

## Class 12 Physics Chapter 7 Alternating Current MCQs

**1. What is the frequency of the AC Mains in India?**

- (a) 60 Hz
- (b) 50 Hz
- (c) 40 Hz
- (d) 30 Hz

**2. An alternating current can be produced by a**

- (a) Choke coil
- (b) Dynamo
- (c) Electric Motor
- (d) Transformer

**3. Which of the following can measure an alternating current?**

- (a) Voltmeter
- (b) Ammeter
- (c) Suspended coil Galvanometer
- (d) Moving Coil Galvanometer

**4. Which of the following circuits exhibits maximum power dissipation?**

- (a) Pure Inductive Circuit
- (b) Pure Capacitive Circuit
- (c) Pure Resistive Circuit
- (d) None of the above

**5. What happens to the inductive reactance when the frequency of the AC supply is increased?**

- (a) Increases
- (b) Decreases
- (c) Remains the same
- (d) Decreases inversely

**6. What happens to the quality factor of an LCR circuit if the resistance is increased?**

- (a) Increases
- (b) Decreases
- (c) Remains the same
- (d) None of the above

**7. Which of the following statements is true about the LCR circuit connected to an AC source at resonance?**

- (a) R equals the applied voltage.
- (b) R is zero
- (c) C is zero
- (d) L equals the applied voltage

**8. The impedance in the series LCR circuit is minimum at the resonance frequency.**

- (a) True
- (b) False

**9. When is the current in a circuit wattless?**

- (a) When the inductance of the circuit is zero.
- (b) When the resistance of the circuit is zero.
- (c) When the current is alternating
- (d) When both resistance and inductance is zero

**10. The power factor is one for which of the following?**

- (a) Pure capacitor
- (b) Pure inductor
- (c) Pure resistor
- (d) All of the above

\*\*\*\*\* Answer Key \*\*\*\*\*

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|---------|---------|---------|---------|----------|
| 1 - (b) | 2 - (b) | 3 - (b) | 4 - (c) | 5 - (a)  |
| 6 - (b) | 7 - (a) | 8 - (a) | 9 - (b) | 10 - (c) |