12. Give the classification of the rectifier and explain the full wave rectifier.

Ans:

Rectifier Classification

Rectifiers are electrical circuits that convert alternating current (AC) into direct current (DC). They achieve this by allowing current to flow in only one direction. There are several ways to classify rectifiers:

Full-Wave Rectifier Explained

A full-wave rectifier is a more efficient way to convert AC to DC compared to a half-wave rectifier. It utilizes both positive and negative halves of the AC waveform to produce a pulsating DC output with less ripple (fluctuation). There are two main types of full-wave rectifiers:

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13. Why filter circuit is required? What are the components that can be used as filter elements?

Ans:

Filter circuits are essential electronic components for several reasons:

Signal Purification: They remove unwanted frequencies or noise from a signal, allowing only the desired frequencies to pass through.

Signal Shaping: Filters can modify the frequency content of a signal.

21. Differentiate between sensors and transducers.

Ans:

Sensor	Transducer
A device that converts physical parameters to electrical output.	A device that converts energy from one form into another form is known as a Transducer.
The word Sensor comes from the USA.	The word Transducer comes from Europe.
The use of a Sensor is for sensing the element itself.	The uses of transducers are for sensing elements and also for circuitry.
In the Sensor its resistance changes with temperature.	In Transducers its resistance changes with in volta

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