CHE 112 Homework Practice Problems from Brown, LeMay, Bursten, et al (13th ed) Textbook

While reading each chapter, always do the imbedded practice exercises, "Give it some thought", & "Go Figure" questions. Many answers are in the back of the textbook. Then, do these Exercises from the end of the chapter, as minimum practice applying the important concepts. These exercises have their answers in the back of the textbook. Check your answers and get help promptly if you cannot figure out how to get the right answers. There are many more problems at the end of each chapter. The more practice, the better. Remember, the *Solution Manual* is available for purchase and is on reserve in the library.

Chapter Sections	Topic	Corresponding Exercises *(end of chapter, **odd** numbered)*
Chemical Equilibrium		
Chap15.1 – 15.4	Intro	Odd 15. 3 – 7; 13 - 29
Chap 15.6	K applications & ICE	Odd 15.9; 31 – 37; 41 - 59
Chap 15.7	Le Chatelier	Odd 15. 11; 61 – 67
Acids & Bases Part I		
Chap 16.1 – 16.2	Review, Bronsted-Lowry	Odd 16.1; 13 - 25
Chap 16.3 – 16.5	K_w, pH, strong acids	Odd 16.27 – 37; 41 - 47
Chap 16.6 – 16.8	K_a, K_b, ICE	Odd 16.5 – 7; 49 - 77
Chap 16.9	pH of Salt Solutions	Odd 16.9; 79 - 85
Chap 16.10	Chem Structure & Acid/Base	Odd 16.11; 93 - 97
Chap 16.11	Lewis Model of Acid & Base	Odd 16. 87 - 91
Acids & Bases Part II		
Chap 17.1 – 17.2	Common Ion, Buffers	Odd 17.1 – 3; 13 - 31
Chap 17.3	Titrations	Odd 17.5 – 7; 33 – 47; 16.3
Solubility & Precipitation		
Chap 17.4	K_{sp} Intro	Odd 17. 51 - 55
Chap 17.5, pp 751 – 755; 17.6	Additional Solubility/ppt	Odd 17.9; 49; 57 – 63; 69, 71
Complex Ions		
Chap 17.5, pp 756 - 759	K_{form} Intro; K_{form} w/ K_{sp}	Odd 17.65 - 67
Chap 17.7	Qual Analysis	Odd 17.77 – 79
Chap 23.1 – 23.3	Complex Ion Chemistry	Odd 23.13 – 21; 25 – 27; 31
Chap 23.4	Nomenclature, Structures, Isomers	Odd 23.35 - 43
Chap 23.5 – 23.6	Bonding	Odd 23.45 – 47; 51
Thermodynamics		
Chap 19.1 – 19.4	Review; Entropy Intro	Odd 19.1 – 5; 11 – 49; 53
Chap 19.5 – 19.6	Free Energy	Odd 19.7; 55 – 65; 75
Chap 19.7	Free Energy & Equilibrium	Odd 19.9; 77 - 81
Electrochemistry		
Chap 20.1 – 20.2	REDOX Rxns	Odd 20.1; 13 - 25
Chap 20.3 – 20.4	Voltaic Cells, Potentials	Odd 20.27 - 47
Chap 20.5 – 20.6	Thermo, Nernst Eqn	Odd 20.51 – 65
Chap 20.7	Batteries & Fuel Cells	
Chap 20.8	Corrosion	Odd 20. 83 - 85
Chap 20.9	Electrolysis	Odd 20.89 - 93
over		

Chapter Sections	Topic	Corresponding Exercises *(end of chapter, **odd** numbered)*
Kinetics		
Chap 14.1 – 14.3	Rates & Differential Rate Laws	Odd 14.1 – 5; 17 -35
Chap 14.4	Integrated Rate Laws	Odd 14.39 - 49
Chap 14.5 & 14.7	Arrhenius Eqn, catalysis	Odd 14.51; 55 – 63
Chap 14.6	Mechanisms	Odd 14.65 – 73
Nuclear Chemistry		
Chap 21.1 – 21.5	Radioactivity, Transmutation	Odd 21.1 – 3; 9 – 23; 27 – 37
Chap 21.6 – 21.8	$E = mc^2$, Binding Energy, Fission, Fusion	Odd 21.45 - 47
Organic Chemistry		
Chap 24.1 – 24.3	Intro, Hydrocarbons, Isomers	Odd 24.1; 24.7 – 17; 21- 31
Chap 24.4	Other Families	Odd 24.43 - 45
Environmental Chemistry		
Chap 18		
Acid Rain (US EPA website)	http://www.epa.gov/acidrain/what/index.html	
Climate Change (US EPA website)	http://www.epa.gov/climatechange/	
Water Pollution (US EPA website)	http://water.epa.gov/polwaste/	
Lead Pollution (US EPA website)	http://www.epa.gov/lead/	
Pesticides (US EPA website)	http://www.epa.gov/pesticides/about/index.htm	
Environmental Health Sciences (NIH website)	http://www.niehs.nih.gov/	
Chesapeake Bay Foundation	http://www.cbf.org/	
Alliance for the Chesapeake Bay	http://www.allianceforthebay.org/	
Chesapeake Bay Trust	www.cbtrust.org/	
Chesapeake Bay Commission/Program	http://www.chesbay.us/	
Storage of Spent Nuclear Fuel (US NRC website)	http://www.nrc.gov/waste/spent-fuel-storage.html	
National Institute of Standards & Technology	www.nist.gov/	