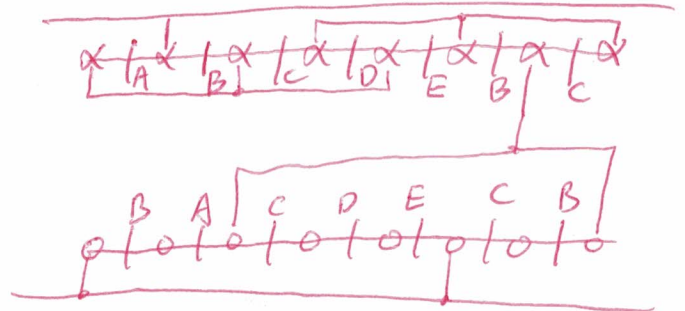
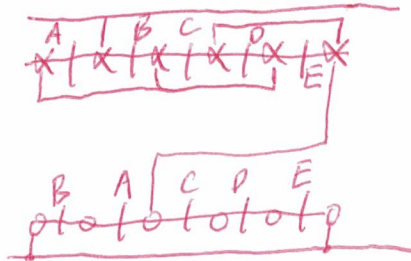
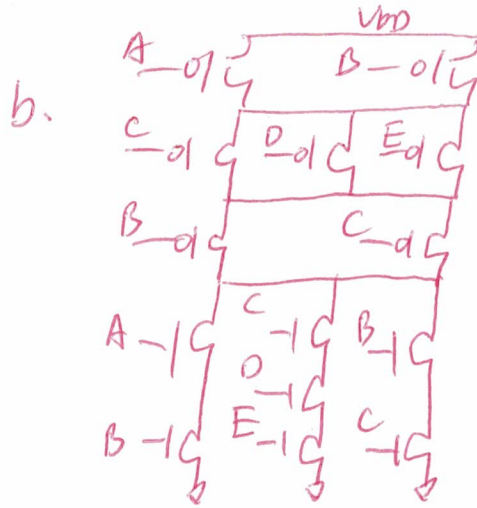
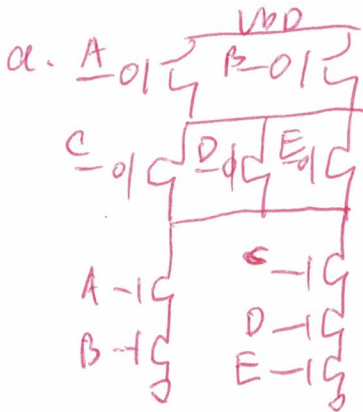


ENGR338 Quiz 4

1. Draw the stick diagram layout of the following logic circuits. (50 points)

a. $\overline{(AB + CD)E + AB} = AB\bar{E} + C\bar{D}E + AB = AB(C\bar{E} + 1) + C\bar{D}E = AB + C\bar{D}E$

b. $\overline{AB + CDE + BC}$



2. (a) Use truth table and K Map to find the gate-level schematic of the 2-1 MUX (must be static-1 hazard free). (b) Draw the diagram of the 3-bit add/subtractor that uses FAs and MUXes and the control bit. (50 points)

Refer to 3/22 lecture/videos and notes