

Answer 5 :- Faraday's law and Electromagnetic Induction

• Faraday's law of Induction :- The instantaneous emf induced in a circuit is directly proportional to the time rate of change of the magnetic flux through the circuit.

• If the circuit consists of N loops, all of the same area, and if ϕ_B is the flux through one loop, an emf is induced in every loop and Faraday's law becomes.

$$\mathcal{E} = -N \frac{d\phi_B}{dt}$$