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. InductorD. 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