# 28 Lecture - PHY101

## **Important Mcqs**

| In a simple circuit consisting of a resistor and a battery | , what happens | to the current if | f the resistance is |
|--|----------------|-------------------|---------------------|
| doubled?   |                |                   |                     |

- a) The current doubles
- b) The current is halved
- c) The current remains the same
- d) The current becomes zero

**Answer:** b) The current is halved

#### What is the unit of electric current?

- a) Joule
- b) Coulomb
- c) Watt
- d) Ampere

Answer: d) Ampere

In a parallel circuit, what happens to the total resistance when additional resistors are added?

- a) The total resistance decreases
- b) The total resistance increases
- c) The total resistance remains the same
- d) The total resistance becomes zero

Answer: a) The total resistance decreases

What is the relationship between voltage, current, and resistance in a circuit?

- a) V = IR
- b) I = VR

- c) R = IV
- d) V = RI

Answer: a) V = IR

In a circuit with a battery and a single resistor, what happens to the current if the voltage of the battery is increased?

- a) The current increases
- b) The current decreases
- c) The current remains the same
- d) The current becomes zero

**Answer: a) The current increases** 

### What is the role of a capacitor in a circuit?

- a) To store energy in the form of electric charge
- b) To increase the resistance of the circuit
- c) To reduce the resistance of the circuit
- d) To act as a switch

Answer: a) To store energy in the form of electric charge

In a circuit with multiple resistors in series, what happens to the total resistance when the resistors are replaced with ones of lower resistance?

- a) The total resistance increases
- b) The total resistance decreases
- c) The total resistance remains the same
- d) The total resistance becomes zero

**Answer: b) The total resistance decreases** 

What is the unit of electric potential difference?

- a) Volt
- b) Joule

- c) Coulombd) Watt
- Answer: a) Volt

## In a series circuit, what happens to the current as it passes through each component?

- a) The current increases
- b) The current decreases
- c) The current remains the same
- d) The current becomes zero

Answer: b) The current decreases

What is the relationship between power, voltage, and current in a circuit?

- a) P = VI
- b) V = PI
- c) I = PV
- d) P = IV

Answer: a) P = VI