

TI-RSLK **MAX**

Texas Instruments Robotics System Learning Kit



Module 2

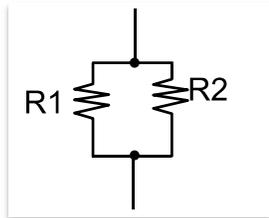
Quiz: Voltage, Current and Power



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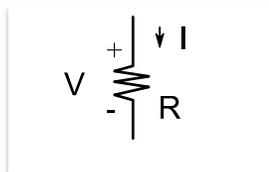
Q1 Resistors

What is the equivalent resistance of R1 in parallel with R2? What is the equivalent resistance of R1 in series with R2?



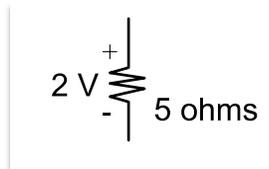
Q2 Ohm's Law

What is the relationship between voltage and current in a resistor?



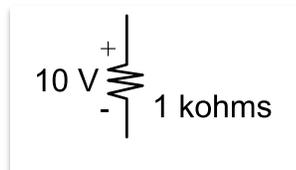
Q3 Power

What happens when 2V is placed across a 5Ω resistor rated at ¼ watt?



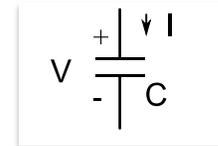
Q4 Power

What happens when 10V is placed across a 1kΩ resistor rated at ¼ watt?



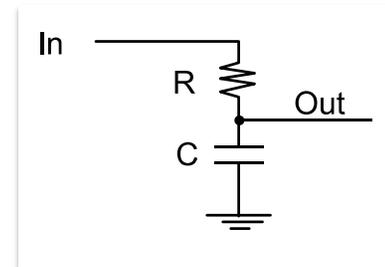
Q5 Capacitor

What is the relationship between voltage and current in a capacitor?



Q6 Cutoff frequency

What is the cutoff frequency of this circuit in terms of R and C?



Q7 LED

The HLMP-4717 yellow LED runs at 1.8 V and 2 mA. The *Luminous Efficacy* is 500 lumens/watt. What is the brightness in lumens?

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Mailing Address: Texas Instruments, Post Office Box 655303, Dallas, Texas 75265
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