

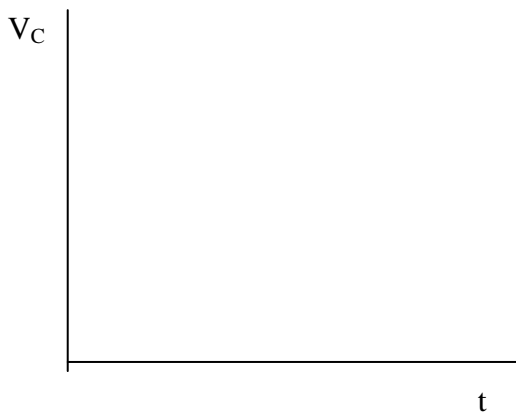
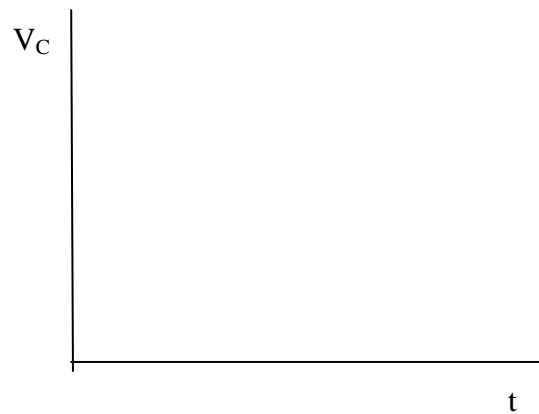
Name: _____ Partner: _____ PH2223 -__

Experiment Sheet for R & C in a DC Circuit

If you wish to study both the charging and discharging of a capacitor why is using a square wave as your source voltage a good idea?

Charging/Discharging Graphs

Sketch what your V_C vs. time graphs looked like on your oscilloscope for the three different frequencies (100, 1000, and 10,000Hz). Only sketch one period (one charge and discharge). Be sure to include your peak voltage values.

 V_C vs. time for 100 Hz V_C vs. time for 1,000 Hz V_C vs. time for 10,000 Hz

Explain the differences in your graphs on the previous page. Did the capacitor fully charge? If one or more graph(s) did not look like the theoretical charging and discharging curves then be sure to explain why.

What did you observe as the half-time (the 1,000 Hz data is usually good for this)? _____

What did you calculate as your half-time? _____

Show your calculation of the half time in the space below.