CLASS XII

Topis
Chapter-1 Electric charges and fields uniformly charged thin spherical shell (field inside and outside).
Chapter-3 Current Electricity Carbon resistors, colour code for carbon resistors; series and parallel combinations of resistors
Chapter-4 Moving Charges and Magnetism Cyclotron
Chapter-5 Magnetism and Matter magnetic field intensity due to a magnetic dipole (bar magnet) along its axis and perpendicular to its axis, torque on a magnetic dipole (bar magnet) in a uniform magnetic field; Para-, dia- and ferro - magnetic substances, with examples. Electromagnets and factors affecting their strengths, permanent magnets.
Chapter-7 Alternating Current power factor, wattless current.
Chapter 8 Electromagnetic Waves Basic idea of displacement current,
Chapter 9 Ray Optics and Optical Instruments Reflection of light, spherical mirrors,(recapitulation) mirror formula , Scattering of light - blue colour of sky and reddish appearance of the sun at sunrise and sunset. resolving power of microscope and astronomical telescope, polarisation, plane polarised light, Brewster's law, uses of plane polarised light and Polaroids.
Chapter-11 Dual Nature of radiation and matter Davisson-Germer experiment

Chapter 13 Nuclei Radioactivity, alpha, beta and gamma particles/rays and their properties; radioactive decay law, half life and mean life binding energy per nucleon and its variation with mass number
Chapter 14 Semiconductor Electronics: Materials, Devices and Simple Circuits Zener diode and their characteristics, zener diode as a voltage regulator.
Practicals: No investigatory project and Activity to be demonstrated 8 experiments (clubbed based on skills) in place of 12