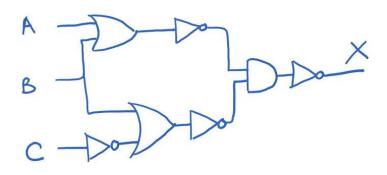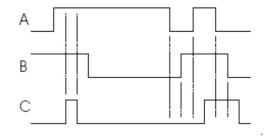# L1 practice questions

Logic gates & Boolean algebra

1. In each case below, draw a logic circuit diagram that implements the Boolean expression. Also construct the truth table for each circuit.

    (a) $X = [(A+B)'(B'C)]'$

    (b) $X = [(ABC)'(A+D)]'$

2. Suppose you have an unknown two-input gate that is either an OR gate or an AND gate. What combination of input levels should you apply to the gate's inputs to determine which type of gate it is? (Tocci et al. 10th ed Q3-9)

3. Write the expression for the output X of the circuit below and use it to determine the complete truth table. Then apply the waveforms that follow to the circuit inputs and draw the resulting output waveform. (Tocci et al. 10th ed Q3-19).