Please print out this form (two-sided, if you can) and write your answers *legibly* in the spaces provided. If you can’t write legibly, type.

1. Draw a circuit that implements the exclusive-or function using just AND, OR gates and inverters. Can you do it with just AND gates and inverters (hint: consider DeMorgan’s Rule)?

2. What does it mean for a flip flop to be metastable? What’s the maximum amount of time that a flip flop can be metastable?
3. Show how you could implement a four input multiplexor using a 2-to-4 decoder and some additional gates.