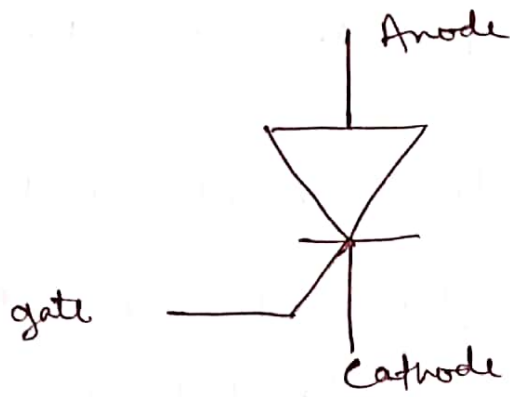


Q1 → What is thyristor? Explain working and construction of thyristor?

Ans: The electric name of Silicon Controlled or the Semiconductor for conducting the flow of current in a single direction. Hence it is also a unidirectional device. It consists of three junctions in it. These are devices that operate based on the current.

1 → The primary function of a thyristor is to control power and current by acting as a switch for such as small lightweight component. It offers adequate protection to circuits with large voltage and currents up to 6000V, 4500A.

Working :- A thyristor is a solid state semiconductor device with four layers of alternating P and N-type materials. It acts exclusively as a bistable switch conducting when the gate receives a current trigger and continuing to conduct until the voltage across the device is reversed based or until the voltage is removed. There are two direct triggers for conducting stage in a three lead thyristor. A small current on its gate lead controls the large current of the Anode to Cathode path. In a two lead thyristor - conducting begins when the potential difference between the Anode and Cathode terminals is sufficiently large breakdown voltage.



Some sources define Silicon Controlled Rectifier and thyristor are more other sources define thyristors constructed device at least four layers of alternating N-Type and P-Type substrate. The first thyristor device ever released can control a relatively large amount of power and voltage with a small device application in control of electric power ranging from light dimmers and electric motor speed control high voltage and direct current power transmission. Thyristor may be used in power switching, circuits relay replacement circuit, motor, oscillator, level detector, low cost timer, logic phase control circuit, relay only on current reversal. To turn them off making them difficult to apply for direct current new device type can be turned on and off, known as a gate turn off thyristor is not proportional device like a transistor - a thyristor can only be fully on or off states. The thyristor unsuitable as an analog amplifier but useful as a switch.