



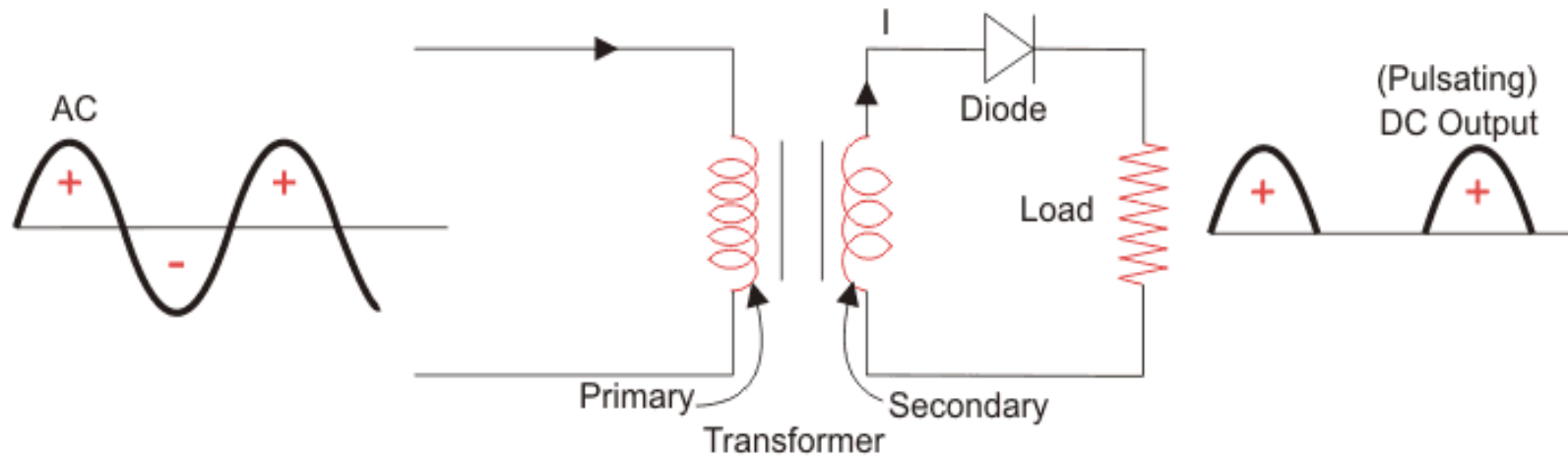
Unit 1 –

SEMICONDUCTOR DIODES

Class 2

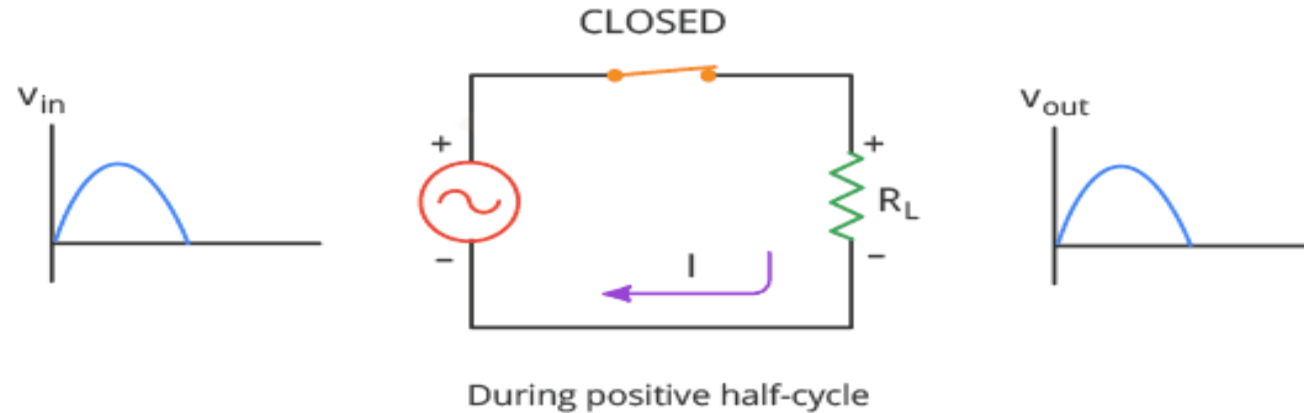
Dr. Shilpa K.C
Assistant Professor
Dept. of Electronics and
Communication
Engineering
Dr. AIT

HALF WAVE RECTIFIER



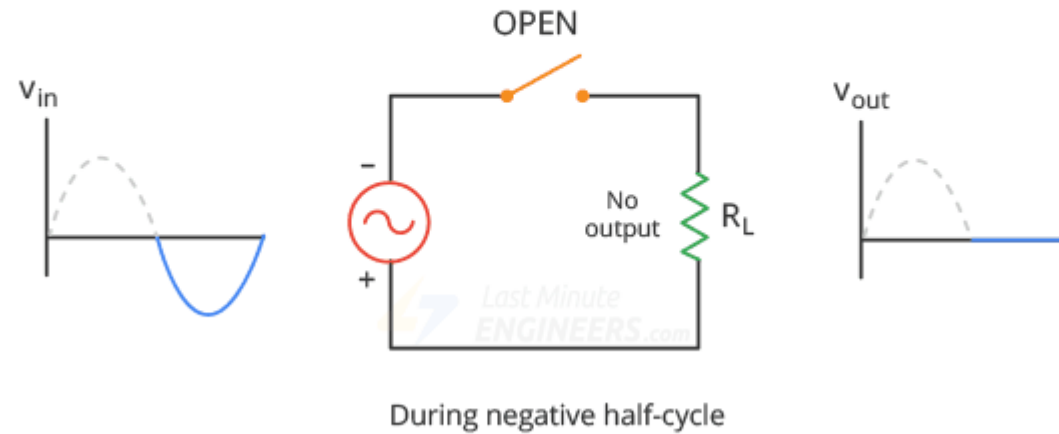
HALF WAVE RECTIFIER

When an alternating voltage is applied across a diode, the positive half-cycle of source voltage will forward-bias the diode. In this case, the diode will appear as a **closed switch**, and the positive half-cycle of source voltage will appear across the load resistor.



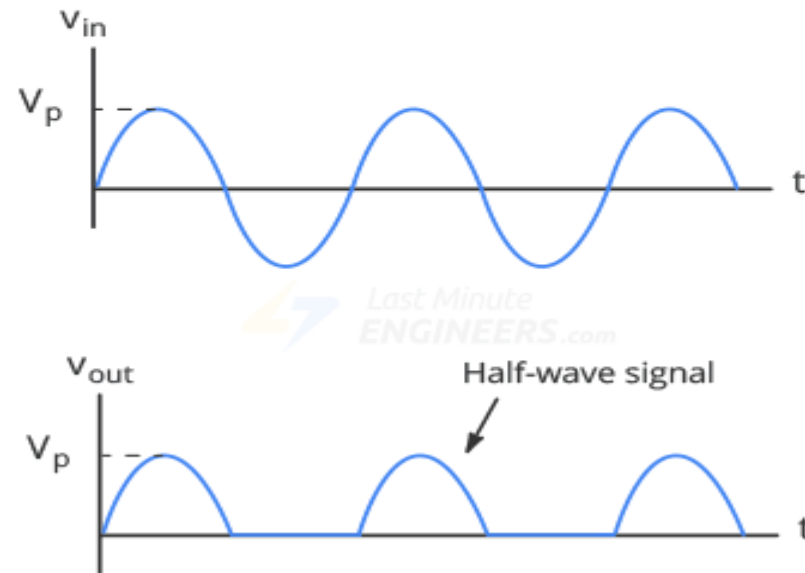
HALF WAVE RECTIFIER

During the negative half-cycle, the diode is reverse biased. In this case, the diode will appear as an **open switch**, and no voltage appears across the load resistor.

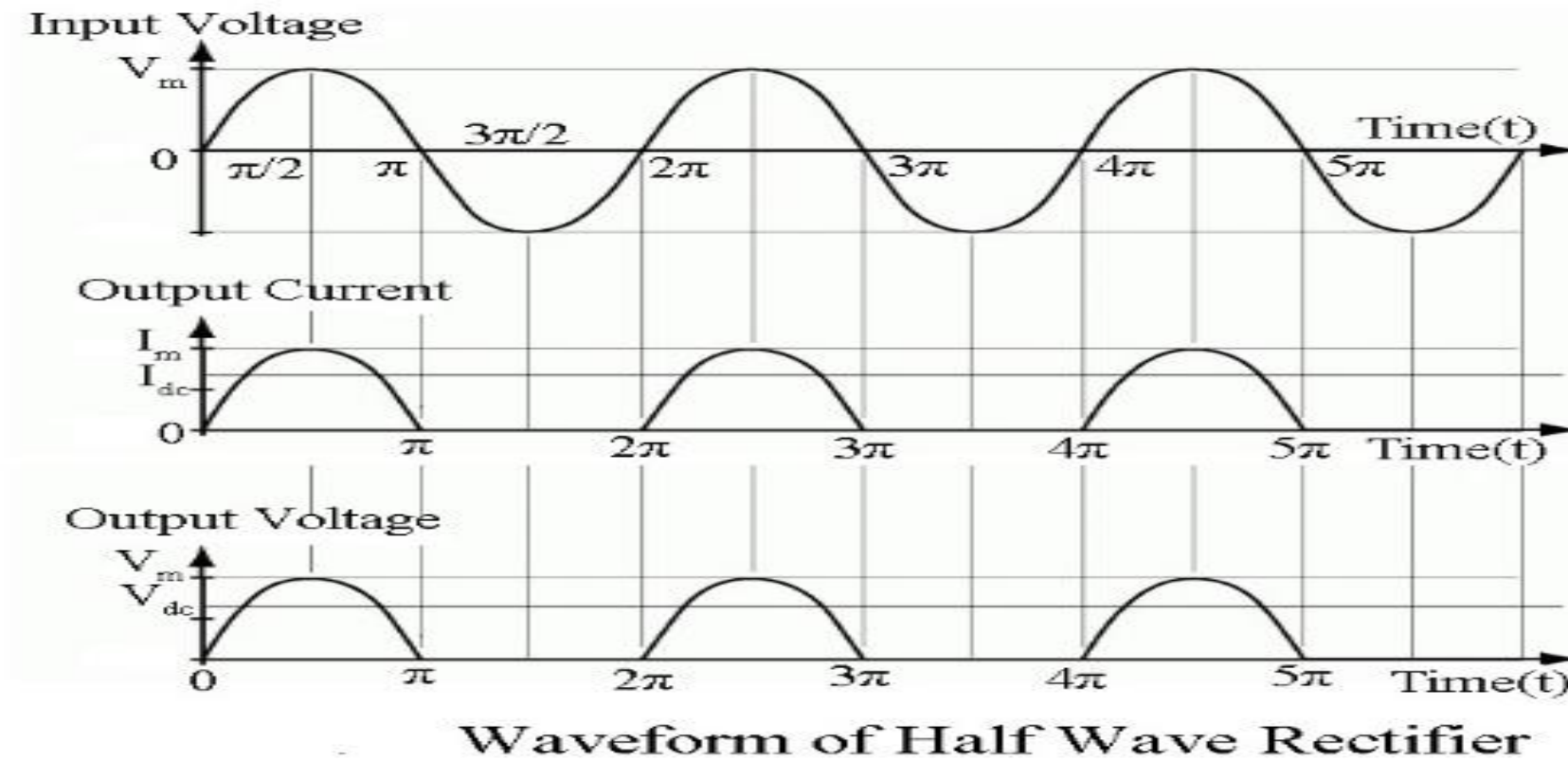


HALF WAVE RECTIFIER

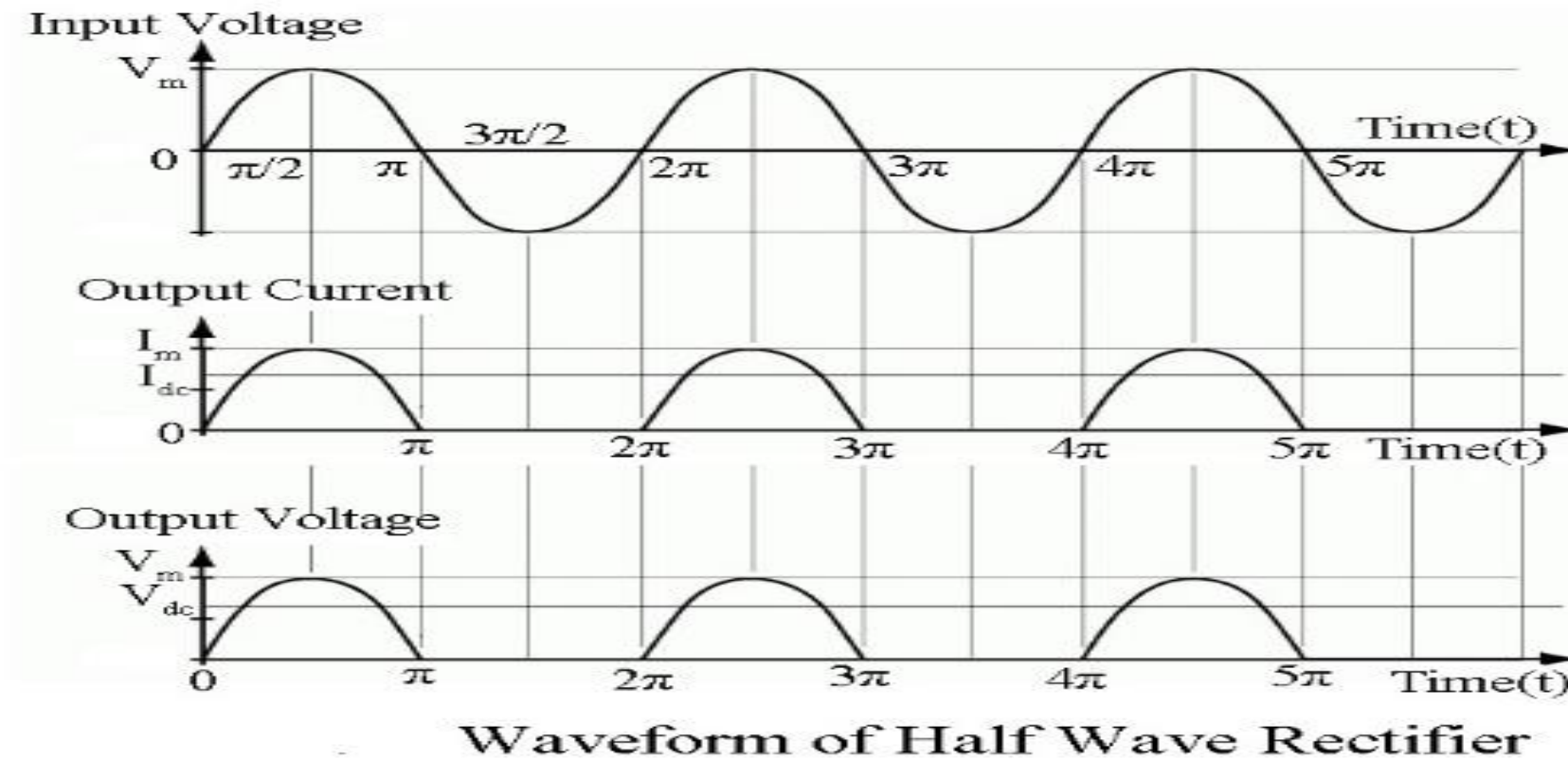
In the half-wave rectifier, the diode conducts during the positive half-cycles and not during the negative half-cycles. Because of this, the half-wave rectifier clips off negative half-cycles. Such waveform is called a **half-wave signal**.



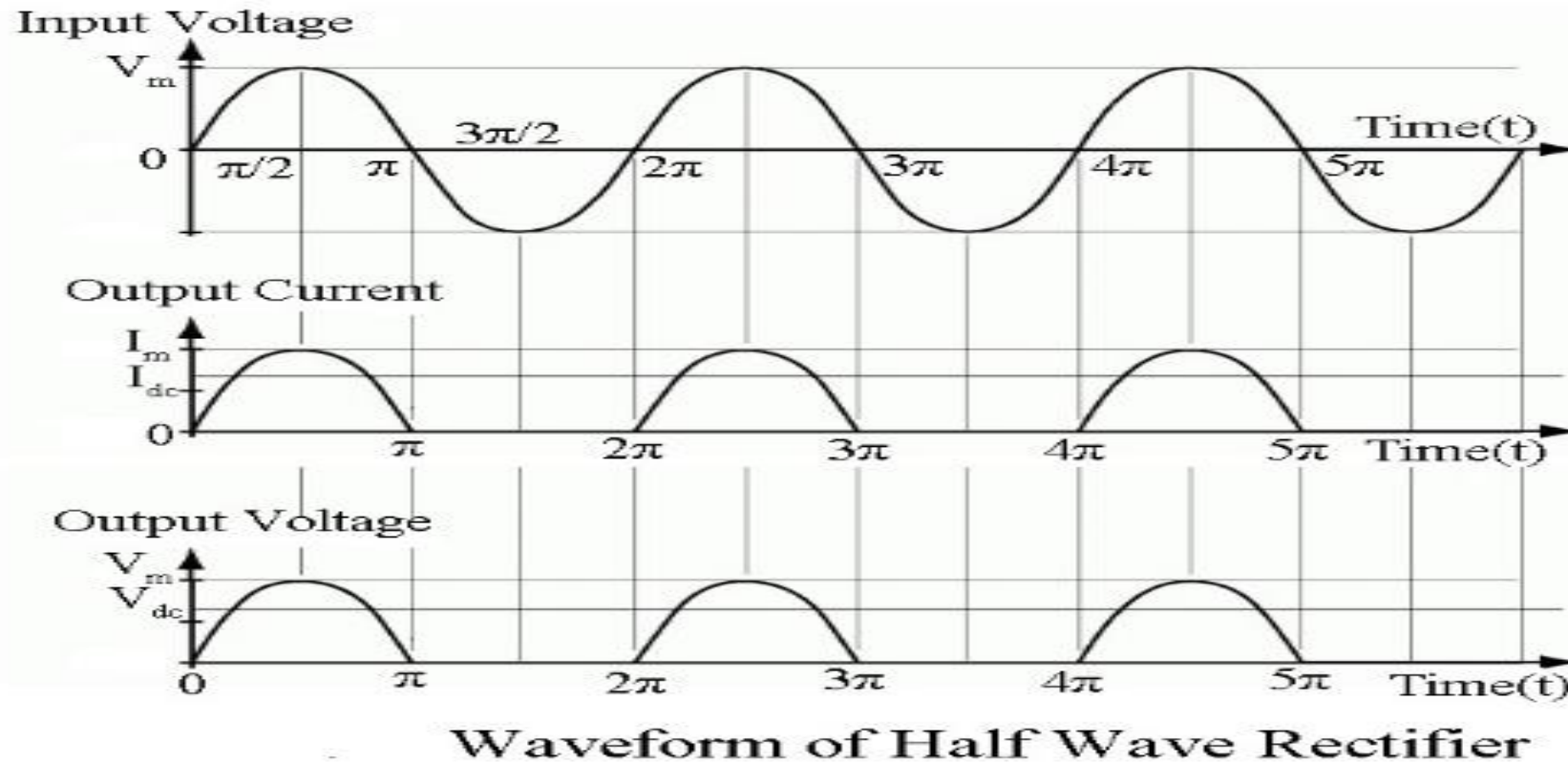
HALF WAVE RECTIFIER



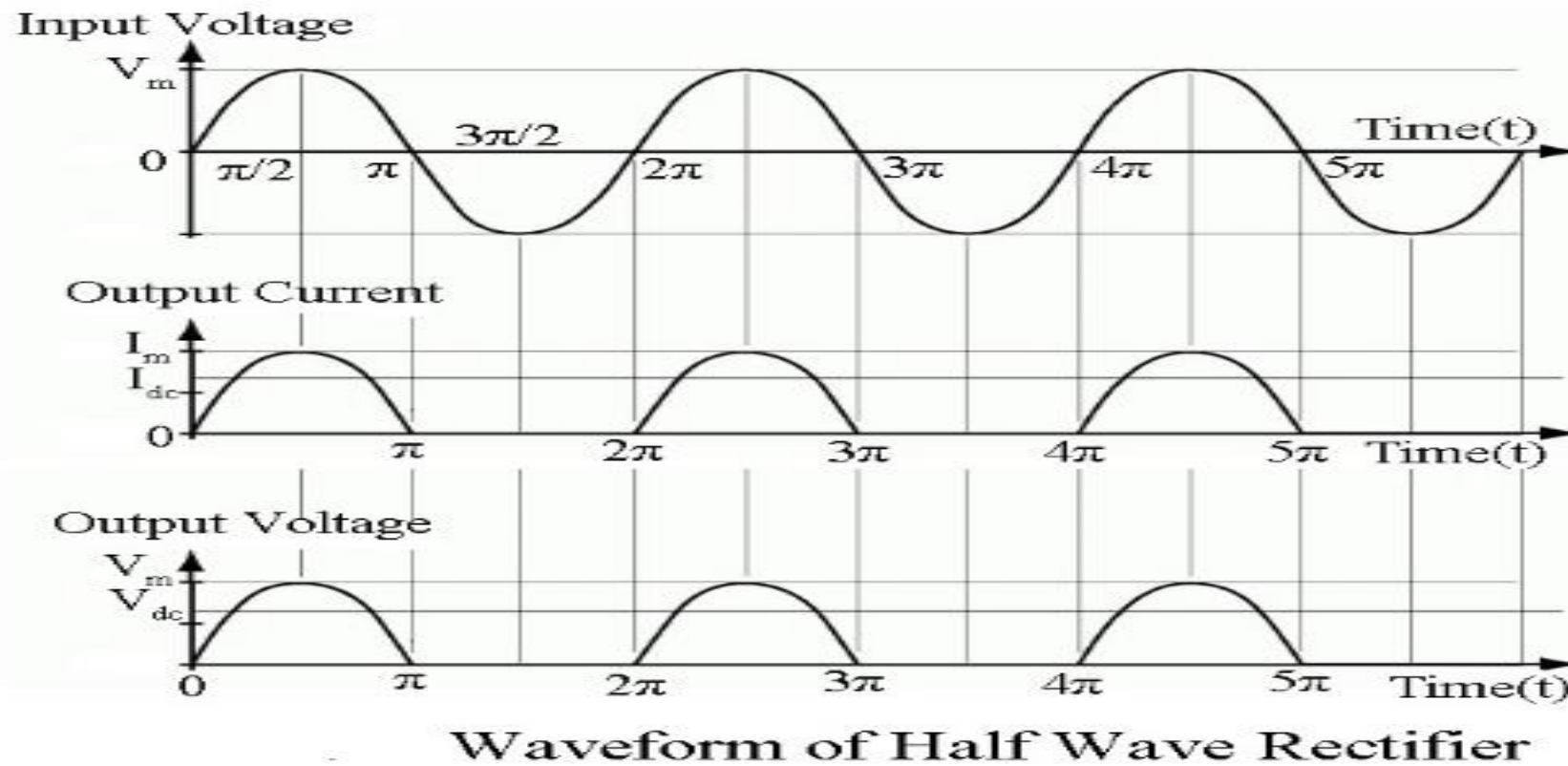
HALF WAVE RECTIFIER



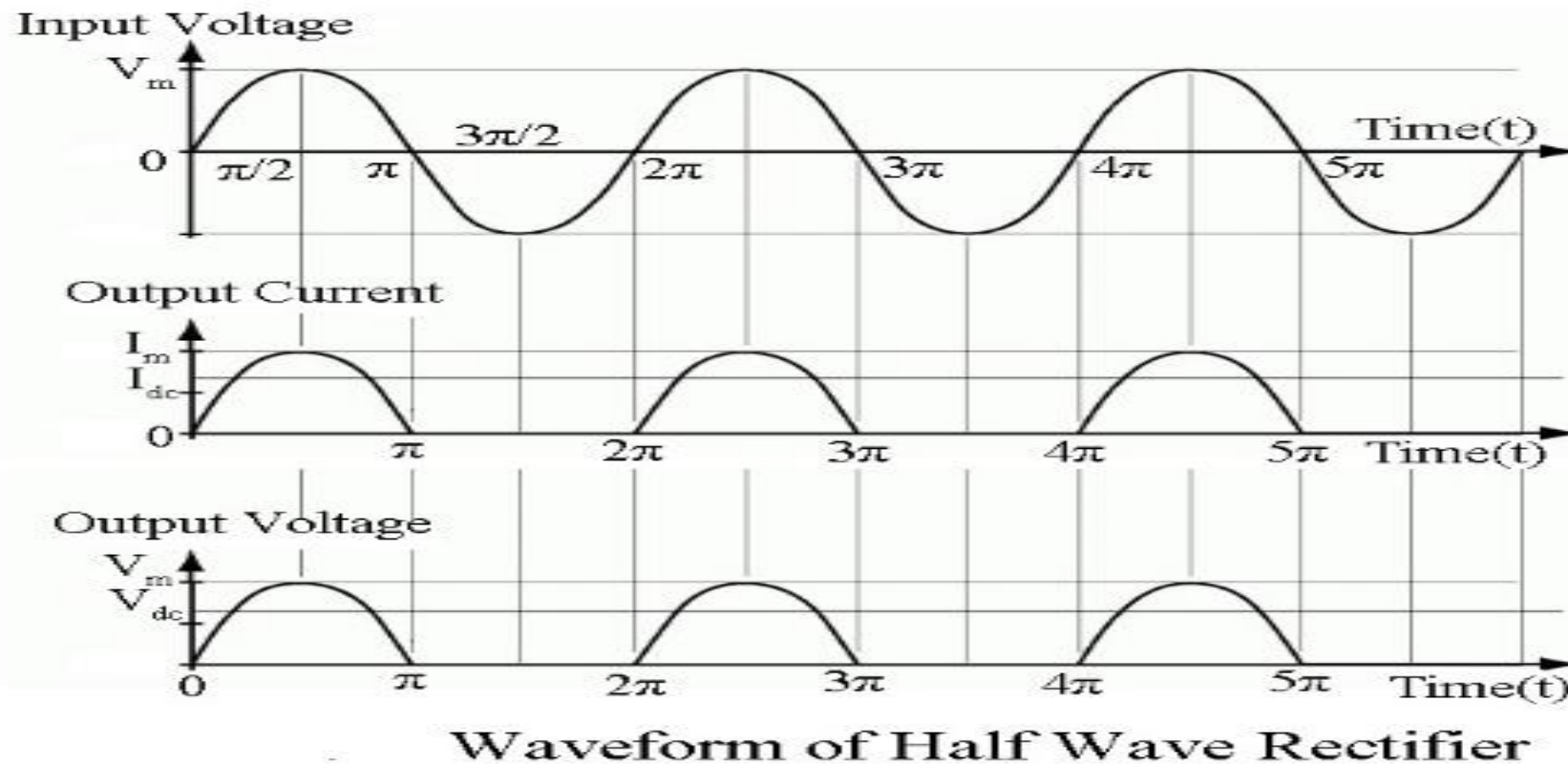
HALF WAVE RECTIFIER



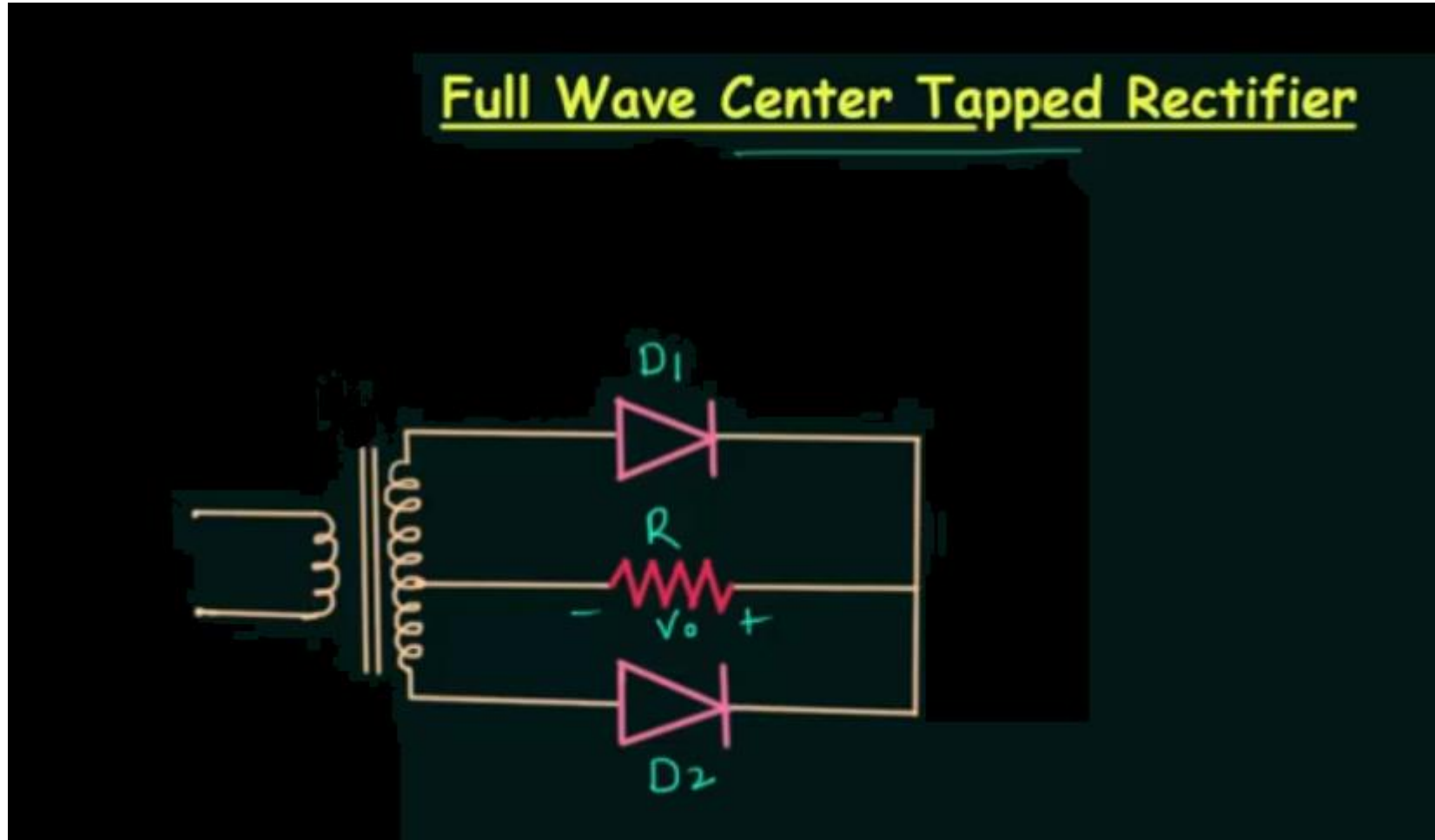
HALF WAVE RECTIFIER

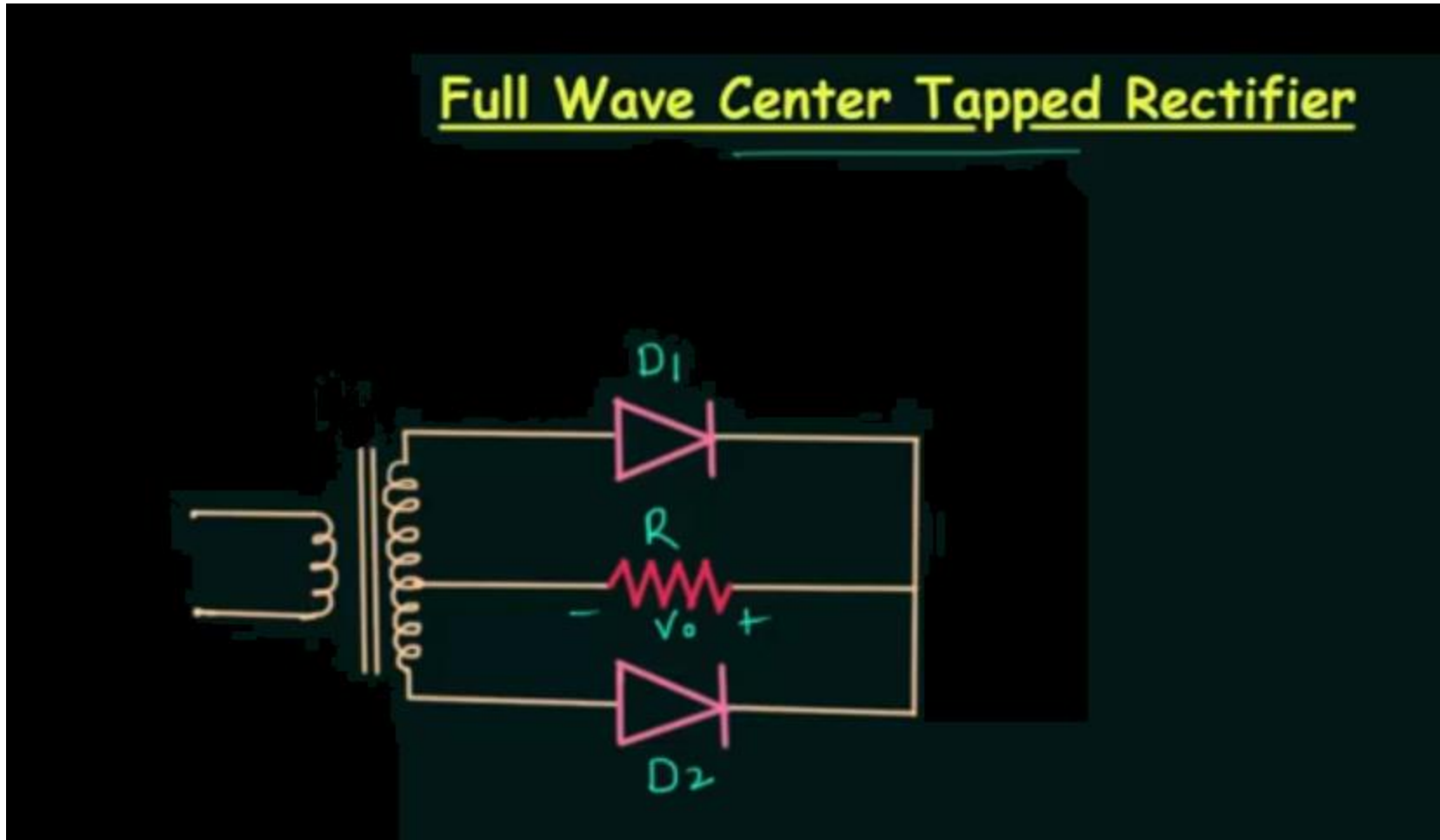


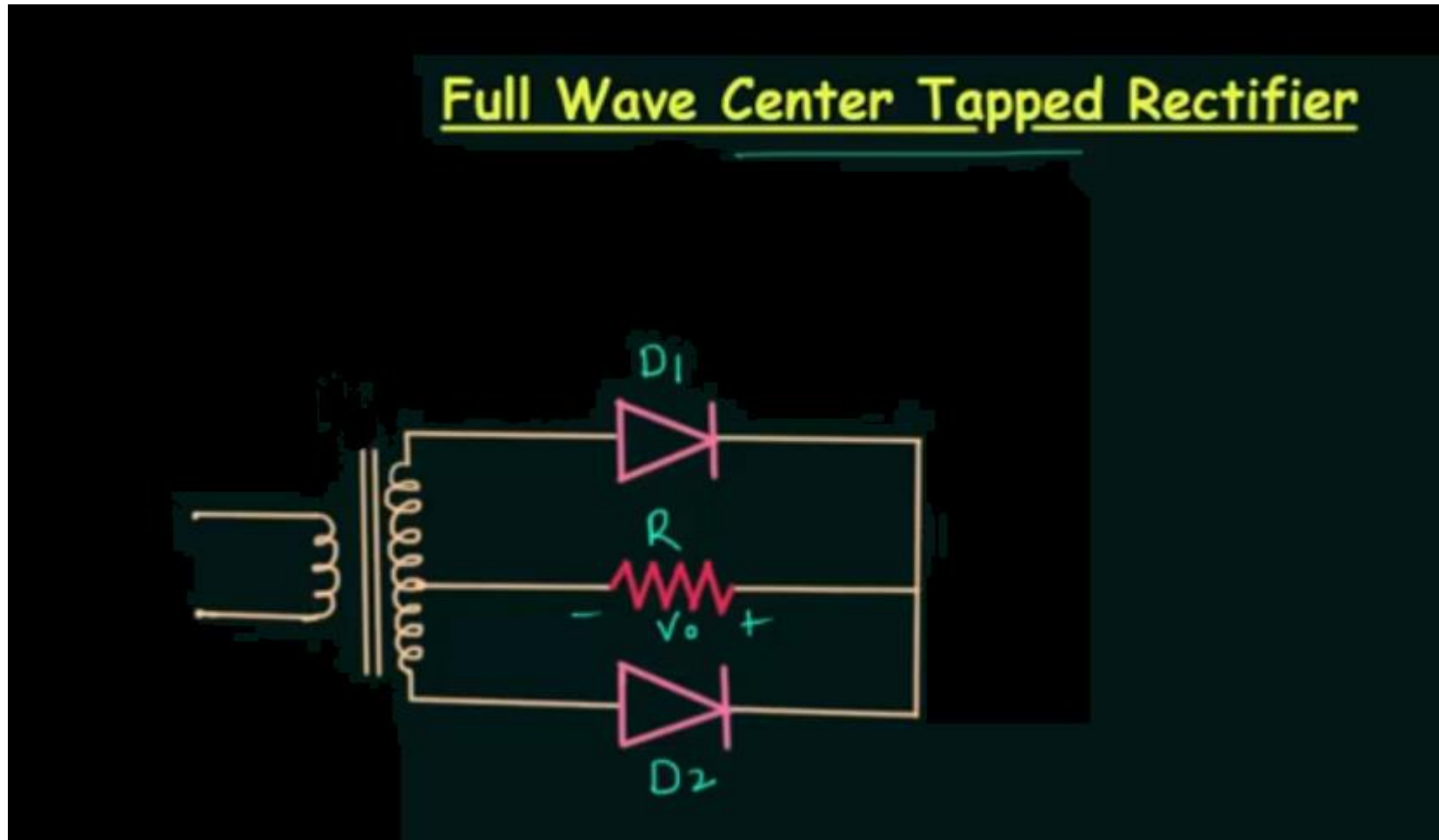
HALF WAVE RECTIFIER



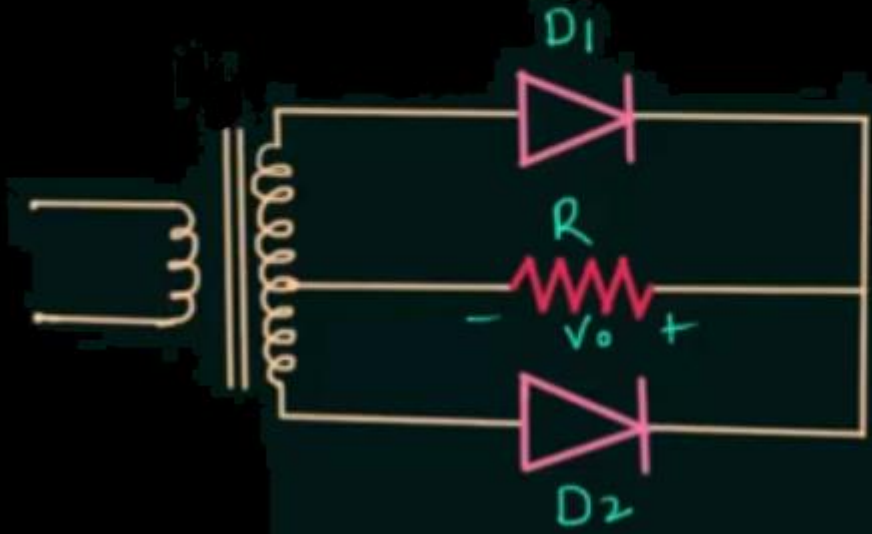
Full Wave Center Tapped Rectifier





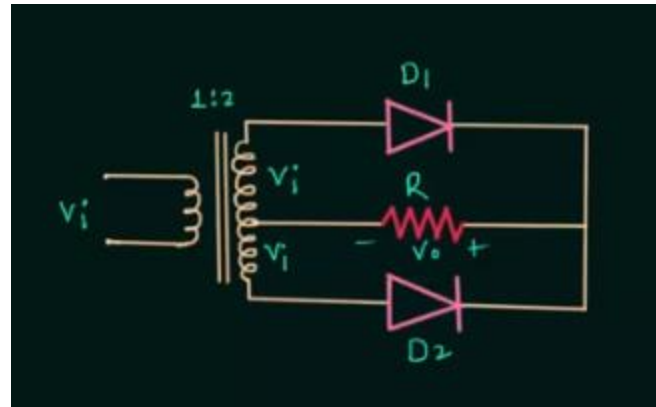


Full Wave Center Tapped Rectifier



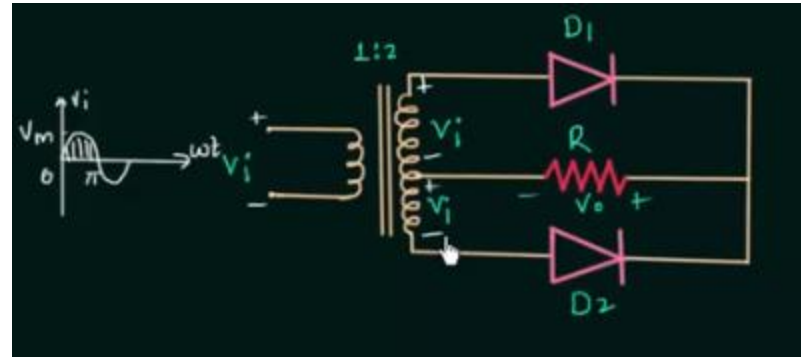


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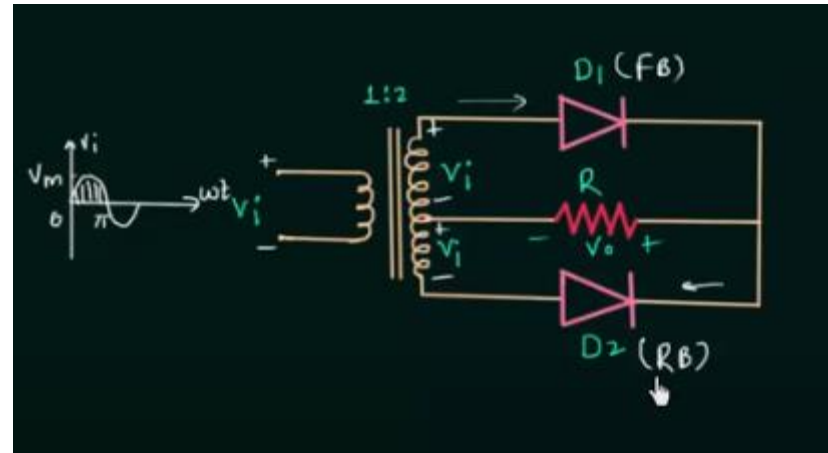


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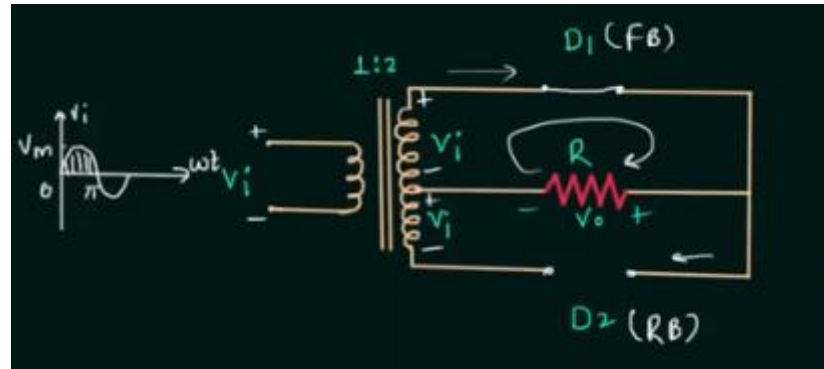


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Thank You

HAVE A NICE DAY