## 7.2.1: Passive RC Circuit Natural Response (35 points total)

1. In the space below, provide (from your pre-lab results) the initial capacitor voltages and time constants for the circuits of Figure 2. (3 pts)
2. Provide below a schematic of the circuit you implemented, including actual resistance and capacitance values used in your circuit. (2 pts)
3. Attach to this worksheet an image of the oscilloscope window, showing the capacitor voltage response for the circuit of Figure 2(a), in which V+ is used as the voltage source. Briefly discuss differences between the measured data and your estimates from the pre-lab (as always, this should include a percent difference between the values). (5 pts)
4. In the space below, provide your estimate of the circuit’s time constant from the measured response data. Briefly discuss differences between the measured data and your estimates from the pre-lab (as always, this should include a percent difference between the values). (5 pts)
5. **DEMO**: Have a teaching assistant initial this sheet, indicating that they have observed your circuits’ operation. (5 pts)

**TA Initials: \_\_\_\_\_\_\_**

1. Attach to this worksheet an image of the oscilloscope window, showing the capacitor voltage response for the circuit of Figure 2(b), in which the waveform generator is used as the voltage source. Briefly discuss differences between the measured data and your estimates from the pre-lab (as always, this should include a percent difference between the values). (5 pts)
2. In the space below, provide your estimate of the circuit’s time constant from the measured response data. Briefly discuss differences between the measured data and your estimates from the pre-lab (as always, this should include a percent difference between the values). (5 pts)
3. **DEMO**: Have a teaching assistant initial this sheet, indicating that they have observed your circuits’ operation when using a square wave. (5 pts)

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