**YOU HAVE TO SHOW ALL WORK IN ORDER TO RECEIVE FULL CREDIT**

**Note: All answer must be in engineering notation rounded off to the tenth**

1. **What is the current through a 2.2Ω resistor if the voltage drop across it is 24 V? (7 points)**
2. **If a voltmeter has an internal resistance of 50 kΩ find the current through the meter when it reads 120 V. (7 points)**
3. **In a TV camera, a current of 5.6 mA passes through a resistor of 3.3 MΩ What is the voltage drop across the resistor? (7 points)**
4. **The power consumed by a 2.2 kΩ resistor is 240 mW. What is the current level through the resistor? (8 points)**
5. **A 2.2 kΩ resistor in a stereo system dissipates 42 mW of power. What is the voltage across the resistor? (8 points)**
6. **What are the “hot” resistance level and current rating of a 120 V, 100 W bulb? (8 points)**
7. **What is the power delivered by a 12 V battery if the current drain is 40 A? (8 points)**
8. **Use Kirchhoff’s Current Law (KCL) to find the unknown current (A = 7 points, B = 15 points)**

Base on the KCL,

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1. **Use Kirchhoff’s Voltage Law (KVL) to find the unknown voltage (A, B = 7 points, C = 11 points)**

Base on the KVL, in this closed loop , assumed the current flow is clockwise



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