

Class Test

B.Sc(Prog.) Physical Science with Chemistry

Paper : Electricity & Magnetism

UPC : 2222511201

Sem : II

M-M. 20

Attempt any three questions.

Question no. 1 is compulsory

Q1: state Faraday's laws of electromagnetic induction & also state ~~Faraday's~~ ^{Lenz's} law with applications. (6)

Q2: Derive an expression for $\vec{\nabla} \times \vec{E} = -\frac{\partial \vec{B}}{\partial t}$ where the symbols have their usual meanings. (7)

Q3: Write Maxwell's equations in differential & integral form also specify the symbols with unit. (7)

Q4: Derive an expression for energy stored in magnetic field (7)

$$U = \frac{1}{2} LI^2$$