Date: 17/3/21

Experiment no. 3

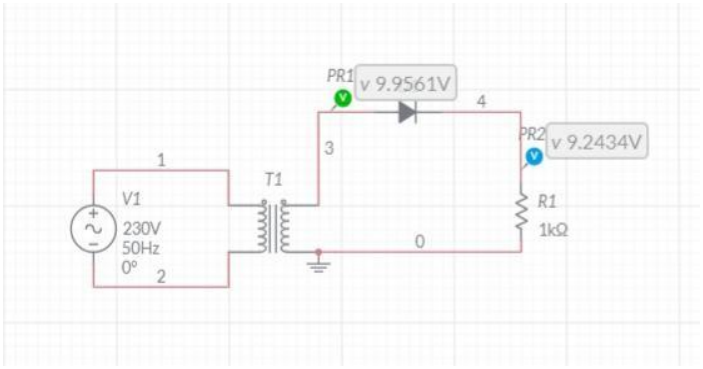
Objective: To study simulation of half wave rectifier using diodes

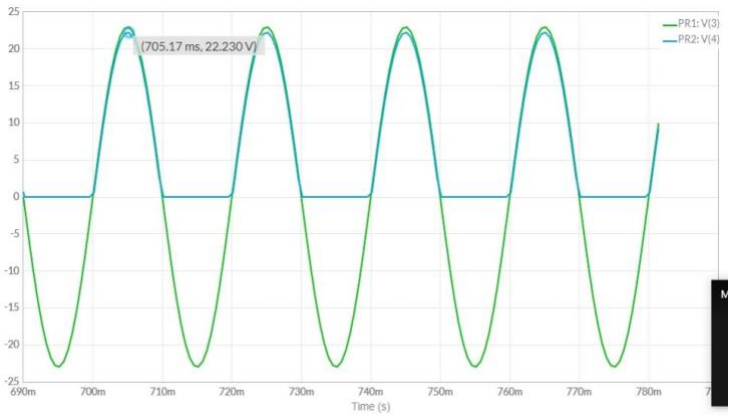
Software used: Multisim Live

Theory: Rectifier changes AC to DC and it is an essential part of power supply. The unique property of a diode, permitting the current to flow in one direction, is utilised in rectifiers.

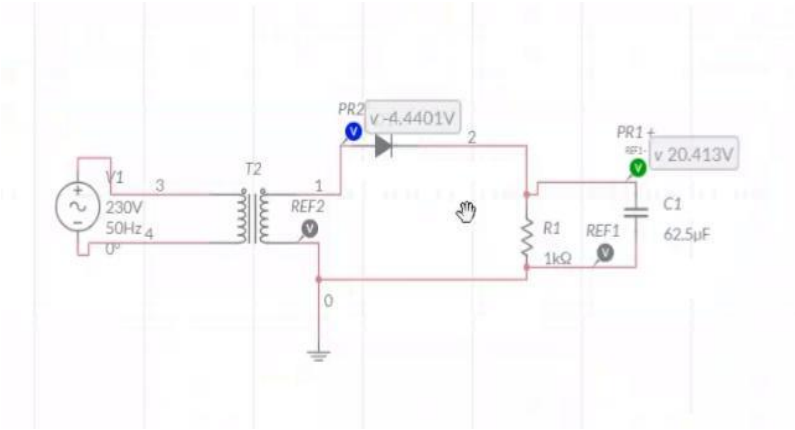
Circuit diagram:

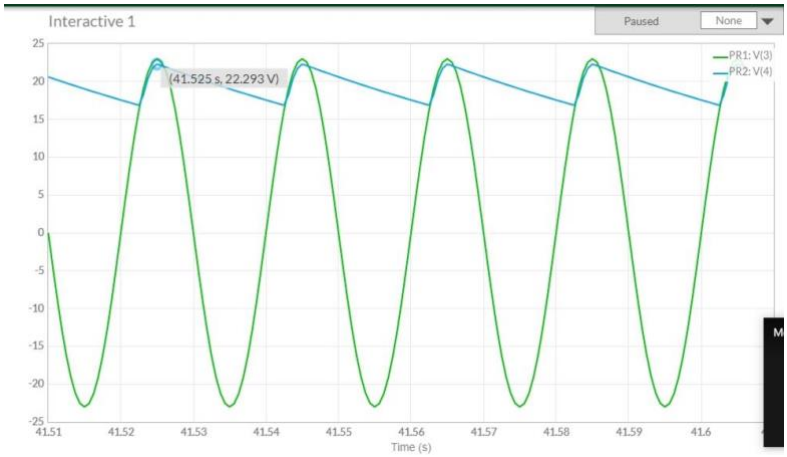
1.Half wave rectifier without filter





2.Half wave rectifier with filter





Results & observations:

Observations:

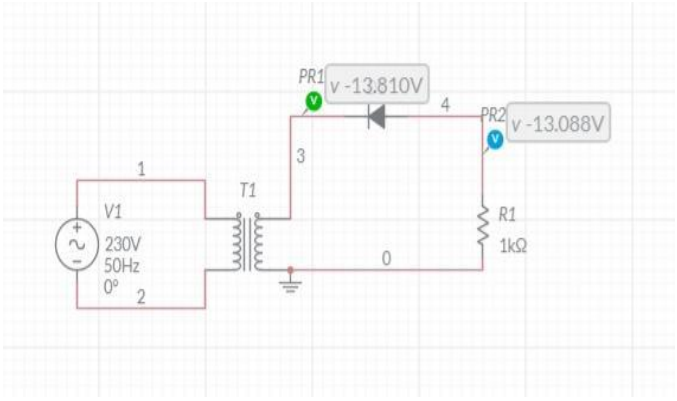
1.Half wave rectifier without filter

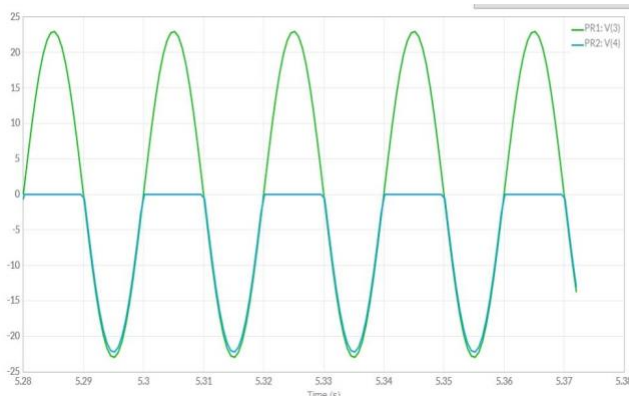
Vp-p	Vp=Vp-p/2	Vrms=Vp/2^1/2
22.230V	11.115V	7.859V

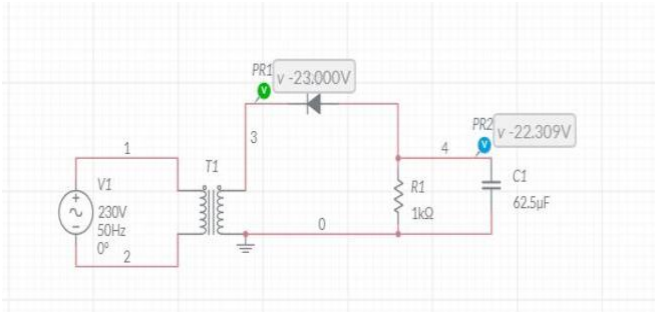
2.Half wave rectifier with filter

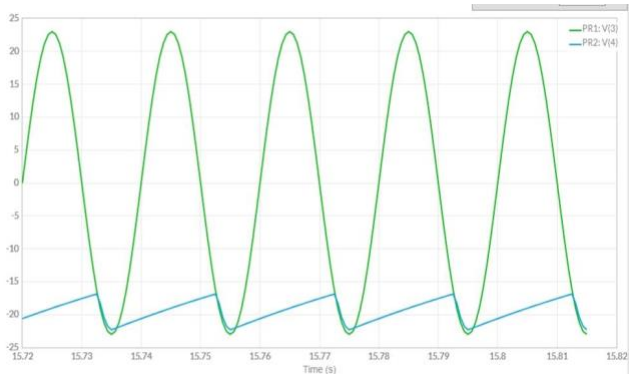
Vp-p	Vp=Vp-p/2	Vrms=Vp/2^1/2
22.293V	11.1465V	7.881V

If we change the direction of diode in Half wave rectifier circuit with filter and without filter then output voltage becomes negative









Result: The Graphs, Diagrams and observations show us the simulation of half wave rectifier using diodes

Submitted by: G Hruthesh reddy (20BCB7031)