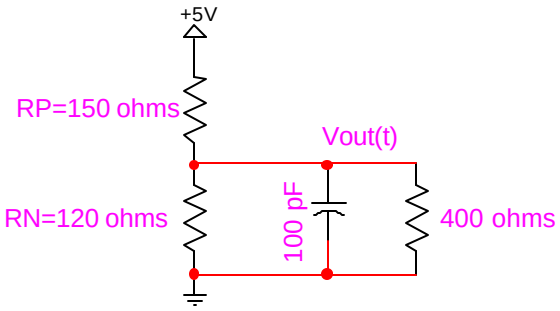
Name _____ Box _____ Due date: Monday. 18 Dec.

EC333 Homework #3 Winter 2000-2001

1 (time constant) Calculate time constants of rising and falling edges of the output voltage in the following circuit.



2 (rise and fall time) Problem 3.67 on page 189 of Wakerly's book.

3 (rise time) Problem 3.69 on page 189 of Wakerly's book.

4 (3-state buffer) Problem 3.96 on page 191 of Wakerly's book.

5 The following circuit implements a parallel to serial transmission. It takes five clock cycles to transmit a 4-bit parallel datum on Pin A, B, C, and D of the 74LS194 to a serial output on Q_A. What is the maximum clock speed at which the circuit can operate normally, assuming all parts are of TTL type?
(Find the data sheets from the department data sheet server at Jupiter\Amalthea\Ece\Common (K:).)