

28 Lecture - PHY101

Important Subjective

What is an electric current, and what are its units?

Answer: Electric current is the flow of electric charges through a conductor. It is measured in amperes (A).

What is Ohm's Law, and how is it used in circuits?

Answer: Ohm's Law states that the current flowing through a conductor is directly proportional to the voltage applied across it and inversely proportional to its resistance. It is commonly used to calculate the resistance, current or voltage of a circuit.

What is the difference between AC and DC current?

Answer: AC (alternating current) changes direction periodically, while DC (direct current) flows in only one direction.

What is a circuit diagram, and how is it useful?

Answer: A circuit diagram is a graphical representation of an electrical circuit that shows how the various components are connected. It is useful for understanding the functioning of the circuit and troubleshooting it if any problem arises.

What is a series circuit, and how does it differ from a parallel circuit?

Answer: In a series circuit, the components are connected in a single loop, while in a parallel circuit, the components are connected in separate branches.

What is a resistor, and how does it affect the flow of current in a circuit?

Answer: A resistor is an electrical component that resists the flow of current in a circuit. It is used to regulate the amount of current flowing through a circuit.

What is a capacitor, and how is it used in a circuit?

Answer: A capacitor is an electrical component that stores electric charge. It is commonly used in circuits to block DC current and pass AC current.

What is an inductor, and how does it affect the flow of current in a circuit?

Answer: An inductor is an electrical component that stores energy in a magnetic field. It is used to oppose changes in current flow in a circuit.

What is a diode, and what is its purpose in a circuit?

Answer: A diode is an electrical component that allows current to flow in only one direction. It is used to regulate the flow of current in a circuit and prevent reverse current.

What is a transistor, and how is it used in electronic devices?

Answer: A transistor is an electrical component that is used to amplify or switch electronic signals. It is a fundamental building block of modern electronic devices such as computers and smartphones.