**RC Circuits**

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**Section I: Background**

An RC circuit is a type of electrical circuit consisting of any number of 1 or more Resistors and Capacitators in either series or parallel. A resistor is a circuit component that can very in value of resistivity which is measured in ohms, and the use of the component is to provide a point of resistance in the circuit. A capacitator is another type of circuit component which typically consists of two metal plates with separation between them, which when a current is passed through the component the charge of the plates become opposite which creates an electric field between the two plates, which allows the capacitator to be charged up and de-charged. Capacitators are measured by their capacitance which is the amount they can be charged up. A circuit in series means the flow of electrons passes through every single component and has only a single route to take to complete the circuit, whereas a parallel circuit the electrons have multiple paths to take to complete the circuit and don’t go through every component. The combination of resistor and capacitator in either series, parallel or both, change the rate of charge and discharge of capacitator because of the electrons travel through the circuit, which will demonstrate by the experiment.

**Section II: Theory and Procedure**