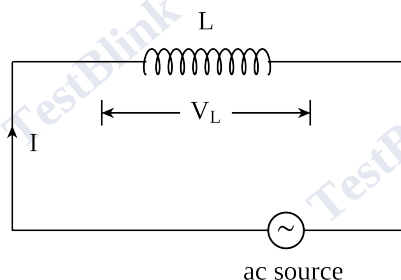


NEET ALTERNATING CURRENT — AC VOLTAGE APPLIED TO AN INDUCTOR — PYQS

Max. Marks: 12
Questions: 3

Section A (MCQ) — 3 questions

- Q.1** In the circuit shown below, the inductance L is connected to an ac source. The current flowing in the circuit is $I = I_0 \sin \omega t$. The voltage drop (V_L) across L is [RE-NEET (UG) 2024]



- (1) $\omega L I_0 \sin \omega t$ (2) $\frac{I_0}{\omega L} \sin \omega t$
 (3) $\frac{I_0}{\omega L} \cos \omega t$ (4) $\omega L I_0 \cos \omega t$

 Scan or tap for the
full solution


- Q.2** An inductor of inductance 2 mH is connected to a 220 V, 50 Hz ac source. Let the inductive reactance in the circuit is X_1 . If a 220 V dc source replace the ac source in the circuit, then the inductive reactance in the circuit is X_2 . X_1 and X_2 respectively are :

[NEET (UG) 2022 (Phase 2)]

- (1) 0.628 Ω , infinity (2) 6.28 Ω , zero
 (3) 6.28 Ω , infinity (4) 0.628 Ω , zero

 Scan or tap for the
full solution


- Q.3** A coil of self-inductance L is connected in series with a bulb B and an AC source. Brightness of the bulb decreases when [NEET 2013]

- (1) a capacitance of reactance $X_C = X_L$ is included in the same circuit.
 (2) an iron rod is inserted in the coil.
 (3) frequency of the AC source is decreased.
 (4) number of turns in the coil is reduced.

 Scan or tap for the
full solution


ANSWER KEY

Ques.	1	2	3										
Ans.	4	4	2										