## Experiment 5: Study and Observation of Clipper Circuit.

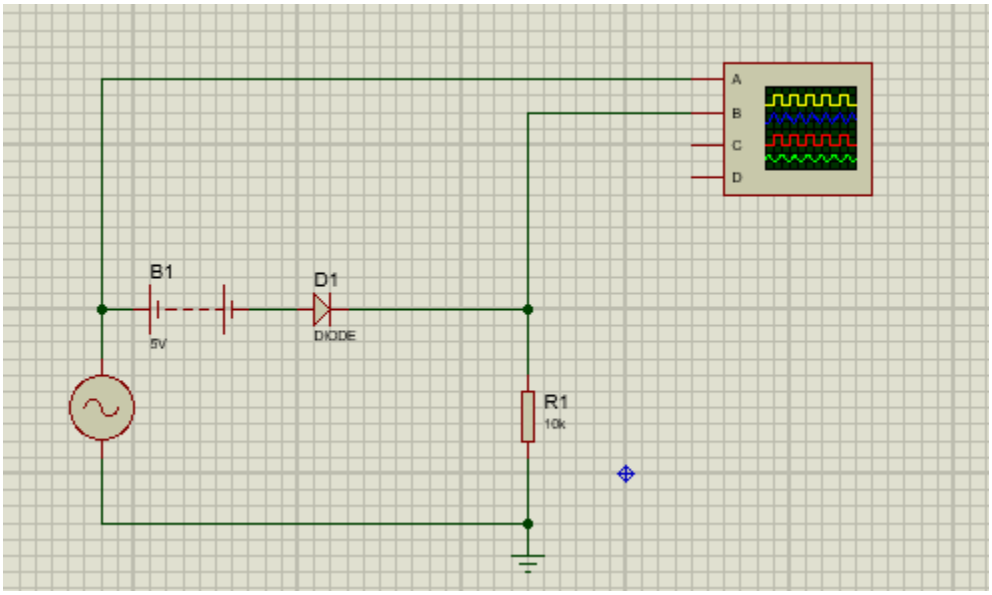
**Full-Wave Rectifier:**

A clipper circuit is an electronic circuit designed to "clip" or limit the voltage amplitude of an input signal. It is used to remove unwanted portions of the input signal. There are two types of clipper circuits: positive clipper and negative clipper.

**Equipment and Software Requirements:**

- Proteus simulation software
- Computer with Proteus installed

**Circuit Diagram:**




**Data Collection and Analysis:**

- Record the input and output voltages in a tabular form for different input values.
- Analyze the results and observe how the clipper circuit clips the input voltage.

**Precautions:**

- Ensure proper connections in the circuit.
- Avoid applying excessive voltage to the diode.
- Use appropriate units and scales for measurements.
- Be cautious when using simulation software to avoid incorrect configurations.

**Lab Task:**

Design the clipper circuit with:

i) A negative reference voltage.
ii) Reversing the diode

**Questions and Exercises:**

a. What is the purpose of a clipper circuit in electronics?

b. Explain the difference between a positive clipper and a negative clipper.

c. Why are diodes used in clipper circuits?

d. What happens when a diode becomes forward-biased, and what happens when it becomes reverse-biased?