

CH302 Random Musings—A getting close to V-Day edition

1. No time to explain but my wife and daughter just celebrated their birthdays on the same day again and I am about to have another baby. Life is busy and it is now clear I will never go to Europe.

2. Quiz 2 Results. Travis informs me that you all earned an average score of 79 of Quiz 2. That is really impressive and I hope it carries over to the exam.

3. Sadly QUEST is still not in fully functional form and we are doing our best just to get exams ready on time. This means that I can't evaluate stats and make decisions about what questions to keep or toss. But I spoke with a programmer this morning and it is getting there. I promise that I will evaluate the fairness of all quiz and exam questions when it becomes possible and will let you know my decision.

3. If for any reason you are having problems with your grades—from not finding yourself in QUEST, to not finding your grade to not believing that the recorded score is accurate, please do the following:

- Most importantly, do NOT e-mail me to start the process, instead:
- Fill out a change of grade (you can download it from my web site)
- Turn it in to Travis in class. No exceptions.
- Wait a couple days for Travis to get back to you (he'll usually do it the same day.)
- Please follow these simple instructions. They are the only way you will get your requests for grading information and QUEST concerns.

5. Worksheet 4 is a practice exam 1 with associated answer key. Worksheet 5 is an introduction to how to work simple acid base problems. The first half of it will be really useful in preparing to work problems on the exam. The last half includes questions that explain the validity of approximations to the RICE expression. This latter material will be important on the next week after Spring Break.

6. There is a first exam coming up on Wednesday evening. I have provided the question types for it and had a review on Sunday night. The notes from that review are found on my lecture notes web page. A format and procedure for exam 1 as well as the question types are found at the end of the musings. But some highlights of ways in which the exam procedure may be different than last semester:

- The exam will be Wednesday evening from 7:30 till 9:00 pm. You get 90 minutes sharp.
- Last name A-L will be in Welch 2.224. Last name M-Z will be in BUR 106.
- You will be given a sheet of equations and constants and a periodic table.
- A make-up exam will be given on Sunday evening from 6 to 7:30 pm in Welch 2.224. Anyone can take it. Just don't tell me your plans.

7. Where is that love poetry? I know that most of you don't believe in love or would rather just study for a test, but remember that I am taking love poetry dedications and actual written love poetry for the Thursday musings. Please send it to me by Thursday at class time.

8. In the mean time, here is love poetry written by famous people who are poetry for a living.

Oranges By Gary Soto

The first time I walked
With a girl, I was twelve,
Cold, and weighted down
With two oranges in my jacket.
December. Frost cracking
Beneath my steps, my breath
Before me, then gone,
As I walked toward
Her house, the one whose
Porch light burned yellow
Night and day, in any weather.
A dog barked at me, until
She came out pulling
At her gloves, face bright
With rouge. I smiled,
Touched her shoulder, and led
Her down the street, across
A used car lot and a line
Of newly planted trees,
Until we were breathing
Before a drugstore. We
Entered, the tiny bell
Bringing a saleslady
Down a narrow aisle of goods.
I turned to the candies
Tiered like bleachers,
And asked what she wanted -
Light in her eyes, a smile
Starting at the corners
Of her mouth. I fingered
A nickel in my pocket,
And when she lifted a chocolate
That cost a dime,
I didn't say anything.
I took the nickel from
My pocket, then an orange,
And set them quietly on
The counter. When I looked up,
The lady's eyes met mine,
And held them, knowing
Very well what it was all
About.

Outside,
A few cars hissing past,
Fog hanging like old
Coats between the trees.

I took my girl's hand
In mine for two blocks,
Then released it to let
Her unwrap the chocolate.
I peeled my orange
That was so bright against
The gray of December
That, from some distance,
Someone might have thought
I was making a fire in my hands.

Sonnet #18 William Shakespeare

Shall I compare thee to a Summer's day?
Thou art more lovely and more temperate:
Rough winds do shake the darling buds of May,
And Summer's lease hath all too short a date:
Sometime too hot the eye of heaven shines,
And oft' is his gold complexion dimm'd;
And every fair from fair sometime declines,
By chance or nature's changing course untrimm'd:
But thy eternal Summer shall not fade
Nor lose possession of that fair thou owest;
Nor shall Death brag thou wanderest in his shade,
When in eternal lines to time thou growest:

So long as men can breathe, or eyes can see,
So long lives this, and this gives life to thee.

How Do I Love Thee?

Elizabeth Barrett Browning

How do I love thee? Let me count the ways.
I love thee to the depth and breadth and height
My soul can reach, when feeling out of sight
For the ends of being and ideal grace.
I love thee to the level of every day's
Most quiet need, by sun and candle-light.
I love thee freely, as men strive for right.
I love thee purely, as they turn from praise.
I love thee with the passion put to use
In my old griefs, and with my childhood's faith.
I love thee with a love I seemed to lose
With my lost saints. I love with the breath,
Smiles, tears, of all my life; and, if God choose,
I shall but love thee better after death.

Love Not Me by John Wilbye

Love not me for comely grace,
 For my pleasing eye or face,
 Nor for any outward part:
 No, nor for a constant heart!
 For these may fail or turn to ill:
 Should thou and I sever.
 Keep, therefore, a true woman's eye,
 And love me still, but know not why!
 So hast thou the same reason still
 To dote upon me ever.

My Love Is Like To Ice by Edmund Spenser

My love is like to ice, and I to fire:
 How come it then that this her cold is so great
 Is not dissolved through my so hot desire,
 But harder grows the more I her entreat?
 Or how comes it that my exceeding heat
 Is not allayed by her heart-frozen cold,
 But that I burn much more in boiling sweat,
 And feel my flames augmented manifold?
 What more miraculous thing may be told,
 That fire, which is congealed with senseless cold,
 Should kindle fire by wonderful device?
 Such is the power of love in gentle mind,
 That it can alter all the course of kind.

Love by Samuel Taylor Coleridge

And in Life's noisiest hour,
 There whispers still the ceaseless Love of Thee,
 The heart's Self-solace and soliloquy.
 You mould my Hopes, you fashion me within;
 And to the leading Love-throb in the Heart
 Thro' all my Being, thro' my pulse's beat;
 You lie in all my many Thoughts, like Light,
 Like the fair light of Dawn, or summer Eve
 On rippling Stream, or cloud-reflecting Lake.
 And looking to the Heaven, that bends above you,
 How oft! I bless the Lot that made me love you.

Longing by Matthew Arnold

Come to me in my dreams, and then
 By day I shall be well again!
 For then the night will more than pay
 The hopeless longing of the day.
 Come, as thou cam'st a thousand times,
 A messenger from radiant climes,
 And smile on thy new world, and be
 As kind to others as to me!
 Or, as thou never cam'st in sooth,
 Come now, and let me dream it truth;
 And part my hair, and kiss my brow,

And say: My love! why sufferest thou?
 Come to me in my dreams, and then
 By day I shall be well again!
 For then the night will more than pay
 The hopeless longing of the day.

She Walks In Beauty Lord Byron

She walks in beauty, like the night
 Of cloudless climes and starry skies;
 And all that's best of dark and bright
 Meet in her aspect and her eyes:
 Thus mellow'd to that tender light
 Which heaven to gaudy day denies.
 One shade the more, one ray the less,
 Had half impair'd the nameless grace
 Which waves in raven tress,
 Or softly lightens o'er her face;
 Where thoughts serenely sweet express
 How pure, how dear their dwelling place.
 And on that cheek, and o'er that brow,
 So soft, so calm, yet eloquent,
 The smiles that win, the tint that glow,
 A mind at peace with all below,
 A heart whose love is innocent!

A Red,Red Rose Robert Burns

O my luv'e's like a red, red rose,
 That's newly sprung in June;
 O my luv'e's like the melodie
 That's sweetly play'd in tune
 As fair art thou, my bonie lass,
 So deep in luv'e am I;
 And I will luv'e thee still, my Dear,
 Till a' the seas gang dry.
 Till a' the seas gang dry, my Dear,
 And the rocks melt wi' the sun;
 I will luv'e thee still my Dear,
 While the sands o' life shall run.
 And fare thee weel, my only Luv'e,
 And fare the weel, a while!
 And I will come again, my Luv'e,

A Friend Like You
by Author Unknown

There's lots of things
With which I'm blessed,
Tho' my life's been both Sunny and Blue,
But of all my blessings,
This one's the best:
To have a friend like you.

In times of trouble
Friends will say,
"Just ask, I'll help you through it."
But you don't wait for me to ask,
You just get up
And do it!

And I can think
Of nothing in life
That I could more wisely do,
Than know a friend,
And be a friend,
And love a friend... like you.

Counting the Beats
by Robert Graves:

You, love, and I,
(He whispers) you and I,
And if no more than only you and I
What care you or I?

Counting the beats,
Counting the slow heart beats,
The bleeding to death of time in slow heart beats,
Wakeful they lie.

Cloudless day,
Night, and a cloudless day,
Yet the huge storm will burst upon their heads one
day
From a bitter sky.

Where shall we be,
(She whispers) where shall we be,
When death strikes home, O where then shall we be
Who were you and I?

Not there but here,
(He whispers) only here,
As we are, here, together, now and here,
Always you and I.

Counting the beats,
Counting the slow heart beats,
The bleeding to death of time in slow heart beats,
Wakeful they lie.

Trague:
By Viggo Mortensen

I swallowed the reel
And the rod
And the faith that
So sweetly I had
The afternoon of the day
That I met you
I saw myself in your eyes
And in your arms
And an entire lifetime
In your lips I lived
The afternoon of the day
That I met you.

Stanza for Music:
by Lord Byron

They say that Hope is happiness;
But genuine Love must prize the past,
And Memory wakes the thoughts that bless;
They rose the first- they set the last;

And all that Memory loves the most
Was once our only Hope to be,
And all that Hope adored and lost
Hath melted into Memory.

Alas! it is delusion all:
The future cheats us from afar,
Nor can we be what we recall,
Nor dare we think on what we are.

Come Slowly
by Emily Dickinson

Come slowly, Eden
Lips unused to thee.
Bashful, sip thy jasmines,
As the fainting bee,
Reaching late his flower,
Round her chamber hums,
Counts his nectars -alights,
And is lost in balms!

CH 302 Exam 1 Procedures: Format and Administration

Exam format:

1. A major CH302 exam covering Chapters 8 through the beginning of 10 will be administered Wednesday, February 13 from 7:30 till 9:00 pm. The exam will be worth 180 points. Only problems similar in content and difficulty to those from quizzes and worksheets will be included on the exam. Many of the problems are more challenging than the quiz questions.
2. Test structure: The exam will consist of 30 questions with each question worth 6 points. Questions are in a multiple-choice format. Look below for an exact breakdown of problem types.
3. In addition to the problems, you will be provided a bubble sheet, a table of the elements, and a list of useful equations and constants. Plenty of space for working problems is provided on the exam. Do not bring your own scratch paper.

Exam Administration: READ THIS CAREFULLY. IF YOU DO NOT FOLLOW PROCEDURES, YOU MAY NOT BE ALLOWED TO TAKE THE EXAM. The supreme rule for my exams: everyone has the right to an optimum test-taking environment. I am less concerned with cheating than I am with you making life miserable for others taking the exam. All of the rules for this exam are constructed with this in mind.

1. Exam location: Last name A-L, WEL 2.224. Last name M-Z, BUR 106 ***** Burdine is a mess to get to these days because of renovation so plan ahead to keep yourself out of the labyrinth of fencing that takes you everywhere except to Burdine. Also, if you go to the wrong room, you will not be allowed to take the exam. There is only enough seating for the students as listed above.
2. Exam start time: 7:30 pm. We may decide not to administer the exam to late arrivals if it becomes too disruptive to those taking the exam. Once you start the exam, you may not leave to take the make-up. You must turn in scantron with validated identity.
3. What you may bring to your seat for the exam: number 2 pencils, calculator (I don't care what kind you bring), something to drink.
What you may **not** bring to your seat: anything else including coats, food, back packs, books, paper, Walkmans. If you must bring them to class, place them at the bottom of the class room before the exams begins.
4. During the exam, the TAs will be available to answer questions. Raise your hand and one of us will come to help you as best we can. Do not leave your seat unless you are finished and are leaving the room.
5. When you leave, do so quietly. **AS YOU LEAVE YOU MUST SHOW YOUR UT IDENTIFICATION** when you turn in your exam. Make sure your name, special code and SSN are bubbled in.
6. Exam finish time 9:00 pm. You will be given fair warning that the exam is about to end so you can start guessing on questions you don't know. **I WILL NOT TOLERATE ANYONE WRITING AFTER YOU ARE TOLD TO PUT DOWN YOUR PENCILS.** Anyone who is observed to be writing on their exam after the exam ends will be assumed to be cheating and will receive a 0 for the exam and will face additional academic penalties. **READ THIS AGAIN IF YOU DON'T UNDERSTAND. I WILL NOT TOLERATE ANYONE ANSWERING QUESTIONS AFTER THE EXAM STOPS AT 9:00 PM.**
7. If all goes well the exam scores will be posted by Thursday morning. Please don't hassle us if they are not up right away. We are doing our best.
8. If you have any special considerations please contact me immediately by e-mail so we have documentation.
9. Responsibility. There is an increasing tendency for you to think you can be irresponsible and mommy or daddy will take care of you in class. I am not your daddy. So your decision to show up unprepared for quizzes and exam without sharpened pencils or a calculator is not my problem. I will have some pencils and some calculators available because the lower division office is nice, and I will look after folks whose batteries die. But if the collection of calculators I bring to class runs out, you are on your own. Grow up (he said gently.)

The 30 question types on the exam.

30 question types for the exam 1

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, $[H^+]_a$ 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. van't Hoff factor will be substituted for buffer calculation