## CSE-466-- review for Exam 1.

1. List three figures-of-merit for an embedded system.
2. How many clock cycles does the Atmega16 use to increment the contents of a data register? To access SRAM?
3. How does the processor find the ISR? What's an ISR? Be brief.
4. Define "critical section".
5. Describe two techniques for avoiding the disabling of interrupts.
6. Given the circuit below, what is the voltage at point X?
   (No, I didn't forget the resistor values; solve for X)
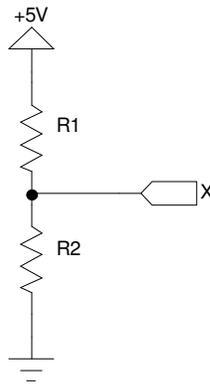
7. Write an interrupt handler for the Atmega16 timer 0 overflow interrupt. Document what mode the timer is operating in, and what operations are required for repeated operation. How would you minimize the interrupt latency?
8. Describe a table-driven digital oscillator. What are three elements that can affect the accuracy of the output?
9. What is the Nyquist frequency, and why is it important?

Important sections of the Course Pak:
- AVR CPU Core
- System Clock section
- Interrupts
- I/O Ports
- Timer/Counter 0 and 1
- Analog to Digital Converter
- Register Summary

Lecture slides