

- Rectifier :- The process of converting an alternating current into a direct current is called rectification and the device used for this process is called rectifier.
- Principle of a rectifier :- When a p-n junction diode is forward biased, it offers a low resistance and when it is reverse biased, it has a high resistance i.e., it conducts current well only in one direction. This unidirectional property of a diode enables it to be used as a rectifier. When a.c. signal is fed to a diode, the diode is forward biased during the positive half cycle and a current flows through it. During the negative half-cycle, the diode is reverse biased and it does not conduct. Thus the signal gets rectified.
- Junction diode as a half-wave rectifier :-

The primary coil of the transformer is connected to a.c. mains and the secondary coil is connected in series with the junction diode  $D$  and load resistance  $R_L$ .

rectification and the arrangement used is called a half-wave rectifier.

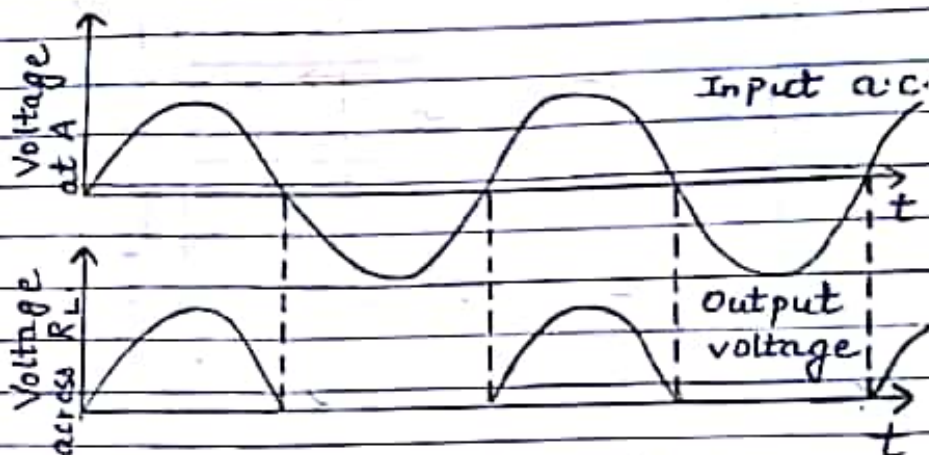


Fig.: Waveforms of input a.c. and output voltage obtained from a half-wave rectifier.