

Random Musings February 5, 2009

1. The results from the first quiz are in and the average was about a 77 which is what I would expect from an intelligent class. No questions are being killed since all of them were answered at >50% correct.
2. There is a quiz next Thursday and an exam next Wednesday. I will have plenty of details about the exam in the next musings but for now be aware that it will be from 7:30 till 9 on the 18th in rooms to be determined and if you have to take the make-up it will be the following Sunday night, no exceptions. Also, I will have an exam review on Sunday night, the 15th, as always.
3. Question types for quiz 2 follow:
 - Van't Hoff ranking of magnitude of colligative properties
 - Colligative property calculation
 - Setting up an equilibrium expression
 - Using LeChatlier's Principle to determine reaction direction
 - Comparing Q to K to determine reaction direction
 - Using the RICE set-up to find equilibrium values
 - Understanding the relationship between free energy and equilibria: $\Delta G = -RT\ln K$
 - Understanding the relationship between temperature and equilibria (Van't Hoff equation)
3. While there may be a few minor changes, these are effectively the 30 question types for exam 1, two weeks ahead of time.

Physical Equilibria

- 1 temperature dependence of phase changes
- 2 vapor pressure theory
- 3 salt dissociation in water
- 4 phase diagram interpretation
- 5 phase diagram navigation
- 6 calculating ΔH from heating across phases transitions
- 7 gas solubility in liquids
- 8 ranking miscibility of liquids
- 8 calculating vapor pressure in binary system
- 10 Clausius Clapeyron equation
- 11 Van't Hoff equation
- 12 colligative property application
- 13 colligative property calculation

Chemical Equilibria

- 14 setting up K from equilibrium expression
- 15 appreciating the magnitudes of K
- 16 calculating equilibrium concentrations from K
- 17 calculating equilibrium concentrations from K
- 18 determining reaction direction from Q and K
- 19 LeChatelier and reaction direction
- 20 LeChatelier and reaction direction
- 21 relationship of ΔG to K

Introduction to Water Equilibria

- 22 theory of auto-protolysis of water
23. temperature dependence of K_w
24. converting between pH, pOH, $[H^+]^+$ and $[OH^-]$
25. ranking acidity and basicity based on equilibrium constants
26. strong acid or base calculation
27. weak acid or base calculation
- 28 weak acid or base calculation
29. identifying acid and base strength
30. simple buffer calculation

4. I erred in putting the course notes together and forgot a splendid little blurb on Van't Hoff equation I added last year to make the course harder. It is part of Lecture 7 from today and you can find it under the lecture notes on the web site. Sorry for the inconvenience.

5. I have tracked down the source of the problem with some of you not being able to see the e-mails I send from the ChemPortal. It is that you have aol.com e-mail addresses and evidently aol.com wants to protect you from the ChemPortal with all manner of security efforts. This kind of thing bores me terribly but I am finding out the specific fix required and will let you know the answer in the next musings. In the mean time I will be posting e-mails through Blackboard.

6. Change of plan, the 125 gift cards for those of you who recently purchased the ChemPortal will arrive as \$45 Amazon.com gift cards rather than AMEX cards. Sorry for the inconvenience. They will arrive soon I trust.

7. The usual materials before a quiz will come in the following way:

- I will post a practice quiz 2 this weekend in the portal
- I will post a practice worksheet 4 this Sunday that will cover lectures 7 through 9.
- The TAs will write up their own practice quiz and it will be available early next week.

8. **“How to get an A in Dr. Laude’s Class” presentation by Dr. Laude on Sunday evening at 6 pm.**

As I mentioned the first day of class, I do not believe in curves and in fact believe instead that my job is to make it possible for you to learn what is expected for this course, and if I do so, I will give you an A, just like I gave 220 out of 502 students As in the fall.

Well there are 130 new students this semester, many of whom are wondering what the heck is going on—“doesn’t Dr. Laude actually teach anything?” many of you might be saying as I explode balloons and play hip hop music. No wonder I receive numerous e-mails from new students who are not used to how my course works and would like advice on how best to study.

In response, I will host a “How to get an A in Dr. Laude’s Class” presentation this Sunday evening at 6 pm in this room. During that time I will offer the study strategies that I have seen work both in terms of week to week learning of the material and specifically, what you should do to prepare for my quizzes and exams. All are invited but it is intended specifically for new students—most folks who had me for CH301 will have heard what I have to say before. It is my strong hope that you will start doing what I recommend early so you aren’t in my office after spring break, on the other side of two failed exams, having to hear me repeat what I will tell you on Sunday.

9. Since it isn't Valentine's Day till next week, it seems reasonable to do hate poetry this week. Here is something from one of your peers. And please, please, get your poetry in, especially the love poetry.

Hate Poem

by: Julie Sheehan

I hate you truly. Truly I do.
Everything about me hates everything about you.
The flick of my wrist hates you.
The way I hold my pencil hates you.
The sound made by my tiniest bones were they trapped
 in the jaws of a moray eel hates you.
Each corpuscle singing in its capillary hates you.
Look out! Fore! I hate you.
The blue-green jewel of sock lint I'm digging
 from under by third toenail, left foot, hates you.
The history of this keychain hates you.
My sigh in the background as you explain relational databases
 hates you.
The goldfish of my genius hates you.
My aorta hates you. Also my ancestors.
A closed window is both a closed window and an obvious
 symbol of how I hate you.
My voice curt as a hairshirt: hate.
My hesitation when you invite me for a drive: hate.
My pleasant "good morning": hate.
You know how when I'm sleepy I nuzzle my head
 under your arm? Hate.
The whites of my target-eyes articulate hate. My wit
 practices it.
My breasts relaxing in their holster from morning
 to night hate you.
Layers of hate, a parfait.
Hours after our latest row, brandishing the sharp glee of hate,
I dissect you cell by cell, so that I might hate each one
 individually and at leisure.
My lungs, duplicitous twins, expand with the utter validity
 of my hate, which can never have enough of you,
Breathlessly, like two idealists in a broken submarine.