NAT I Engineering Physics

Sr	Questions	Answers Choice
1	In LCR series AC circuit the phase angle between current and voltage is	A. Any angle between 0 and ±π/2 B. π/2 C. π D. Any angle between 0 and π/2
2	A particle moving in a magnetic field has increase in its velocity then its radius of the circle	A. Decreases B. Increases C. Remains the same D. Becomes half
3	A particle is moving in a uniform magnetic field then	A. Its momentum changes but total energy remains the same B. Both momentum and total energy remains the same C. Both changes D. Total energy change but momentum remains
4	The direction of induced current is such that it opposes the very cause that has produced it This is the law of	A. Lenz B. Faraday C. Kirchoff D. Fleming
5	Quantity that remains unchanged in a transformer is	A. Voltage B. Current C. Frequency D. None of these
6	In an L-R circuit time constant is that time in which current grows from zero to the value	A. 0.63 I_o B. 0.50 I_o C. 0.73 I_o D. I_o
7	The average power dissipation in a pure capacitor in AC circuit is	A. 1/2 CV² B. CV² C. 2CV² D. Zero
8	Which quantity is increased in step-down transformer?	A. Current B. Voltage C. Power D. Frequency
9	The primary winding of transformer has 500 turns whereas its secondary has 5000 turns The primary is connected to an a.c supply of 20 V, 50 Hz The secondary will have an output of	A. 200 V, 50 Hz B. 2 V, 50 Hz C. 200 V, 500 Hz
10	In an ac circuit with voltage V and current 1 the power dissipated is	A. VI B. 1/2 VI C. 1/√2 VI D. Depends on the phase between V and 1