

23 Lecture - PHY301

Important Subjective

What is Thevenin's theorem?

Answer: Thevenin's theorem states that any complex circuit can be simplified to a single voltage source and a series resistance.

Who developed Thevenin's theorem?

Answer: Thevenin's theorem was developed by Leon Charles Thevenin, a French engineer.

What is the Thevenin voltage?

Answer: The Thevenin voltage is the voltage between two points in a circuit when no current is flowing through the circuit.

What is the Thevenin resistance?

Answer: The Thevenin resistance is the equivalent resistance of a circuit when all voltage sources are turned off and all current sources are shorted.

How can we determine the Thevenin voltage and resistance of a circuit?

Answer: We can determine the Thevenin voltage and resistance by selecting two points in the circuit and assuming that all components to the right of these points are removed, leaving only the components to the left.

What is the simplified circuit that results from applying Thevenin's theorem?

Answer: The simplified circuit that results from applying Thevenin's theorem consists of a single voltage source and a series resistance.

Can Thevenin's theorem be used for AC circuits?

Answer: Yes, Thevenin's theorem can be used for both DC and AC circuits.

What is the advantage of using Thevenin's theorem?

Answer: The advantage of using Thevenin's theorem is that it allows us to simplify complex circuits into simpler circuits, making it easier to analyze and understand them.

What is the equivalent resistance of a circuit with only resistors in series?

Answer: The equivalent resistance of a circuit with only resistors in series is the sum of all the resistances.

What is the equivalent resistance of a circuit with only resistors in parallel?

Answer: The equivalent resistance of a circuit with only resistors in parallel is the reciprocal of the sum of the reciprocals of all the resistances.