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Assignment Question on Ohm's Law

Title: Practical Applications and Factors Affecting Ohm's Law

Question 1: Practical Applications of Ohm's Law

Explain at least **five real-life applications** of Ohm's Law. Your answer should include:

- How Ohm's Law is applied in **home electrical wiring, mobile phone chargers, electric heaters, automobile circuits, and LEDs.**
- Calculations or examples demonstrating the relationship between **voltage, current, and resistance** in any one application.

Question 2: Factors Affecting Ohm's Law

Discuss the various factors that influence **Ohm's Law** in electrical circuits, such as:

- **Temperature** and its effect on resistance.
- **Material of the conductor** (e.g., copper vs. aluminum).
- **Cross-sectional area and length** of the wire.
- **External magnetic fields and frequency of AC voltage.**