

UNC Charlotte, Department of Electrical and Computer Engineering
ECGR 2181, Fall 2009, Homework #11
Due: 12/4/09, During your class session (100 points)

Show all of your work!!!! Also, use ONE side of the paper and do not staple.

1. Do problem 3.38 in the textbook. (25 points)
2. Do problem 3.39 in the textbook. (25 points)
3. Based on the following equations, reverse-engineer the FSM. Show all five steps of the process. Minimize the equations, if possible. (50 points)

$$\begin{aligned}n_2 &= s_2's_1s_0B' + s_2s_1' + s_2s_0' + s_2B \\n_1 &= s_1s_0' + s_1B + s_2s_0B + s_2's_1's_0B' \\n_0 &= s_0'B + s_2'B + s_1B + s_2s_1's_0B' \\x &= s_2s_0' + s_2s_1' + s_2's_1s_0 \\y &= s_1 \text{ XOR } s_0\end{aligned}$$