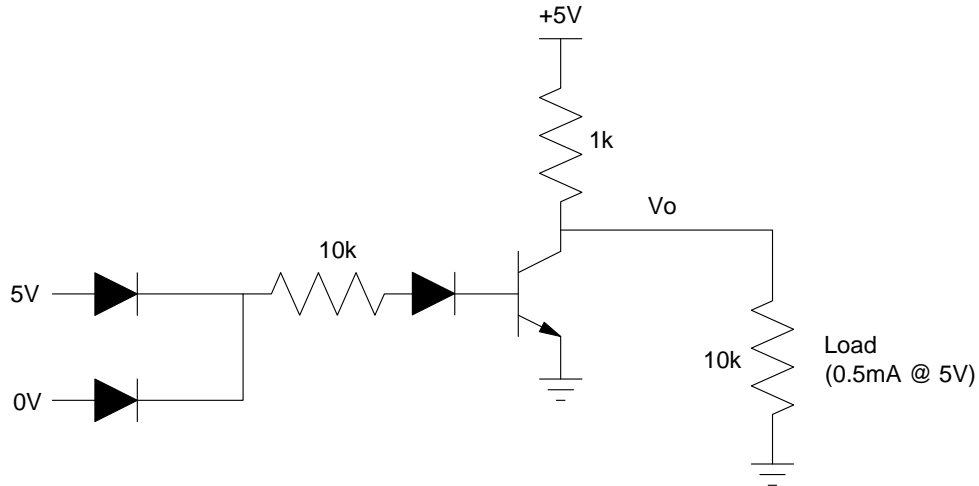


ECE 320 - Homework #7

DTL, TTL Logic. Due Monday, October 10th

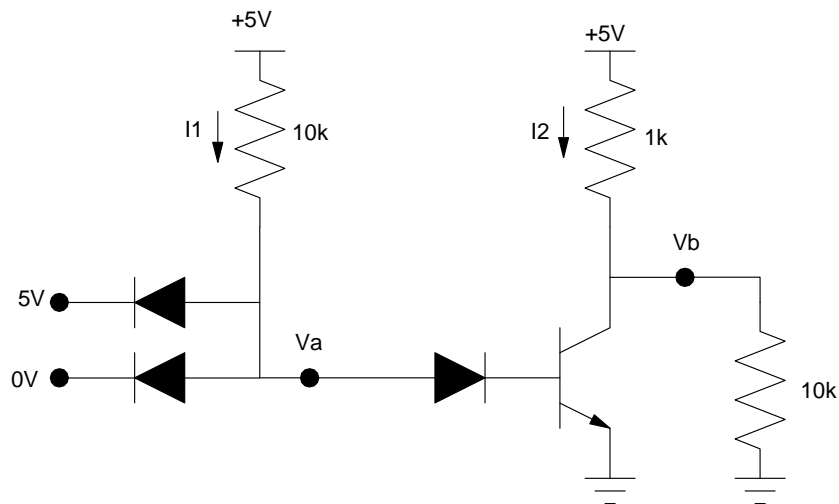
DTL Logic:

1) Determine the voltages and currents for the following DTL NOR gate:



2) Check your analysis with PartSim (or similar program)

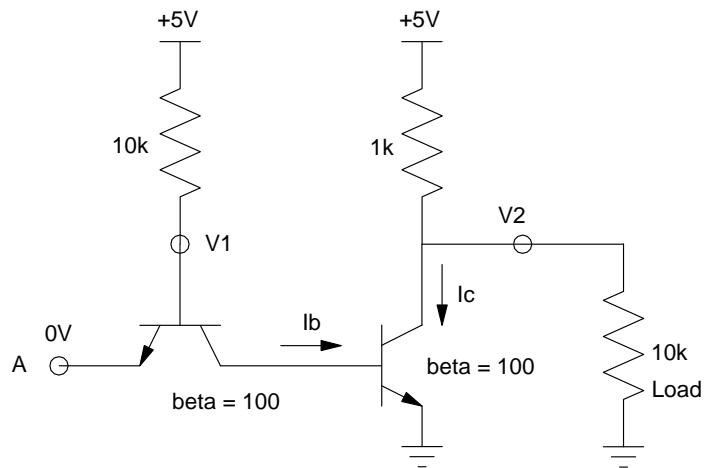
3) Determine the voltages and currents for the following DTL NAND gate:



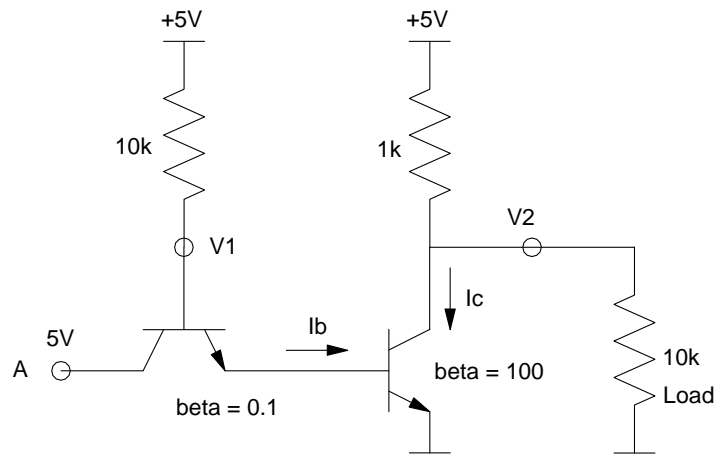
4) Check your analysis with PartSim (or similar program)

TTL Logic

5) Determine the voltages and currents for the following TTL inverter



6) Determine the voltages and currents for the following TTL inverter



Term Project:

Specify a device which uses two different circuits we cover in ECE 320.

7) Overall Requirements: Specify what the entire system does in terms of

- Inputs
- Outputs
- Relationship: How the inputs affect the outputs

8) Project Breakdown: Show how this device can be build using two different circuits covered in ECE 320. For each circuit, specify the

- Inputs
- Outputs
- Relationship: How the inputs affect the outputs