**Assignment 2**

**Applied Physics Lab**

**SP-BSE- 25**

**Kirchhoff’s Voltage and Current Law**

1. Explain Kirchhoff’s Voltage Law (KVL) and Kirchhoff’s Current Law (KCL) in detail. How do they relate to the conservation of energy and charge?
2. Why are KVL and KCL fundamental principles in electrical circuit analysis? Provide real-life examples of their significance.
3. How are Kirchhoff’s Laws applied in electrical power distribution systems?
4. Explain how KVL and KCL are used in designing electronic circuits such as amplifiers and filters.
5. How do Kirchhoff’s Laws help in diagnosing faults in electrical circuits? Provide practical examples.