

31. A choke is used as a resistance in

- [A.](#) DC circuit
- [B.](#) AC circuits
- [C.](#) Both AC and DC circuit
- [D.](#) Full wave rectifier circuit

Answer: Option B

32. At resonance the value of the power factor in an L-C-R series circuit is

- [A.](#) Zero
- [C.](#) 1
- [D.](#) not definite

Answer: Option c

33. An A.C series circuit containing $4\sqrt{2}$ resistance and $3\sqrt{2}$ inductive reactance. The impedance of the circuit is

- [A.](#) $1\sqrt{2}$
- [B.](#) $5\sqrt{2}$
- [C.](#) $7\sqrt{2}$
- [D.](#) $7/2\sqrt{2}$

Answer: Option B

34. An inductive coil has a resistance of $100\sqrt{2}$. When an AC signal of frequency 1000Hz is fed to the coil the applied voltage leads the current by 45° . What is the inductance of the coil?

- [A.](#) 10mH
- [B.](#) 12mH
- [C.](#) 16mH
- [D.](#) 20mH

Answer: Option c

35. Choose the correct statement. In the case of AC circuit ohms law holds for

- [A.](#) Peak values of voltage and current
- [B.](#) Effective values of voltage and current
- [C.](#) Instantaneous values of voltage and current
- [D.](#) All of the above

Answer: Option D

36. The phase angle between the voltage and the current in an AC circuit consisting of a resistance is

- [A.](#) Zero [B.](#) 45°
[C.](#) 90° [D.](#) 180°

Answer: Option A

37. In an LCR series circuit, if V is the effective value of the applied voltage V_R is the voltage across R V_L is the effective voltage across L & V_C is the effective voltage across C then

- [A.](#) $V = V_R + V_L + V_C$ [B.](#) $V^2 = V_R^2 + V_L^2 + V_C^2$
[C.](#) $V^2 = V_R^2 + (V_L - V_C)^2$ [D.](#) $V^2 = V_L^2 + (V_R - V_C)^2$

Answer: Option c

38. a voltage $V = V_0 \cos \omega t$ is applied across a resistor of resistance R the average power dissipated per cycle in the resistor is given by

- [A.](#) $V_0^2/2R$ [B.](#) $V_0^2/2R$
[C.](#) $V_0^2/2R$ [D.](#) $V_0^2/2R$

Answer: Option c

39. Two identical coaxial circular loops carry equal currents in the same direction. If the loops approach each other the current in

- [A.](#) Each increases [B.](#) Each decreases
[C.](#) Each remains the same [D.](#) One increases whereas that in the other decreases

Answer: Option B

40. An inductor may store energy in

- [A.](#) its electric field [B.](#) its coils

C. its magnetic field

D. both electric and magnetic fields

Answer: Option c

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