Employment under Perfect Competition 589 / The Market Demand Curve for Labor 590 / The Market Supply Curve for Labor 590 / Example 28.1: The Value of Water's Marginal Product: The Important Case of California 591 / Equilibrium Price and Quantity of Labor 592 / Wage Differentials 594 / The All-Volunteer Army: A Case Study 595 / Signaling in the Labor Market 596 / Principal-Agent Problems in the Labor Market 597 / Incentive Systems: Bonus Payments versus a Fixed Wage 598 / The Moral of the Tale 599 / Test Yourself 599 / Monopsony 599 / Labor Unions 601 / Recent Trends in Union Membership 602 / Example 28.2: Can a Union Increase Employment? 603 / How Unions Increase Wages 603 / Collective Bargaining 604 / Union Concessions in the 1980s 605 / Test Yourself 606 / Summary 606 / Concepts for Review 607

Chapter 29 / INTEREST, RENT, AND PROFITS 608

The Nature of Interest 608 / The Determination of the Interest Rate 609 / Functions of the Interest Rate 612 / Capital Budgeting 613 / Capital and Roundabout Methods of Production 614 / Why Capital? 615 / Capitalization of Assets 615 / Effects on an Asset's Value of Changes in the Rate of Return on Other Investments 616 / What Does That Dream House Really Cost? 617 / The Present Value of Future Income 618 / Test Yourself 619 / Rent: Nature and Significance 619 / Profits 621 / Example 29.1: Exodus of Scientists and Engineers from Teaching 622 / The Functions of Profits 624 / Profits and Losses: Mainsprings of a Capitalistic System 624 / Diversifiable Risk, Nondiversifiable Risk, and the Capital Asset Pricing Model 625 / The Functional Distribution of Income 626 / Test Yourself 627 / Summary 627 / Concepts for Review 628

Chapter 30 / INCOME INEQUALITY AND POVERTY 629

How Much Inequality of Income? 629 / Why Inequality? 629 / A Measure of Income Inequality 631 / Trends in Income Inequality 632 / Effects of the Tax Structure on Income Inequality 632 / Example 30.1: Economic Effects of Illegal Aliens 633 / Income Inequality: The Pros and Cons 634 / Equal Pay for Work of "Comparable Worth" 635 / What is Poverty? 638 / Incidence and Causes of Poverty 639 / Test Yourself 640 / Social Insurance 641 / Antipoverty Programs 643 / Example 30.2: Why Not Cure Poverty with a Check? 645 / Increases in the Minimum Wage: A Cure for Poverty? 646 / The War on Poverty: Some Final Volleys 647 / Test Yourself 648 / Summary 648 / Concepts for Review 648

PART EIGHT GOVERNMENT AND THE ECONOMY

Chapter 31 / THE ECONOMIC ROLE OF THE GOVERNMENT 649

Limitations of the Price System 649 / What Functions Should the Government Perform? 650 / Establishing "Rules of the Game" 651 / Maintaining

a Competitive Framework 652 / Redistribution of Income 652 / SEMATECH: Should the Government Subsidize Semiconductors? 653 / Stabilizing the Economy 654 / Providing Public Goods 654 / Why the Tennessee Valley Authority? 655 / Example 31.1: The Economics of Urban Blight 656 / Externalities 657 / Size and Nature of Government Activities 658 / Changes in View of Government Responsibilities 660 / *The Saga of the B-1 Bomber* 661 / What the Federal, State, and Local Governments Receive in Taxes 662 / Test Yourself 663 / The Role of Government in American Agriculture 663 / The Farm Problem 663 / Government Aid to Agriculture 666 / Price Supports and Surplus Controls 667 / Farm Policy: The Past Twenty Years 668 / Evaluation of Government Farm Programs 669 / Test Yourself 670 / Summary 671 / Concepts for Review 672

Chapter 32 / GOVERNMENT EXPENDITURES AND TAXATION 673

Government Expenditures 673 / Central Economic Issues: Medical Care: Can Benefit-Cost Analysis Be Used? 675 / Scope and Efficiency of Government Activities 678 / The Theory of Public Choice 679 / Test Yourself 681 / Taxation and Government Revenues 681 / Principles of Taxation 682 / The Personal Income Tax 683 / The Corporate Income Tax 684 / The Property Tax and the Sales Tax 685 / Tax Incidence 685 / Example 32.1: Should Income or Consumption Be Taxed? 688 / Alternative Ways of Financing Government Expenditures—and Their Effects 688 / Test Yourself 689 / Summary 689 / Concepts for Review 690

Chapter 33 / GOVERNMENT AND THE ENVIRONMENT 691

Our Environmental Problems 691 / The Important Role of External Dis-economies 692 / Direct Regulation by Government 693 / Effluent Fees 694 / Transferable Emissions Permits 696 / Tax Credits for Pollution-Control Equipment 696 / How Clean Should the Environment Be? 697 / Example 33.1: How to Reduce the Costs of Cleaning Up 699 / Pollution-Control Programs in the United States 699 / Directions of Environmental Policy since 1975 700 / Central Economic Issues: What Should Be Done about Global Warming? 701 / Test Yourself 704 / Summary 704 / Concepts for Review 705

PART NINE THE LESS DEVELOPED COUNTRIES AND ALTERNATIVE ECONOMIC SYSTEMS

Chapter 34 / THE LESS DEVELOPED COUNTRIES 707

Less Developed Countries: Definitions and Characteristics 707 / Barriers to Development and the Need for Capital Formation 710 / The Population Explosion 711 / Technology: A Crucial Factor 713 / *The Clash over the Protection of Intellectual Property* 715 / Entrepreneurship and Social Institutions 716 / Lack of Natural Resources 716 / Example 34.1: Economic Development with an Unlimited Labor Supply 717 / The Role of Government 718 / Test Yourself 718 / Balanced Growth 719 / Development Planning in Less Developed Countries 720 / Example 34.2: The Push toward Industrialization 721 / Planning in Action: The Case of India 721 / Choosing Investment Projects in Less Developed Countries 723 / Foreign Aid 724 / Can Argentina, Brazil, and Mexico Pay Their Debts? 727 / The World Bank 728 / Test Yourself 729 / Summary 729 / Concepts for Review 730

Chapter 35 / THE COMMUNIST COUNTRIES AND MARXISM 731

The Doctrines of Karl Marx 731 / The Soviet Economy 734 / Soviet Economic Planning 735 / Priorities and Performance 736 / Prices in the USSR 738 / The Distribution of Income 739 / Soviet Economic Growth 739 / Example 35.1: A Peek behind Soviet Price Tags 740 / Evaluation of the Soviet Economy 741 / Gorbachev's 1987 Economic Proposals 742 / Pressures for Economic Reform 743 / Test Yourself 744 / The Chinese Economy 744 / Democratic Socialism 746 / Radical Economics 747 / Does Capitalism Have a Future? 748 / Test Yourself 749 / Summary 749 / Concepts for Review 750

Appendices: DIGGING DEEPER INTO THE ECONOMIST'S TOOL BOX A1

Appendix A: *IS* and *LM* Curves A1 / Appendix B: Linear Programming A8 / Appendix C: General Equilibrium Analysis and Input-Output Models A15 / Appendix D: Optimal Resource Allocation and Perfect Competition A18

BRIEF ANSWERS TO ODD-NUMBERED TEST-YOURSELF QUESTIONS A25

BRIEF ANSWERS TO “PROBING DEEPER” AT THE END OF “CENTRAL ECONOMIC ISSUES” A44

How to Make the Transition from Communism to Capitalism: The Case of Poland (pp. 54–56) *Will the Banks Go the Way of the Savings and Loan Industry?* (pp. 234–36) *Has the United States Lost Its Technological Edge?* (pp. 348–49) *America's Chronic Trade Deficit* (pp. 398–400) *Can American Firms Compete?* (pp. 492–94) *Medical Care: Can Benefit-Cost Analysis Be Used?* (pp. 675–77) *What Should Be Done about Global Warming?* (pp. 701–3)

GLOSSARY OF TERMS A49

INDEX A65