1.(5) When using assembly language with gcc in the way described in class, explain what precautions must be taken in regards to register use.

must not clobber registers used by gcc

2.(5) In 0.5u CMOS, how does power dissipation scale with clock frequency?

linearly, $P \approx CV^2F$

3.(5) What fundamental action is taken in the AVR to reduce power dissipation in the sleep modes?

Shut off clocks that aren't needed.

4.(5) After a power-up reset, the AVR does not immediately begin to start execution. According to the datasheet, why is this?

to let power supply and/or oscillator stabilize.

5.(5) Jack Ganssle says a great watchdog timer also resets peripherals. Why is that important?

Peripherals may have been left in incorrect or dangerous states by runaway software thus they should be reinitialized too.

6.(5) What was the initial use of JTAG?

to test for opens + shorts to ICs on a printed circuit board.

(over)

7.(5) What is a bootloader used for?

Can be used by the uC to reprogram itself there are other uses too, Encryption, etc.

8.(5) A fuse byte reads what value when programmed?

logic Zero

9.(5) True or False, using vi or emacs will make you more attractive to the opposite sex?

Freebie!