

# 31 Lecture - PHY101

## Important Mcqs

**What is the phase difference between voltage and current in an ideal inductor in an AC circuit?**

- A. 0 degrees
- B. 90 degrees
- C. 180 degrees
- D. 270 degrees

**Answer: B. 90 degrees**

**What is the unit of frequency in an AC circuit?**

- A. Hertz
- B. Volt
- C. Ampere
- D. Ohm

**Answer: A. Hertz**

**What is the term for the opposition of an AC circuit to the flow of current?**

- A. Resistance
- B. Reactance
- C. Impedance
- D. Conductance

**Answer: B. Reactance**

**Which of the following components is commonly used to reduce the reactance of an AC circuit?**

- A. Resistor
- B. Capacitor

- C. Inductor
- D. Transformer

**Answer: B. Capacitor**

**What is the effect of increasing the frequency of an AC circuit?**

- A. Increases the reactance of inductors
- B. Decreases the reactance of inductors
- C. Increases the reactance of capacitors
- D. Decreases the reactance of capacitors

**Answer: B. Decreases the reactance of inductors**

**What is the term for the measure of the amount of AC power being used in a circuit?**

- A. Amplitude
- B. Frequency
- C. Power factor
- D. RMS voltage

**Answer: C. Power factor**

**What is the relationship between the voltage and current in a purely resistive AC circuit?**

- A. They are in phase
- B. Voltage leads current by 90 degrees
- C. Voltage lags current by 90 degrees
- D. Voltage and current are 180 degrees out of phase

**Answer: A. They are in phase**

**Which of the following is true for a parallel AC circuit?**

- A. Voltage is the same across all components
- B. Current is the same across all components
- C. Resistance increases as more components are added

D. Capacitance decreases as more components are added

**Answer: A. Voltage is the same across all components**

**What is the unit of power in an AC circuit?**

A. Watt

B. Volt-ampere

C. Ohm

D. Joule

**Answer: B. Volt-ampere**

**What is the term for the time delay between the peak voltage and peak current in an AC circuit?**

A. Phase angle

B. Power factor

C. Impedance

D. Reactance

**Answer: A. Phase angle**