Important Topics

Electrostatics

1) Electric Field due to dipole **(i)** axial **(ii)** Equatorial

2) Torque due to dipole

3) Gauss Law & Application [100% conf.]

4) Field Lines and properties

5) Equipotential Surfaces, properties and diagrams

6)Capacitance of || plate capacitor

7) **(i)** dielectric **(ii)** Non - dielectric

8) Energy stored in a capacitor

Current Electricity

1) Drift velocity, Mobility & their relation

2) Combinations of cells **(i)** series **(ii)** parallel

3) Meter Bridge - Principle, diagram, find r, s etc.

4) Potentiometer - Principle and two applications [EMF comparison] conceptual ques of book.

Magnetic Effect and Magnetism

1) Magnetic dipole moment of moving electron and hence define Bohr magneton.

2) Cyclotron 100% sure

3) Conversion of Moving Coil Galvano to voltmeter and ammeter with numericals.

4) Force between two parallel current carrying conductor hence define SI unit of current.

5) Dia, Para, Ferro diagrams - field lines in external magnetic field, susceptibility.

6) Curie's Law

7) Elements of Earth's Magnetic Field

Important Topics
Electro Magnetic Induction

1) AC Generator

2) Motional EMF, derivation, definition and diagram

3) Faraday's Law

4) Lenz law & its consistency with laws of conservation of energy

v 5) Eddy Current and it's minimization.

AC

1) L & C circuit

v 2) LCR circuit

v 3) Power in LCR circuit

v 4) Resonance in LCR circuit

5) Watt-less current

v 6) Transformer

EM Waves

1) Definition, properties of displacement current.

2) Maxwell equations

3) EM waves, define, properties, diagrams

4) EM spectrum - **(i)** Wave function **(ii)** Production **(iii)** uses