Certainly! Here are the questions based on the given constraints:  
  
\*\*Multiple Choice Questions (MCQs):\*\*  
  
1. Which of the following is the unit of electric current?  
 a) Volt  
 b) Ohm  
 c) Ampere  
 d) Joule  
  
2. What is the formula for calculating the resistance in a circuit?  
 a) R = V/I  
 b) R = VI  
 c) R = I/V  
 d) R = V + I  
  
3. Which device is used to measure electric current in a circuit?  
 a) Voltmeter  
 b) Ammeter  
 c) Ohmmeter  
 d) Galvanometer  
  
4. In a parallel circuit, the total resistance is:  
 a) Greater than the largest resistance  
 b) Equal to the sum of all resistances  
 c) Less than the smallest resistance  
 d) Equal to the average of all resistances  
  
5. Which law states that the current through a conductor between two points is directly proportional to the voltage across the two points?  
 a) Coulomb's Law  
 b) Ohm's Law  
 c) Faraday's Law  
 d) Kirchhoff's Law  
  
\*\*Fill in the Blanks:\*\*  
  
1. The SI unit of electric charge is \_\_\_\_\_\_\_\_\_\_.  
2. The relationship between voltage, current, and resistance is given by \_\_\_\_\_\_\_\_\_\_ Law.  
3. A device that converts chemical energy into electrical energy is called a \_\_\_\_\_\_\_\_\_\_.  
4. The opposition to the flow of current in a conductor is called \_\_\_\_\_\_\_\_\_\_.  
5. In a series circuit, the total resistance is the \_\_\_\_\_\_\_\_\_\_ of the individual resistances.  
  
\*\*True/False:\*\*  
  
1. The resistance of a conductor decreases with an increase in temperature. (True/False)  
2. A voltmeter is connected in series with the circuit to measure the voltage. (True/False)  
3. The unit of electrical power is Watt. (True/False)  
4. Ohm's Law is applicable to all types of materials. (True/False)  
5. In a parallel circuit, the voltage across each component is the same. (True/False)  
  
\*\*One-word Questions:\*\*  
  
1. What is the unit of electrical resistance?  
2. Which instrument measures the potential difference across two points?  
3. What is the flow of electric charge called?  
4. What is the name of the law that relates current, voltage, and resistance?  
5. What kind of circuit has components connected end-to-end?  
  
\*\*Short Answer Questions:\*\*  
  
1. Define electric current and give its unit.  
2. Explain the difference between series and parallel circuits.  
3. What is the role of a fuse in an electrical circuit?  
4. How does temperature affect the resistance of a conductor?  
5. State and explain Ohm's Law.  
  
\*\*Long Answer Questions:\*\*  
  
1. Describe the construction and working of a simple electric circuit with a diagram.  
2. Explain the concept of electrical power and derive the formula for power in terms of voltage and current.  
3. Discuss the factors affecting the resistance of a conductor.  
4. Describe the process of electroplating and its applications.  
5. Explain Kirchhoff’s laws of electrical circuits with suitable examples and diagrams.