

High School Electrical Engineering Fundamentals

Electrical Engineering · Answer Key · 10 Questions

1. What is the standard unit of electrical current?

- A) Volt
- B) Ohm
- C) Ampere**
- D) Watt

2. Which law states that the current through a conductor between two points is directly proportional to the voltage across the two points and inversely proportional to the resistance between them?

- A) Faraday's Law
- B) Ampere's Law
- C) Ohm's Law**
- D) Kirchhoff's Voltage Law

3. What component is designed to oppose the flow of electric current?

- A) Capacitor
- B) Inductor
- C) Resistor**
- D) Diode

4. What is the unit of electrical resistance?

- A) Siemens
- B) Farad
- C) Henry
- D) Ohm**

5. A device that stores electrical energy in an electric field is known as a:

- A) Inductor
- B) Resistor
- C) Capacitor**
- D) Transistor

6. What type of electrical current flows in only one direction, typically produced by batteries?

- A) Alternating Current (AC)
- B) Direct Current (DC)**
- C) Pulsating Current
- D) Transient Current

7. What is the unit of electrical power?

- A) Joule
- B) Watt**
- C) Volt-Ampere
- D) Coulomb

8. Which of the following is a semiconductor device that can amplify or switch electronic signals and electrical power?

- A) Resistor
- B) Capacitor
- C) Transformer
- D) Transistor**

9. What is the principle that states that in any electric circuit, the sum of the voltages around any closed loop is zero?

- A) Ohm's Law
- B) Kirchhoff's Current Law
- C) Kirchhoff's Voltage Law**
- D) Faraday's Law of Induction

10. The ability of a material to conduct electric current is called its:

- A) Insulation
- B) Resistance
- C) Conductivity**
- D) Capacitance