ABASYN UNIVERSITY PESHAWAR

DEPARTMENT OF COMPUTER SCIENCE

LAB # (8)

Subject: applied physics

Class /section: CC

Submitted to: engr pasha

Submitted by: Hasnat Ahmad

Id: 21708

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EXPERIMENT NO – 09: HALF WAVE RECTIFIER

OBJECTIVE:

- To construct a half wave rectifier and analyze its output waveform on oscilloscope.

APPARATUS:

- Low-voltage AC power supply
- One 1N4001 diode
- Resistance 100Ω
- Oscilloscope
- Transformer

The diode need not be an exact model 1N4001. Any of the "1N400X" series of rectifying diodes are suitable for the task.

SCHEMATIC DIAGRAM:

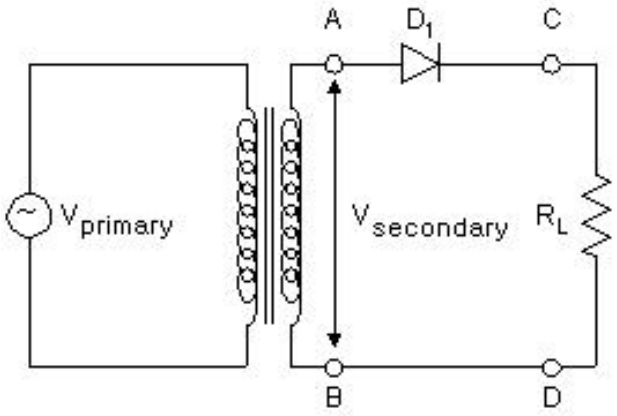
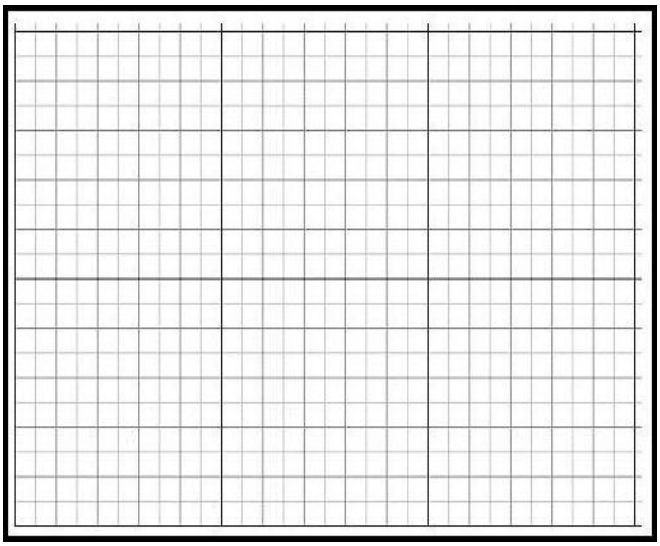


Figure 1

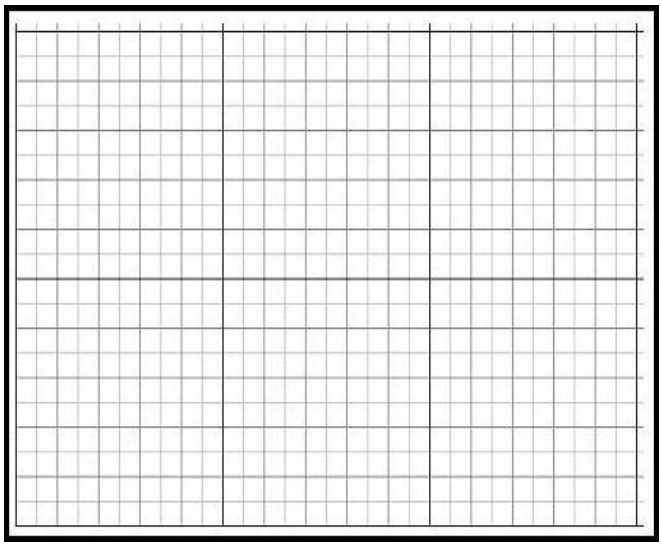
PROCEDURE:

1. Connect the diode to the low-voltage AC power supply as shown in a figure. Note that the resistor uses to limit the current.
2. Connect CH1 of oscilloscope to Input and CH2 to Output/Load Resistance of a circuit.
3. Switch on the oscilloscope and the sinusoidal supply.
4. Sketch the input waveform



INPUT WAVEFORM

6. Sketch the waveform and label it to show the periods when the diode is conducting and those when it is not.



OUTPUT WAVEFORM

CONCLUSION:

__forward biased diode passed current only in forward direction therefore only half wave is form ___in half wave rectifier._____