

**CHEM 116: HOMEWORK SHEET
HOUR EXAM I (Fall 2009-Dr. Babb)**

- Chapter 3 & 4:**
(5th McMurry/Fay Text)
- A. Acids, Bases and Electrolytes (McMurry/Fay Text pg.107-110; 114-116)
 - B. Net Ionic Equations and Solubility (pg. 110-114)
 - C. Molarity of Ions in Solution (pg. 84-90; 110 & Prob. Bk. pg. 161-163)

Graded Online Homework: 116-Review at <http://www.masteringgenchem.com>

Before you can access this homework, you must register using the Mastering Chemistry access code and then enroll in your Mastering course to be included in the instructor's gradebook. Be sure to enroll in the correct section using the proper course ID shown below:

**WVUChem116001F09 for 116-001 (1 PM lecture)
WVUChem116003F09 for 116-003 (8:30 AM lecture)**

*Other Homework: 3.84, 3.86, 3.90, 3.92; 4.1-4.9, 4.32, 4.34, 4.36, 4.42, 4.46, 4.50, 4.54, 4.56, 4.100
Chapter 4 (Problem Book) 114-125 (more if necessary)
Chapter 11 (Problem Book) 15-25*

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- Chapter 11:**
(5th McMurry/Fay Text)
- A. Concentration Units (pg. 399-409)
 - 1. Molarity (M)
 - 2. Wt %/Mass %, ppm, ppb
 - 3. Molality (m)
 - 4. Mole Fraction (X_i)
 - B. Solubility and Henry's Law (Solubility= $k \times P$) (pg. 409-413)

Graded Online Homework: 116-soln

Other Homework: 11.1, 11.3-11.12, 11.13, 11.40, 11.44, 11.50, 11.52, 11.54, 11.56, 11.61, 11.62, 11.64, 11.66, 11.68, 11.70

- C. Colligative Properties (pg. 413-431)
 - 1. VP Lowering ($p_{\text{soln}} = X_{\text{soln}} \times P^{\circ}_{\text{soln}}$)
 - 2. BP Elevation ($\Delta T_b = K_b \times m$)
 - 3. FP Depression ($\Delta T_f = K_f \times m$)
 - 4. Osmotic Pressure ($\pi = MRT$ or $\pi V = nRT$)
- D. Collig. Prop. of Electrolytes & van't Hoff Factor (pg. 414-415; Prob. Bk. pg. 213-215)

Graded Online Homework: 116-collig

*Other Homework: 11.13-11.26, 11.32, 11.34, 11.84-11.92 (even), 11.95, 11.98, 11.100, 11.114, 11.120, 11.126, 11.127
Chapter 14 (Problem Book) 1-7, 8-20 (more if necessary)*

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- Chapter 12:**
(5th McMurry/Fay Text)
- A. Rate Laws and Reaction Order (pg. 439-446)
 - B. Determination of Rate Law (Rate= $k[A]^m[B]^n[C]^p \dots$) (pg. 446-451)

Graded Online Homework: 116-kntcs

*Other Homework: 12.1-12.5, 12.20, 12.21, 12.32-12.40 (even), 12.43, 12.45, 12.46, 12.48
Chapter 16 (Problem Book) 1-5, 20, 21*

Continued on Back

- C. Zeroth, First and Second Order Reactions (pg. 451-461)
1. Integrated Form of Rate Law
 2. Half-Life ($\tau_{1/2}$)

Graded Online Homework: 116-integrate

*Other Homework: 12.6-12.11, 12.22, 12.24, 12.50-12.64 (even)
Chapter 16 (Problem Book) 11-18*

- D. Elementary Reactions & Reaction Mechanisms (pg. 461-470)
- E. Arrhenius Eqn. ($k=A \times \exp(-E_A/RT)$) (pg. 471-477)
- F. Catalysis (pg. 477-486)

Graded Online Homework: 116-mech

*Other Homework: 12.12-12.1, 12.26, 12.28, 12.66-12.72 (even), 12.76-12.82 (even),
12.86, 12.88, 12.92, 12.94, 12.100*

NOTE: Exam I is Wednesday, Sept 16 (in lab) and will cover most of the topics listed on this sheet. You are responsible for material covered in lecture, reading material in text and material covered in homework problems. **Please bring the following items to the exam: #2 pencil, non-programmable calculator, and photo ID.** Sample back tests can be found on the Chem 116 website at <http://www.as.wvu.edu/~mbabb>.