

## Electric Potential Quiz PDF

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**Which device uses potential difference to create current?**

- Resistor
- Battery
- Capacitor
- Inductor

**What is the unit of electric potential?**

- Newton
- Joule
- Volt
- Coulomb

**Which of the following is a correct formula for electric potential due to a point charge?**

- $V = Q/4\pi\epsilon_0 r$
- $V = kQ/r$
- $V = W/F$
- $V = q/E$

**In a uniform electric field, the potential energy of a charge is given by which formula?**

- $U = qEd$
- $U = 1/2 mv^2$
- $U = kQ/r$
- $U = qV$

**Electric potential is defined as the work done per unit charge in bringing a charge from where?**

- A negative plate
- Infinity

- A positive plate
- The ground

**Which of the following surfaces have constant electric potential?**

- Magnetic field lines
- Equipotential surfaces
- Electric field lines
- Gravitational field lines

**What role does electric potential play in the operation of a capacitor?**

**Explain how the conservation of energy principle applies to electric potential energy in a closed system.**

**Explain the relationship between electric potential and electric field.**

**Describe how electric potential energy changes when a charge is moved in an electric field.**

**How is the concept of electric potential used in designing electrical circuits?**

**Which of the following are examples of potential difference in practice? (Select all that apply)**

- Voltage across a battery
- Voltage drop across a resistor
- Electric field strength
- CapacitANCE of a capacitor

**What factors affect the electric potential at a point due to a point charge? (Select all that apply)**

- The magnitude of the charge
- The distance from the charge
- The medium between the charge and the point
- The speed of the charge

**What are the characteristics of a conductor in electrostatic equilibrium? (Select all that apply)**

- The electric field inside is zero.
- The electric potential is constant throughout.
- The surface is an equipotential surface.
- The electric field is strongest inside the conductor.

**Discuss the significance of equipotential surfaces in understanding electric fields.**

**Which of the following are true about equipotential surfaces? (Select all that apply)**

- They are perpendicular to electric field lines.
- No work is done moving a charge along them.
- They can intersect each other.
- They have constant electric potential.

**Which of the following statements about electric potential are true? (Select all that apply)**

- It is a scalar quantity.
- It is measured in volts.
- It can be negative.
- It is a vector quantity.

**In which scenarios is the electric potential energy of a system increased? (Select all that apply)**

- Moving a positive charge closer to a positive charge
- Moving a negative charge closer to a positive charge
- Moving a positive charge away from a negative charge
- Moving a negative charge away from a positive charge

**What happens to the electric potential as you move closer to a positive point charge?**

- It decreases
- It remains constant
- It increases
- It becomes zero

**What is the potential difference across a capacitor in a series circuit?**

- Equal to the total voltage
- Zero
- The same for each capacitor
- Divided among the capacitors