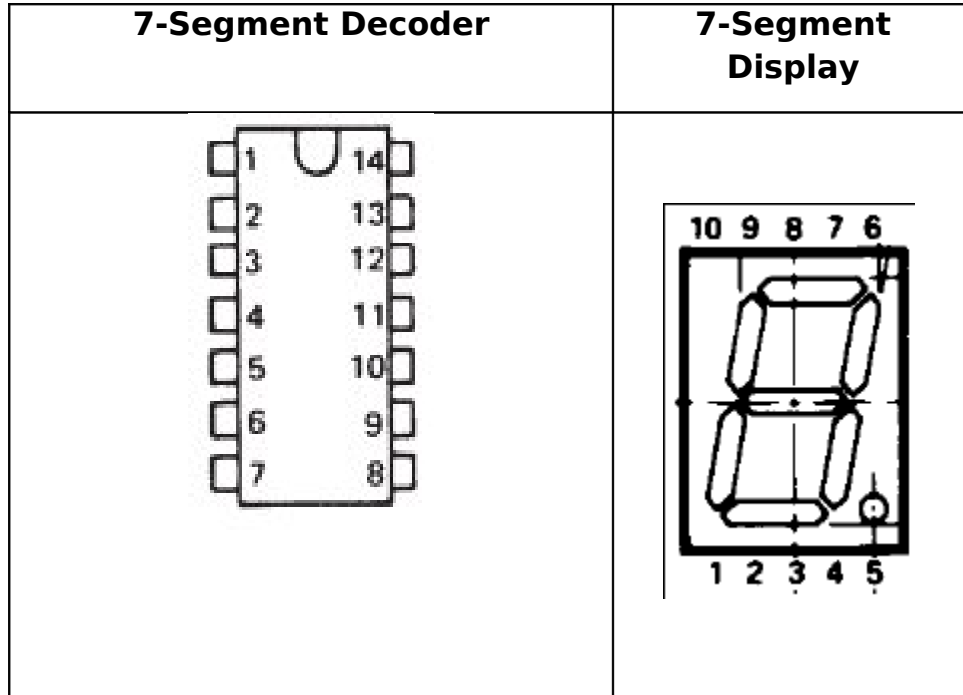Name: _____   Lab Section: _____

ECE 2140
Experiment 8 Prelab
Seven Segment Decoder

1. **Read through Experiment 8.**

2. Look up the data sheets for the parts used in the experiment.

    a. Label all pins according to the data sheet:

7-Segment Decoder	7-Segment Display

    b. Find the following specifications for each IC:

Recommended (Nominal) Operating Voltages	
	7-Seg Decoder
V_{CC}	
V_{IL}	
V_{IH}	
V_{OL}	
V_{OH}	

3. Fill out the truth table

Find out how a 7-segment decoder operates from the data sheet, and fill out the following truth table:

Input	Output (a b c d e f g)
0000	
0001	
0010	
0011	
0100	
0101	
0110	
0111	
1000	
1001	

4. Draw a schematic for the experiment:

5. (Extra Credit – submit at beginning of lab) Derive your own 7-segment decoder. Show all work.