5.112 INSTRUCTIONS AND LOGISTICS FOR EXAM III
November 17, 2004

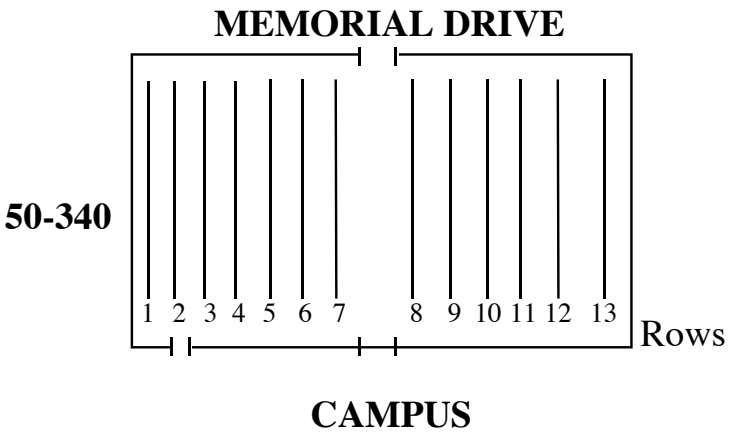
Exam covers LS #18-25 and associated reading and problem sets #6-7. Exam is closed book and closed notes. Bring your calculator. Graphing calculators are not allowed. Check website for models of allowed calculators. A list of physical constants, a periodic table without electron configurations and most equations will be supplied. If you are uncertain whether your calculator meets the acceptance criteria, contact Prof. Ceyer by email. Full credit for a problem will be given only if each step of its solution is clearly shown, including the values of the constants. Quantitative solutions to problems must have the correct number of significant figures.

The equations for which you are responsible are the Nernst equation, the Henderson-Hasselbalch equation and the equation relating standard cell potential to K_{eq}. Be familiar also with the derivatives of the foregoing equations. You need to know the definition of pH, pK_a, etc. and to be able to set up and solve acid-base calculations. You need to know the tenets of VSPR theory, to be able to make molecular structure predictions and to understand the relationship of structure to hybridization. You should be able to contrast valence bond theory with molecular orbitals theory. You will be provided with a table to standard half-cell potentals.

Optional extra problems are posted on the website. Their numerical solutions will be posted on the website and their complete solutions will be posted on the bulletin board outside of 2-204 by Monday morning, 10-25. The TAs have moved their office hours so that they will be held on Oct. 25 and/or Oct. 26. Consult your TA or the course website. Professor Cummins is available to discuss the material in her office, 2-227, on Monday from 4:15 pm to 5:30 pm and on Tuesday from 3:00 pm to 5:30 pm; by phone, 3-5332, anytime; or by email, ccummins@mit.edu. Dr. Christie is available by appointment made via email, patti@mit.edu.

Enter Walker from the left entrance on the campus side of the building. Walk up the stairs to the third floor. There is a class taking an exam before your exam, so you will not be able to get into the room until 12:55 pm. The following recitation sections are assigned to a row of seats in Walker 50-340:

Row 1: Rec #1 Jeremy Ryan
Row 2: Spillover row
Row 3: Rec #7 Nick Piro
Row 4: Spillover row
Row 5: Rec #3 Mike Blair
Row 6: Spillover row
Row 7: Rec #4 Glen Alliger
Row 8: Rec #5 Katherine Lovejoy
Row 9: Spillover row
Row 10: Rec #6 Kate Markiewicz
Row 11: Spillover row
Row 12: Rec #2 Scott Chen
Row 13: Rec #8 Katerina Woodin



Sit with your assigned recitation section. Your recitation section is considered to be the one to which you are formally assigned. Check the website to clarify your recitation assignment. Your assigned TA must be able to identify you and take note of your attendance. If your TA is not able to recognize you, be sure to bring your MIT ID.