ECAT Physics Chapter 16 Alternating Current Online Test

Sr	Questions	Answers Choice
1	The impedance of RLC series resonance circuit at resonant frequency is	A. Greater than R B. Equal to R C. Less than R D. None of these
2	An A.C. voltmeter read 250 volts. The frequency of alternating is 50 Hz, the peak value of voltage is	A. 3525.0 volts B. 35.35 volts C. 353.5 volts D. 3.535 volts
3	To design a resonant circuit of frequency 100 KHz with an inductor of inductance 5 mH, we need a capacitor of capacitance	A. 5.07 pF B. 50 pF C. 0.507 pF D. 507 pF
4	At resonance, the impedance of RLC series circuit is	A. Maximum B. Zero C. Minimum D. Determinate
5	When either L or C is increased, the resonant frequency of the RLC series circuit	A. Increases B. Decreases C. Remains the same D. Becomes zero
6	At resonance, the phase angle for RLC series resonance circuit equals	A. 0° B. 90° C. 180° D. 270°
7	The power factor of resonant series circuit is	A. 1 B. 0 C. -1 D. 0.5
8	In RLC series circuit, resonance occurs when	A. X_{L > Xc} B. X_{L < Xc} C. X_{L = Xc} D. None of these
9	A resonance curve for RLC series circuit is a plot of frequency versus	A. Voltage B. Current C. Impedance D. Reactance
10	The r.m.s. value of alternating current is equal to its maximum value at angle of	A. 60° B. 45° C. 30° D. 90°
11	The device which allows only the flow of an A.C. through a circuit is	A. Capacitor B. Inductor C. D.C. motor D. Battery
12	Alternating current can induce voltage because it has a	A. High peak value B. Varying magnetic field C. Stronger field than direct curren D. Constant magnetic field

13	An A.C varies as a function of	A. Current B. Voltage C. Time D. Charge
14	At higher frequency of the alternating current, the capacitive reactance X_c	A. Increases B. Decreases C. Remains the same D. Increases only when the voltage increases
15	Which one of the following is correct?	A. V_o= 1.414 V_{rms} B. I_{ams}= 1.414 I_o C. VO = 10.70 Vrms D. Both a and b