EXPERIMENT NO. - 1

Aim of the Experiment:

Design, assemble and testing of Full wave rectifier

Theory:

A diode bridge is an arrangement of four (or more) diodes in a bridge circuit configuration that provides the same polarity of output for either polarity of input.

When used in its most common application, for conversion of an alternating current (AC) input into a direct current (DC) output, it is known as a bridge rectifier. A bridge rectifier provides full-wave rectification from a two-wire AC input, resulting in lower cost and weight as compared to a rectifier with a 3-wire input from a transformer with a center-tapped secondary winding.

A full-wave rectifier converts the whole of the input waveform to one of constant polarity (positive or negative) at its output. Full-wave rectification converts both polarities of the input waveform to pulsating DC (direct current), and yields a higher average output voltage. Two diodes and a center tapped transformer, or four diodes in a bridge configuration and any AC source (including a transformer without center tap), are needed. Single semiconductor diodes, double diodes with common cathode or common anode, and four-diode bridges, are manufactured as single components.

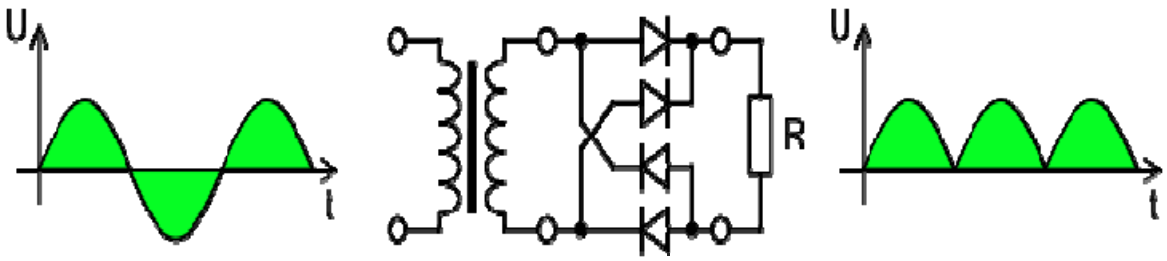
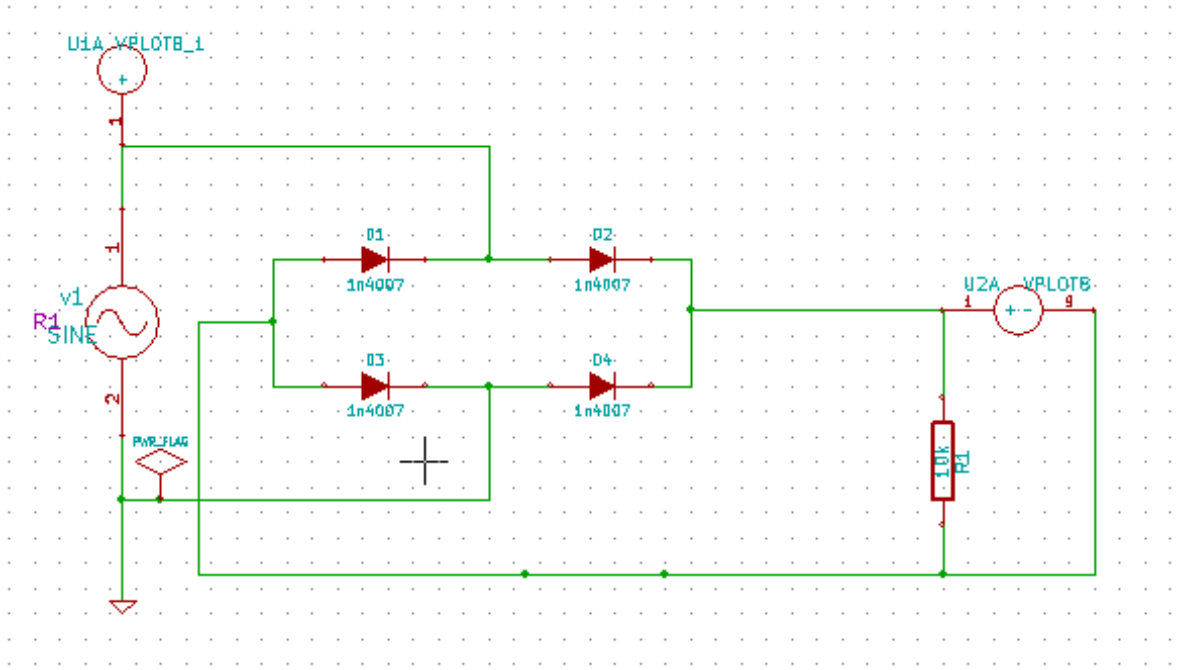
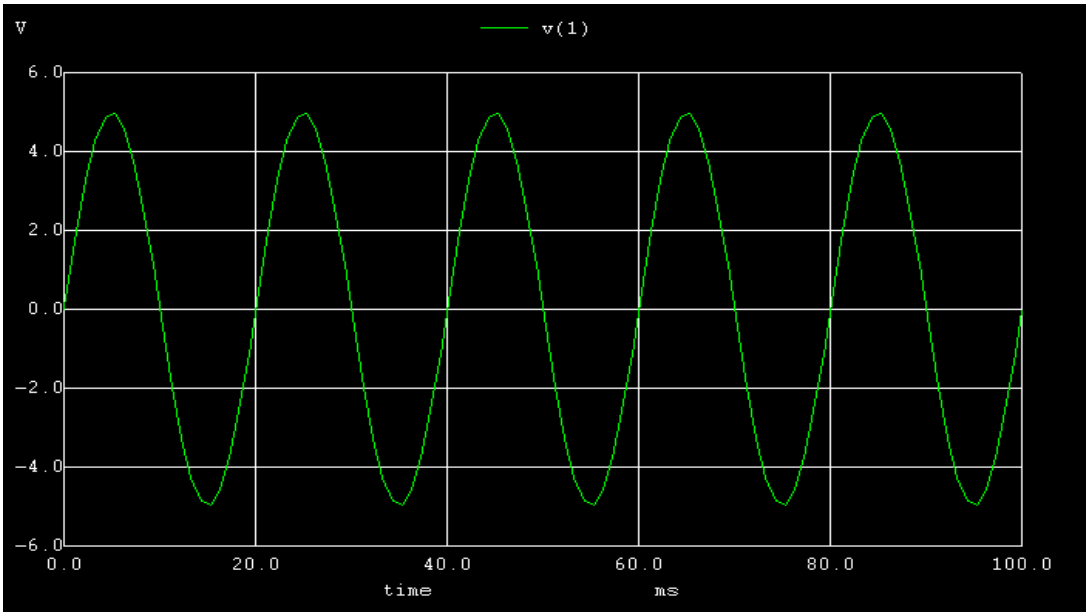


Fig: Diode bridge circuit

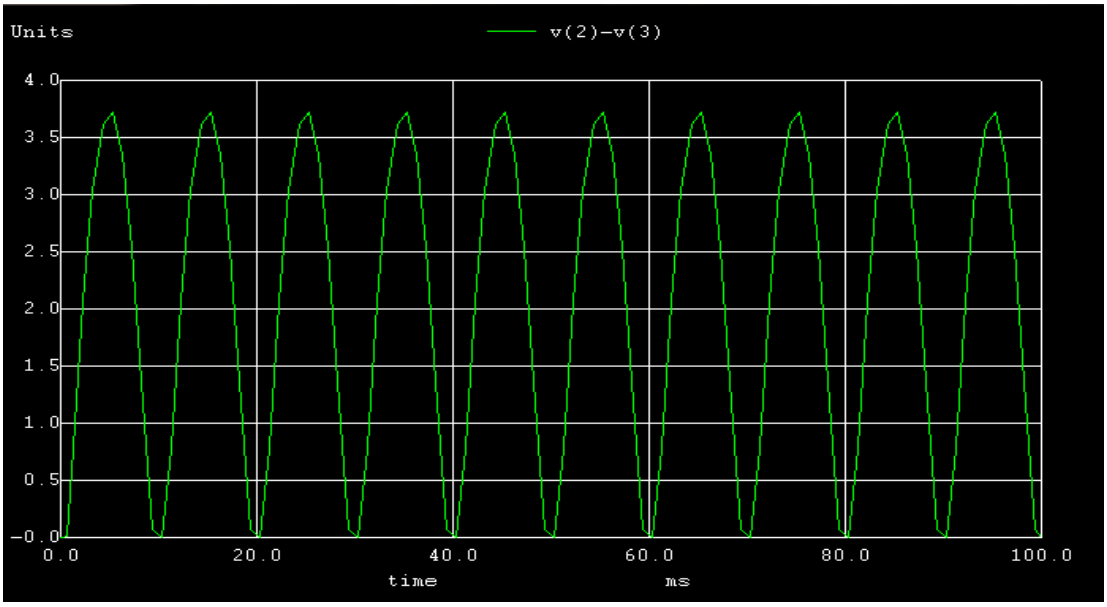
Schematic Circuit:



Input Waveform:



Output Waveform:



Conclusion:

Date: **Signature of the Student**

NAME:

ROLL NO.:

GROUP ID:

SUB GROUP NO.:

Experiment Mark: **/ 20** **Instructor's Signature**