CE 3101   HW2   Name_____
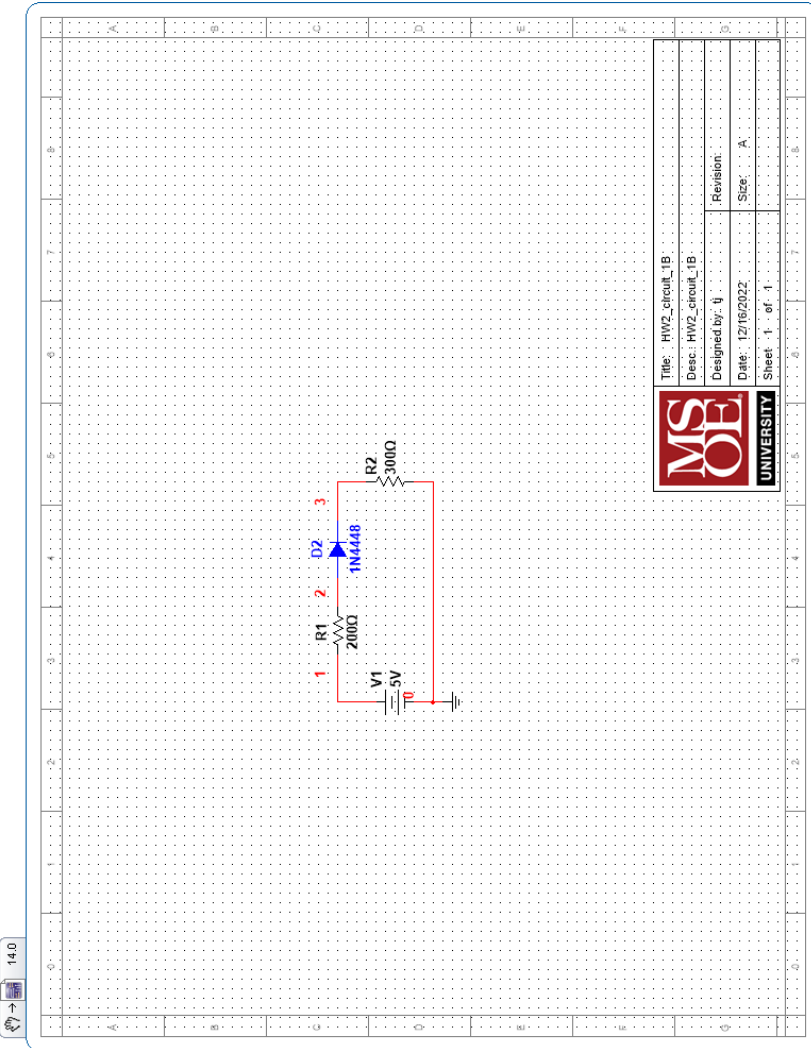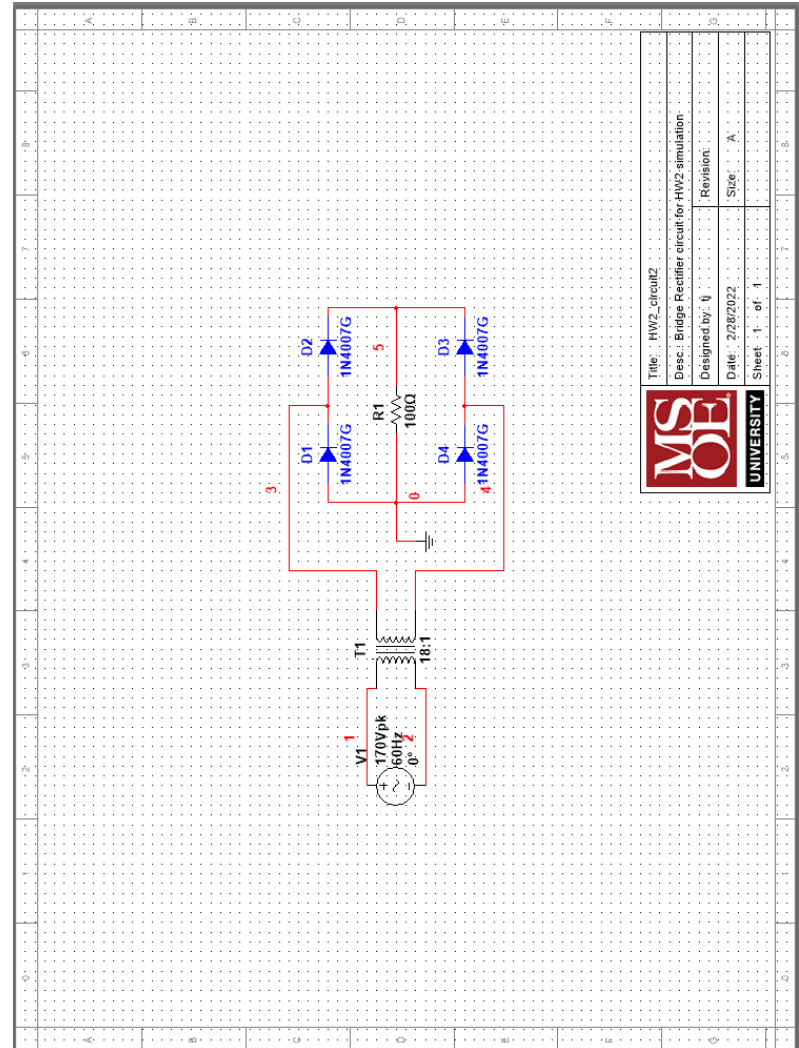
Circuit for parts 1-4

Circuit for part 5

1 – Calculate the current in D2 (assume $V_D = 0.7V$)   10pts

$\boxed{I_D =}$

2 – If I_S for D2 is $3\times10^{-8}A$ and n = 2, calculate the current in D2 with $V_D = 0.7V$
(ignore the rest of the circuit)   20 pts

$\boxed{I_D =}$

3 – Calculate the expected V_D for D2 with the current from part 1, and I_S, n from
part 2   20pts

$\boxed{V_D =}$

4 – Simulate the circuit for part 1 and verify your results for problems 1 and 3.
   Provide a screenshot of the DC analysis   20pts

4 – Simulate the circuit for part 2 and verify the operation of the bridge rectifier
     (plot V3, V4, V5) for at least 2 full input periods
  - Explain the difference in peak voltages between V3/V4 and V5   30pts