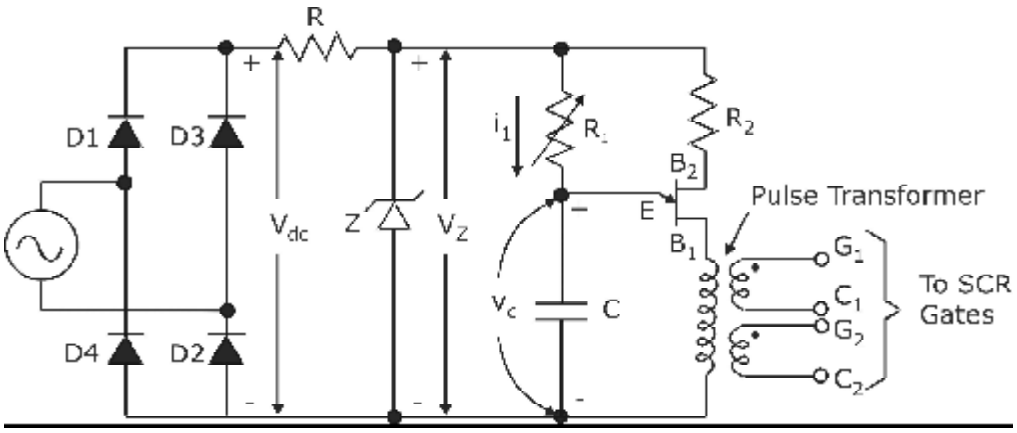
Synchronized UJT Triggering (Ramp Triggering) Circuit:

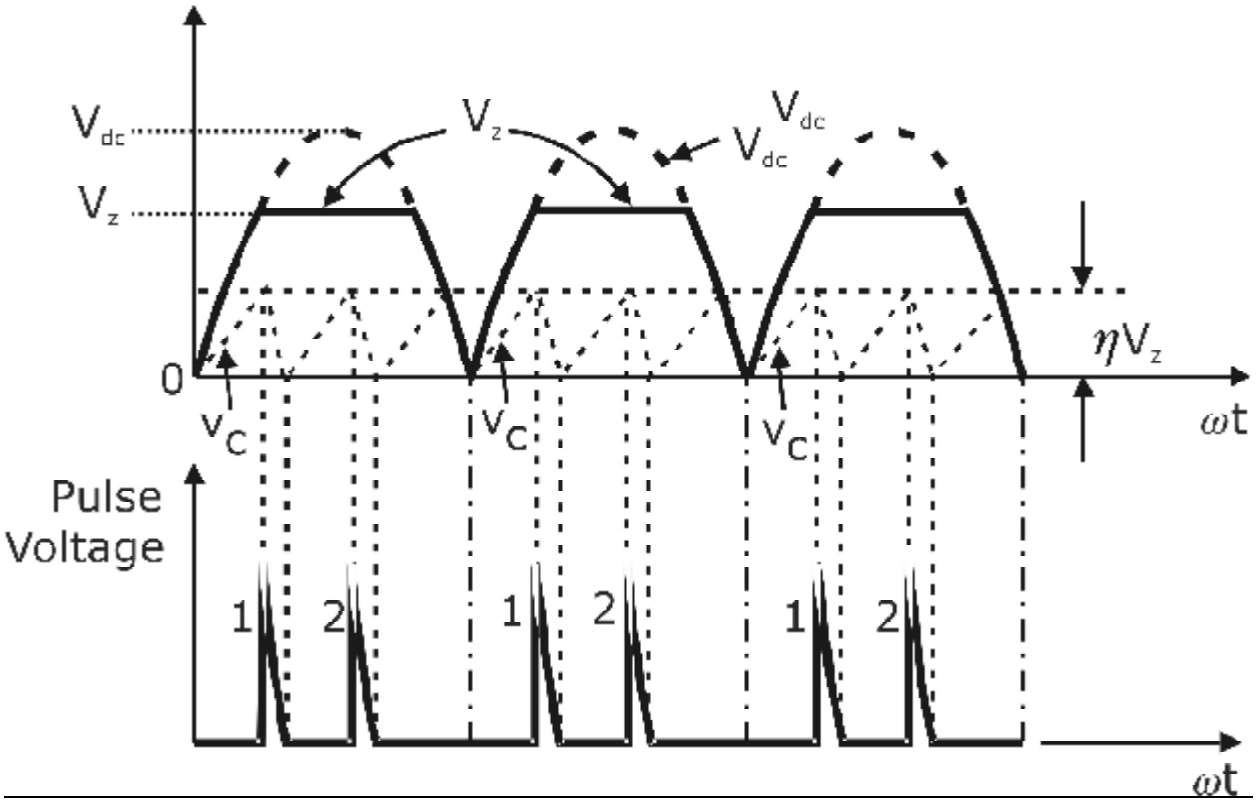
Synchronized UJT triggering circuit is shown in fig.

$V_M = \sqrt{2} \times V_{RMS}$ .....**(13)**



Synchronized UJT Triggering Circuit

The diode bridge D1-D4 rectifier converted AC to DC. The resistance R lowers Edc to a suitable value for the zener diode and UJT. The zener diode D is used to fix rectified voltage V_z. This voltage V_z is applied to the charging circuit RC. Capacitor C charges through R until it reaches the UJT trigger voltage V_p. The UJT turn on and C discharges through the UJT emitter and the primary of the pulse transformer. The winding of pulse transformer have pulse voltage at their secondary terminals. Pulses at the two secondary winding feed the same in phase pulse to two SCRs of a full wave circuit. SCR with positive anode voltage would turn on. Rate of rise of capacitor voltage can be controlled by varying R. This method of controlling the output power by varying charging resistor R is called as ramp control, open loop control or manual control.


V_{dc}
V_z
V_z
V_{dc}
V_{dc}
0
ηV_z
v_C
v_C
v_C
ωt
Pulse
Voltage
1
2
1
2
1
2
ωt