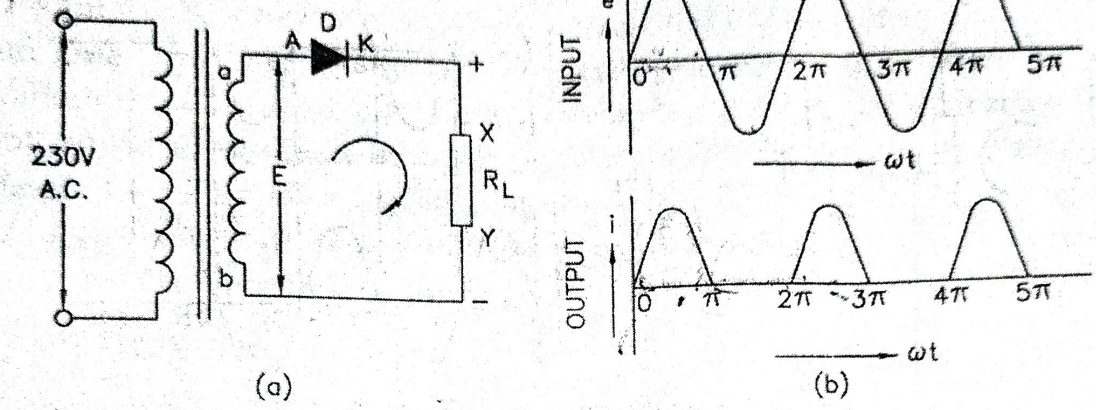
EXPERIMENT:

AIM: Test the half-wave rectifier.

APPARATUS: Rectifier Trainer Kit, Power supply, connecting probes.

CIRCUIT DIAGRAM:



THEORY:

A rectifier is an electronic circuit which converts A.C. quantity i.e. voltage & current to D.C. quantity i.e. voltage and current. Due to unidirectional characteristic of a semiconductor diode, diode is used in rectifier circuit.

These are three types of signal phase rectifier.

- **(i)** Half wave (H.W.) rectifier.
- **(ii)** Full wave (F.W.) rectifier.
- **(iii)** Bridge rectifier.

In half wave rectifier only half of the A.C. input cycle is utilized using a signal diode & step down transformer as shown in fig. 1 & 2.

In half wave rectification the rectifier conducts current during the positive half cycles of input ac supply. The negative half cycles of ac supply are suppressed. During negative half cycles, no current is conducted and hence no voltage appears across load. Therefore, current always flows in one direction through the load though after every half cycle.

PROCEDURE:

1. Connect the circuit as per circuit diagram (For Half Wave Rectifier)
2. Switch on the main supply.
3. Observe the Wave forms on CRO for input signal as well as across output side.

CONCLUSION: