**Part A. Multisim**

8. Explain how Half-wave Rectifier works (Use Diagram /Figures)

Whenever a sinusoidal signal is applied as an input to a half wave rectifier, the rectifier will only allow the 1/2 of the sine wave and it will reject the other half. The AC signal in this way will be turned into a pulsating DC signal. Some examples of this are the output signal from numbers 4 and 5.

A picture containing text, antenna

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9. Explain how Full-wave Rectifier works (Use Diagram /Figures)

On the other hand, whenever a sine wave is applied as an input to a full wave rectifier, the rectifier will completely pass (allow) the positive half cycle and invert the negative cycle. A full wave rectifier will yield 2x more frequency of output waveform than a half wave rectifier. An example of this is the output signal from number 7.

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**Part B. TinkerCAD**

1. Create the similar circuit using TinkerCAD

a. Screenshot your Breadboard

Chart

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2. Place Two Oscilloscope (Connected to Output A and Connected to Output B)

Diagram

Description automatically generated

a. Screenshot the Output waveform of Oscilloscope at Output A

Chart

Description automatically generated

b. Screenshot the Output waveform of Oscilloscope at Output B

Chart, line chart

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3. Create the similar circuit using TinkerCAD

a. Screenshot your Breadboard

A picture containing text, device

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4. Place Oscilloscope

Chart, diagram, box and whisker chart

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a. Screenshot the Output waveform of Oscilloscope at Output

A picture containing diagram

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