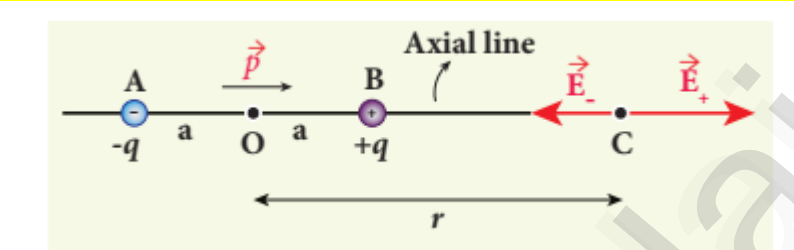
SIR CV RAMAN COACHING CENTRE – 2024

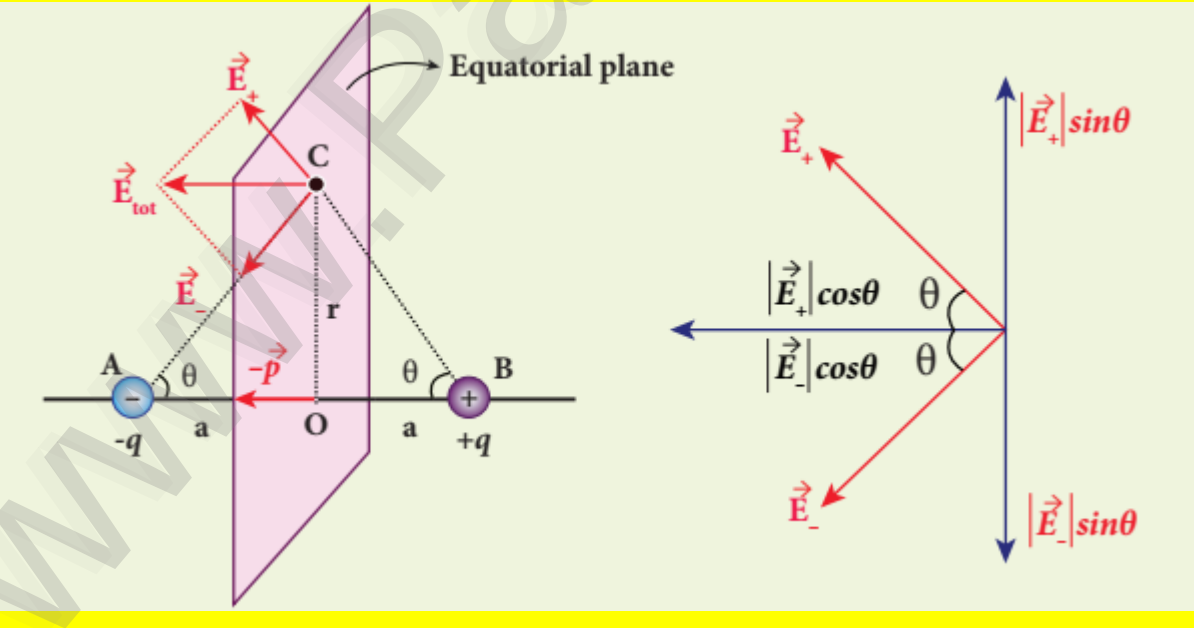
XLL PHYSICS [Unit 1,2,3]- IMPORTANT DIAGRAMS

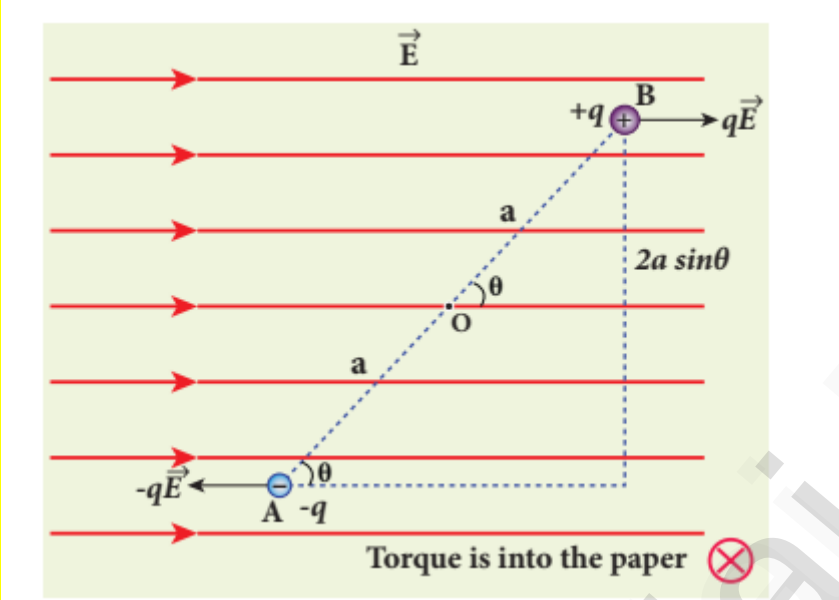
Dr.G.THIRUMOORTHI .,M.Sc,B.Ed,Ph.D ,PHYSICS

thiruphysics1994 gmail.com , 8610560810,,,,



EQUATORIAL PLANE :





ELECTRIC DIPOLE AT A ELECTRIC POTENTIAL :

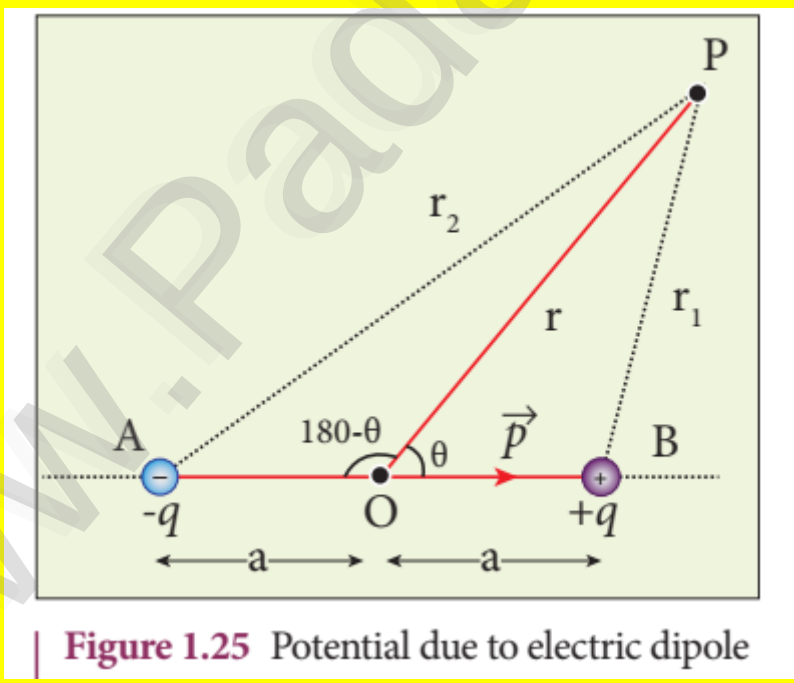


Figure 1.25 Potential due to electric dipole

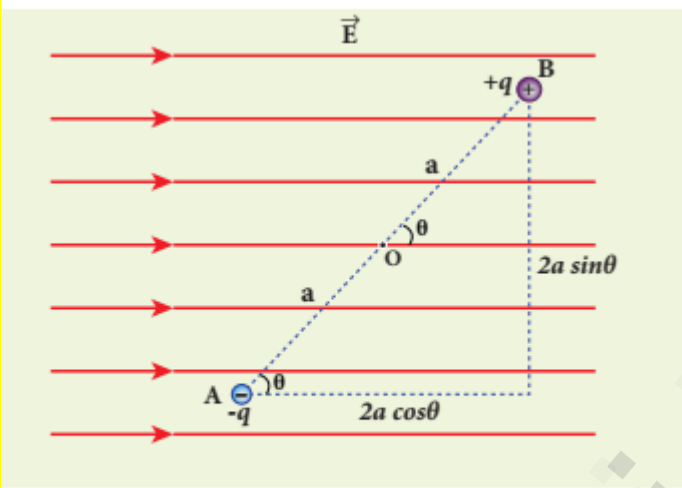


Figure 1.29 The dipole in a uniform electric field

GAUSS LAW APPLICATIONS (i)

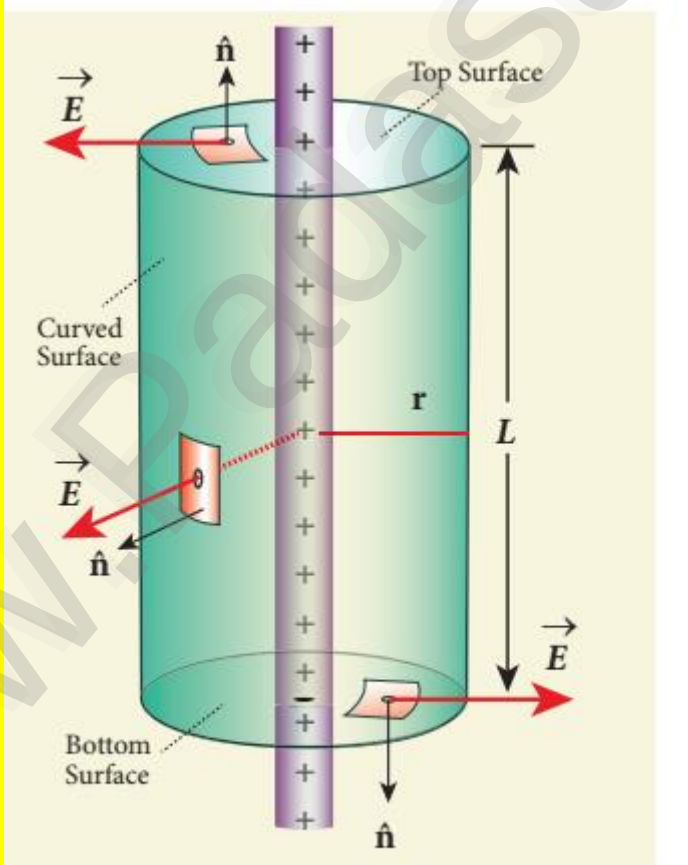


Figure 1.37 Cylindrical Gaussian surface

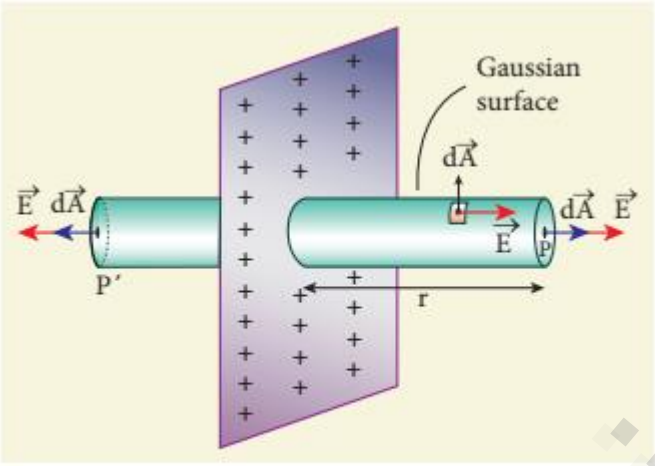


Figure 1.38 Electric field due to charged infinite planar sheet

GAUSS APPILCATIONS (III) ;

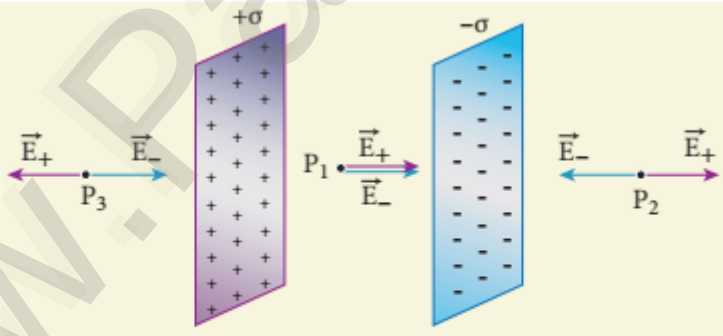
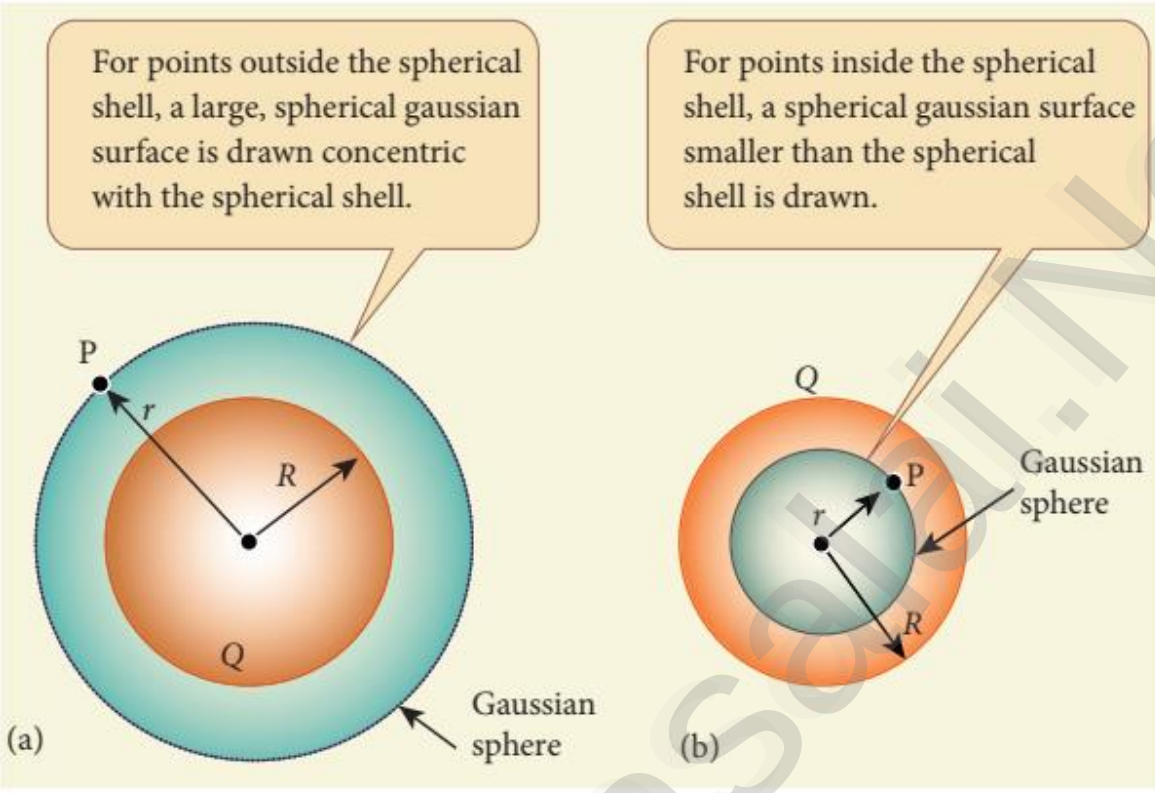
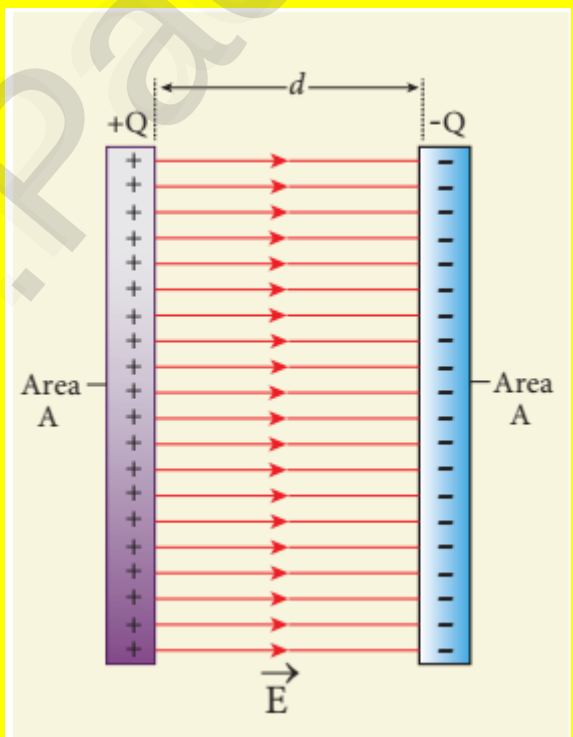


Figure 1.39 Electric field due to two parallel charged sheets



e 1.40 The electric field due to a charged spherical shell

Capacitor parallel plate capacitor :



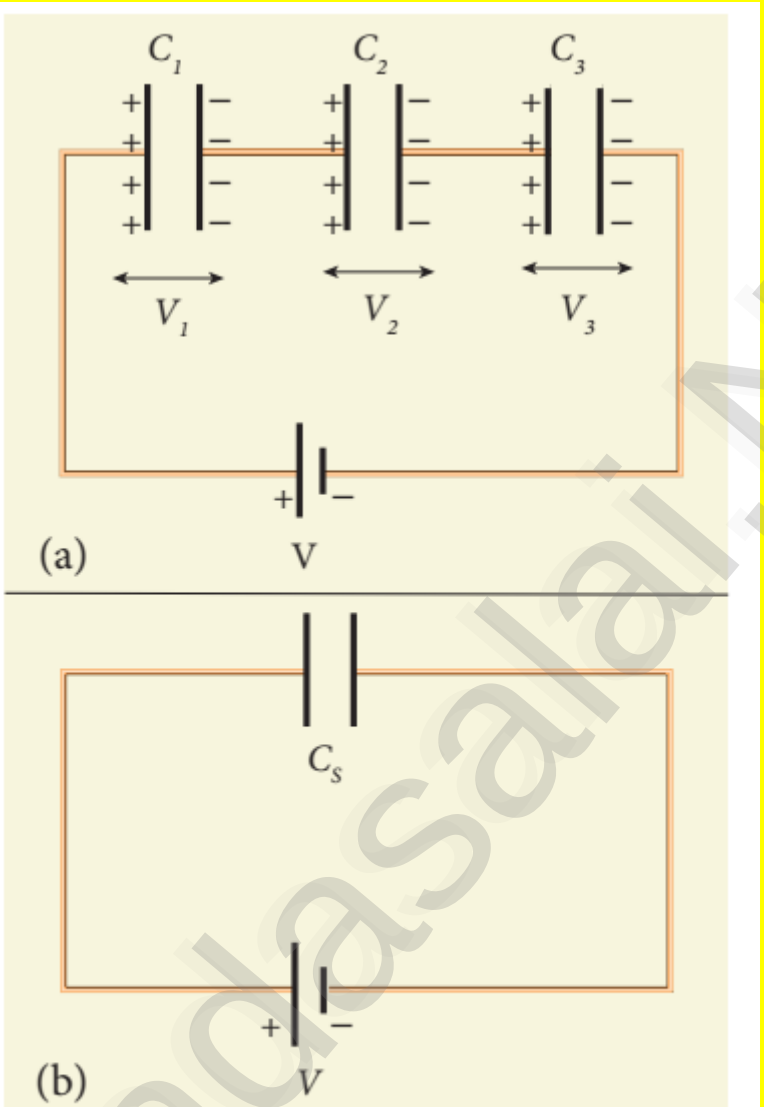


Figure 1.58 (a) Capacitors connected in series (b) Equivalent capacitors C_S

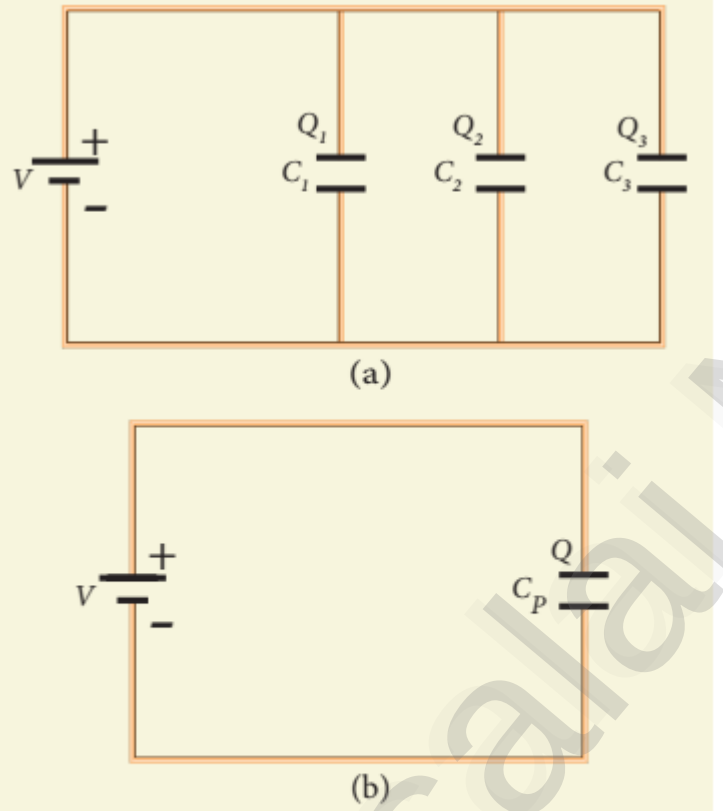


Figure 1.59 (a) capacitors in parallel (b) equivalent capacitance with the same

m

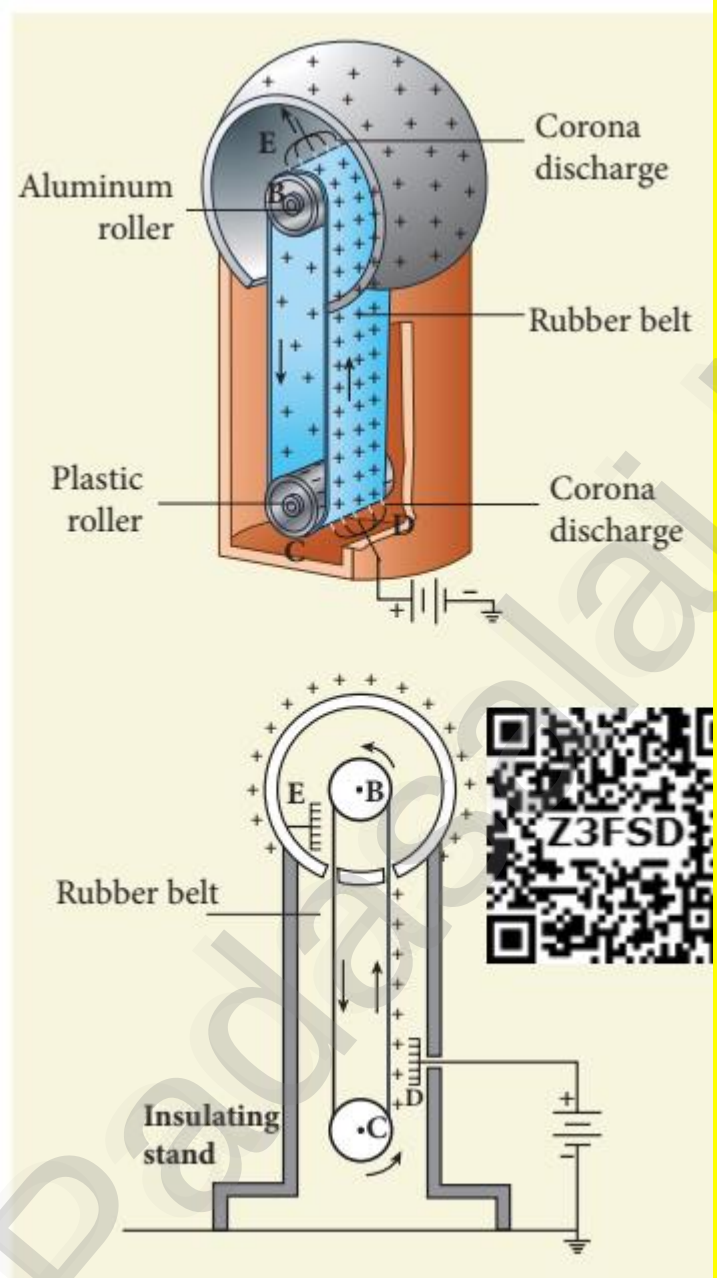


Figure 1.63 Van de Graaff generator

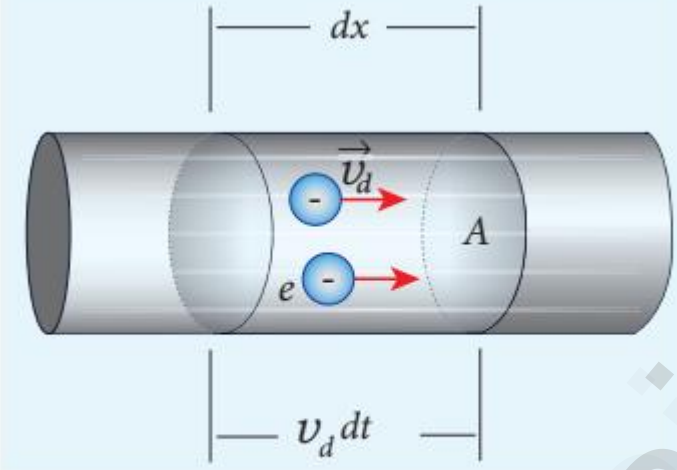


Figure 2.5 Microscopic model of current

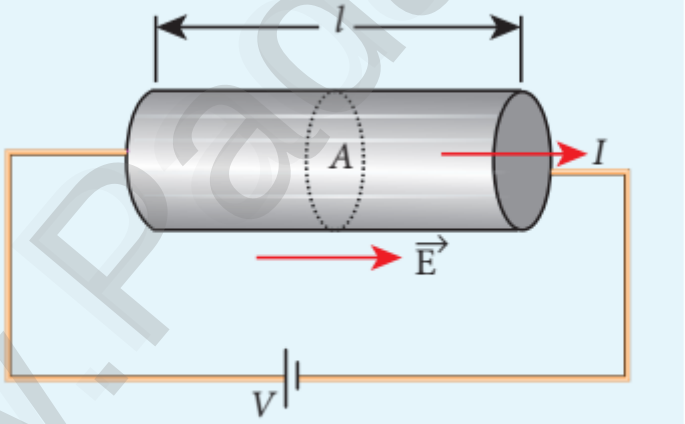
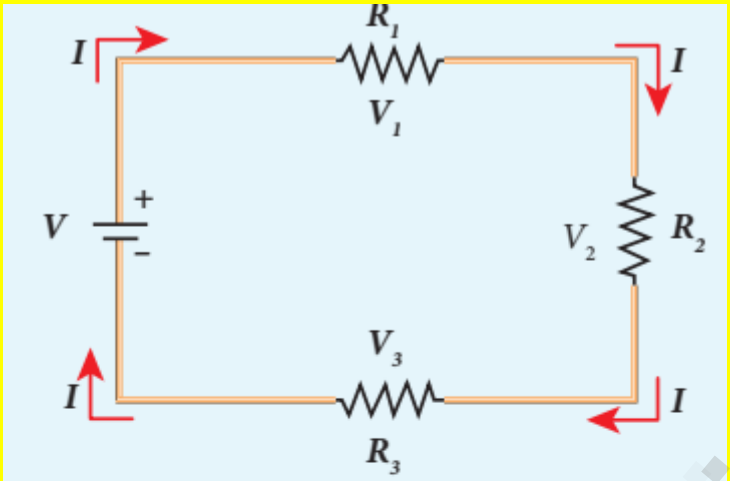
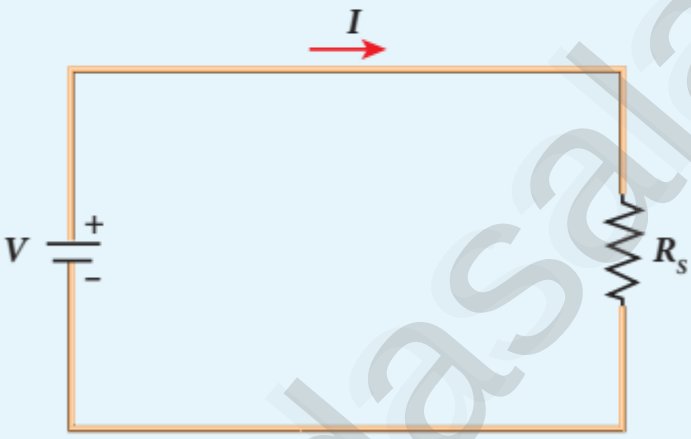


Figure 2.7 Current through the conductor

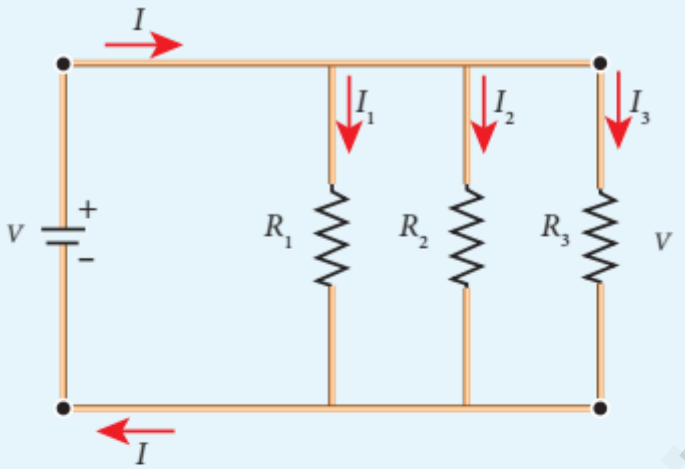


(a) Three resistors in series

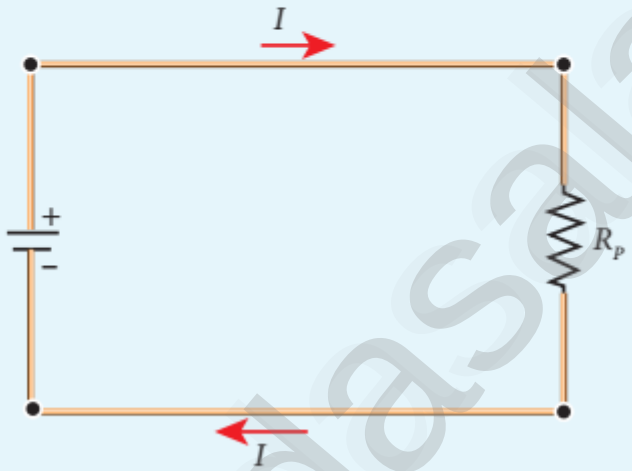


(b) Equivalent resistance (R_s) has the same current

Figure 2.9 Resistors in series

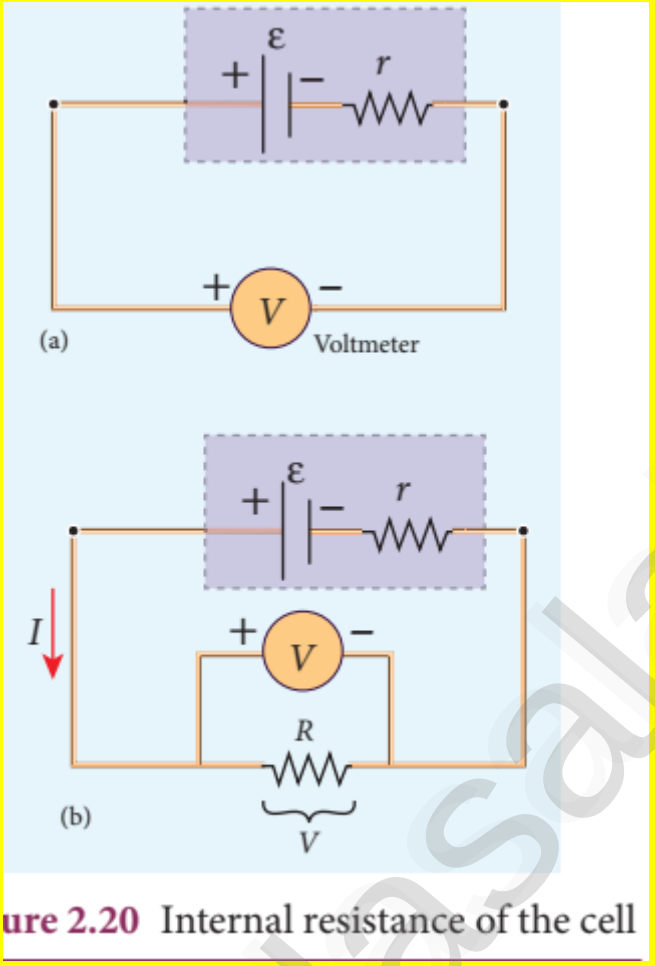


(a) Three resistors in parallel



(b) Equivalent resistance (R_p) has the same current

Figure 2.10 Resistors in parallel



ure 2.20 Internal resistance of the cell

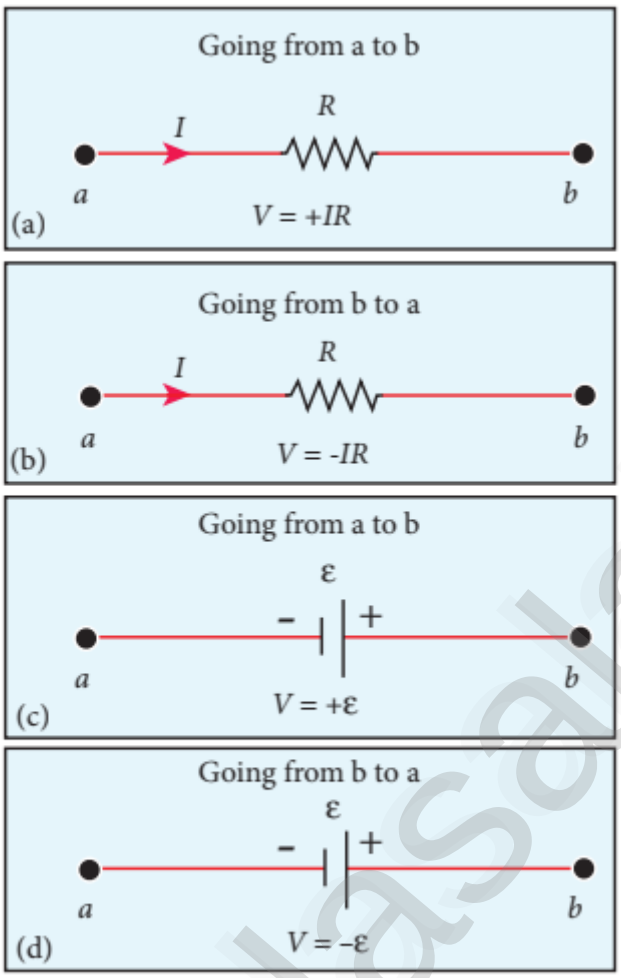


Figure 2.24 Kirchhoff voltage rule

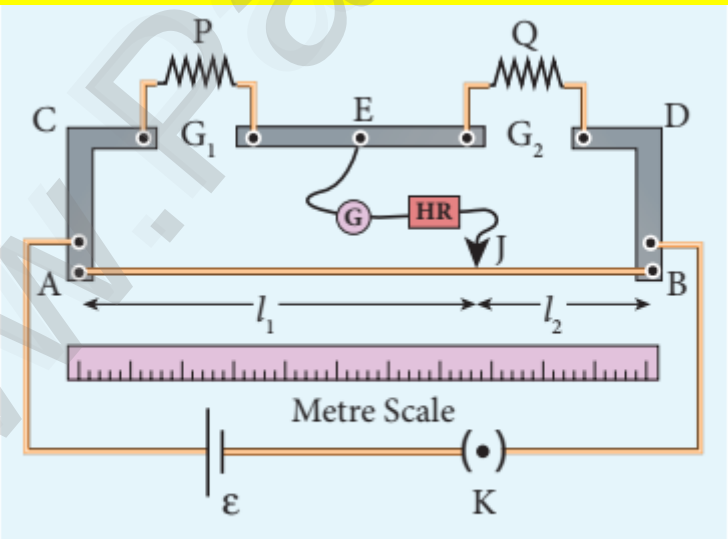


Figure 2.26 Meter bridge

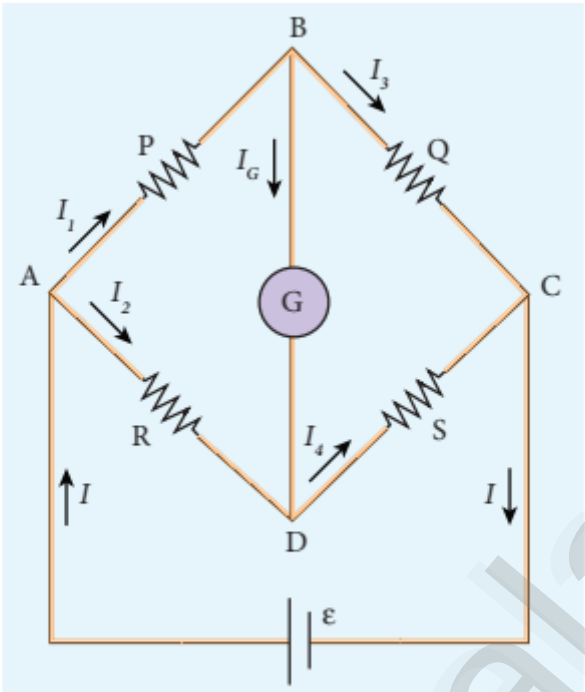


Figure 2.25 Wheatstone's bridge

N

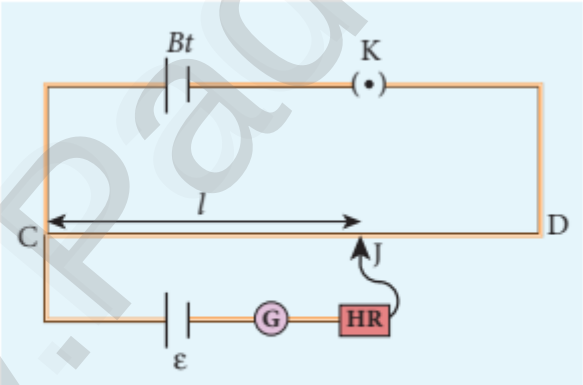


Figure 2.27 Potentiometer

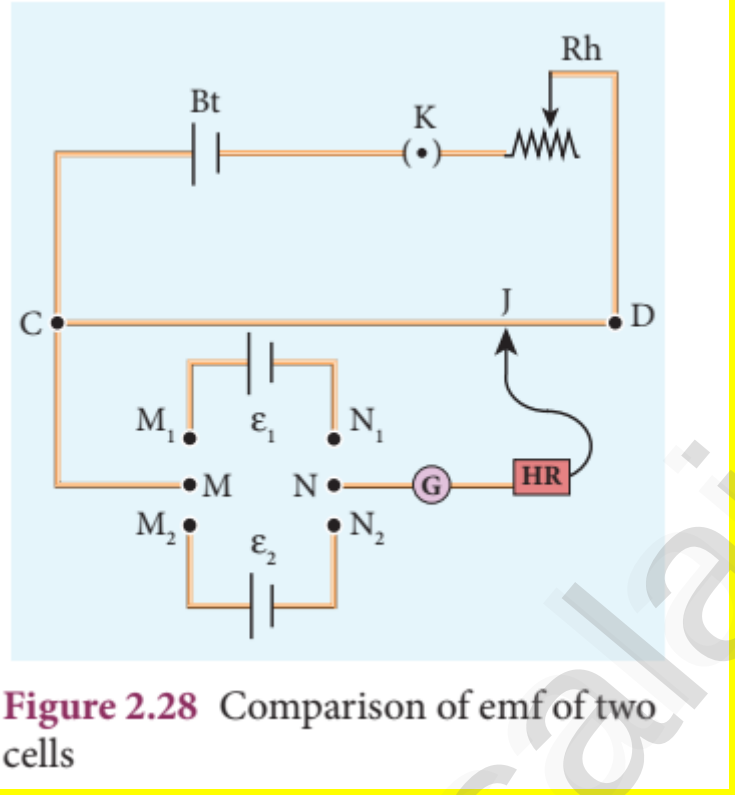


Figure 2.28 Comparison of emf of two cells

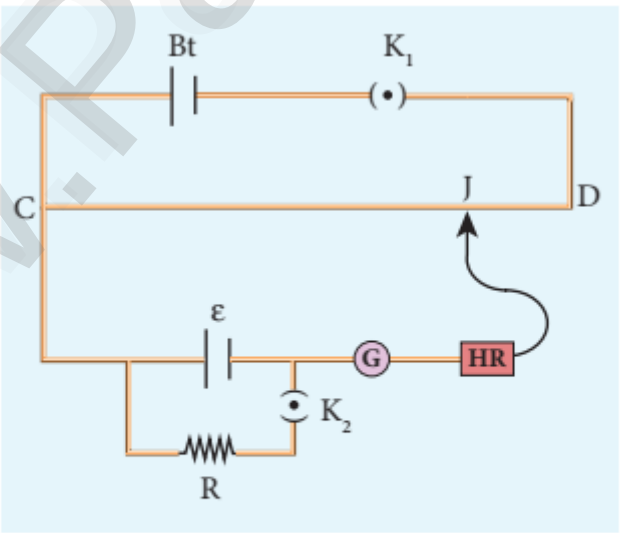


Figure 2.29 measurement of internal resistance

Unit -3

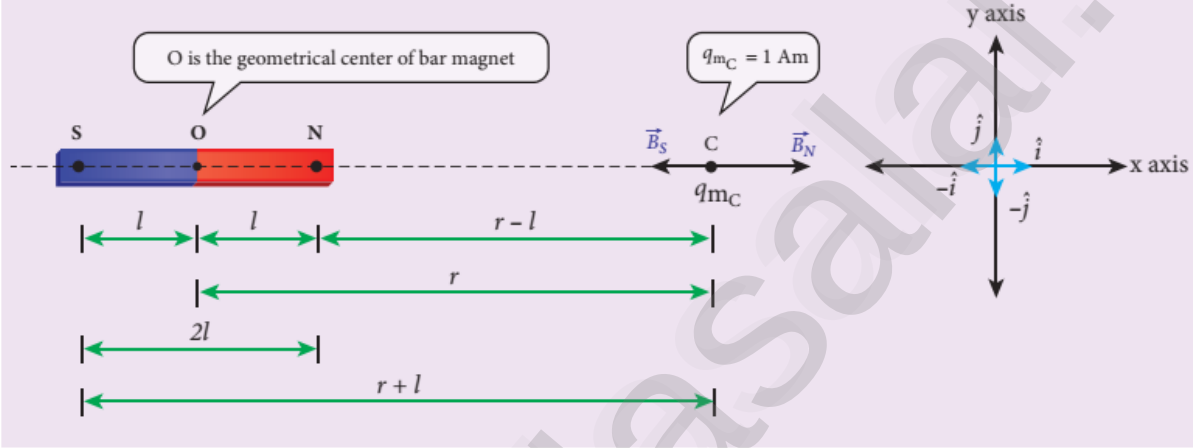


Figure 3.13 Magnetic field at a point along the axial line due to magnetic dipole

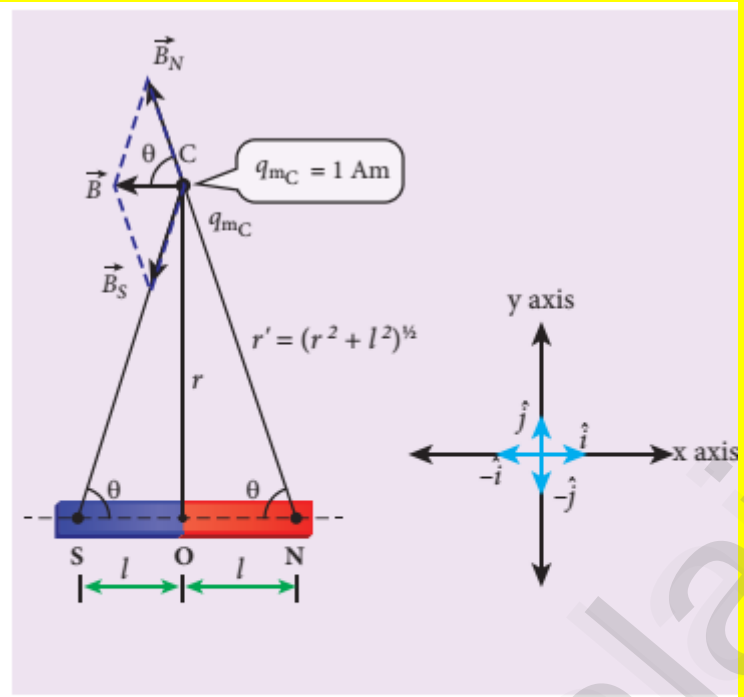


Figure 3.14 Magnetic field at a point along the equatorial line due to a magnetic dipole

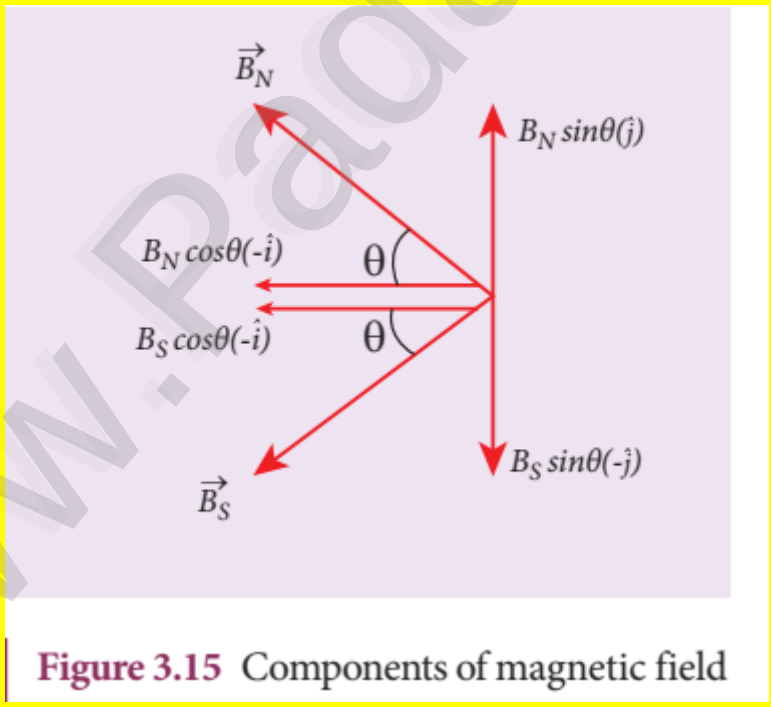


Figure 3.15 Components of magnetic field

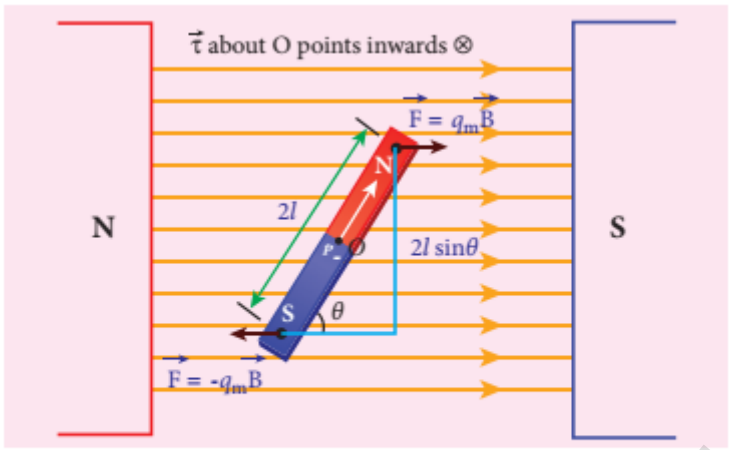


Figure 3.16 Magnetic dipole kept in a uniform magnetic field

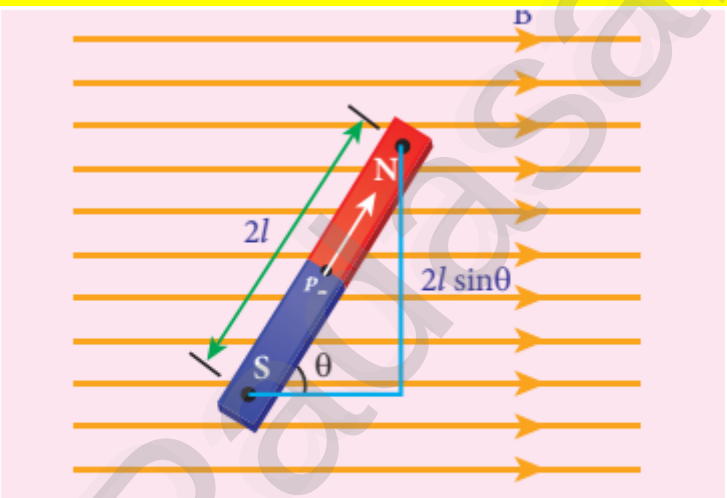


Figure 3.17: A bar magnet (magnetic dipole) in a uniform magnetic field

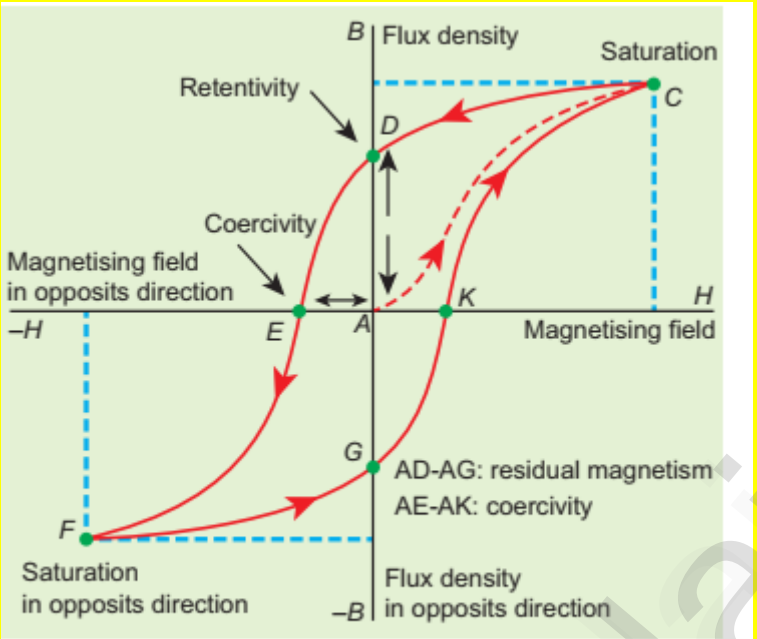


Figure 3.23 Hysteresis – plot for B vs H

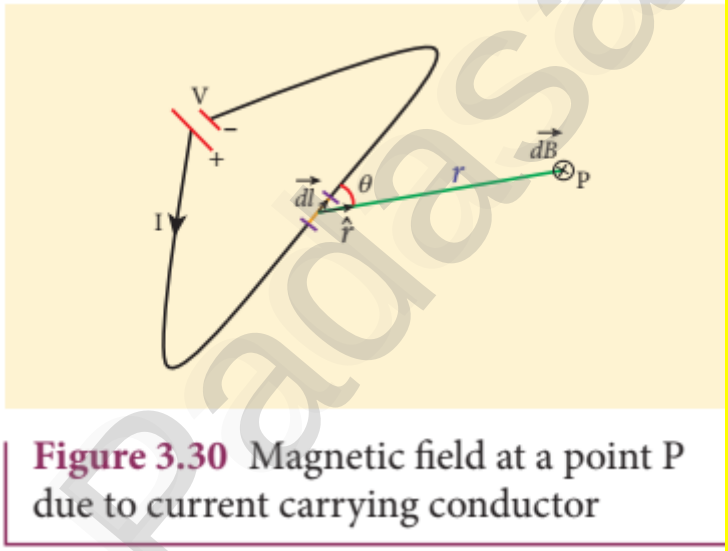


Figure 3.30 Magnetic field at a point P due to current carrying conductor

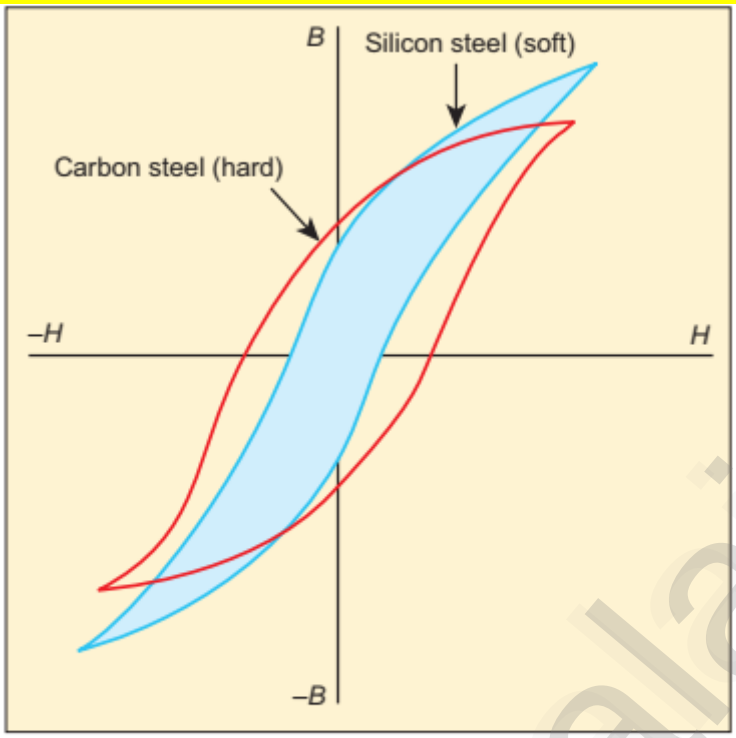


Figure 3.24 Comparison of two ferromagnetic materials based on hysteresis loop

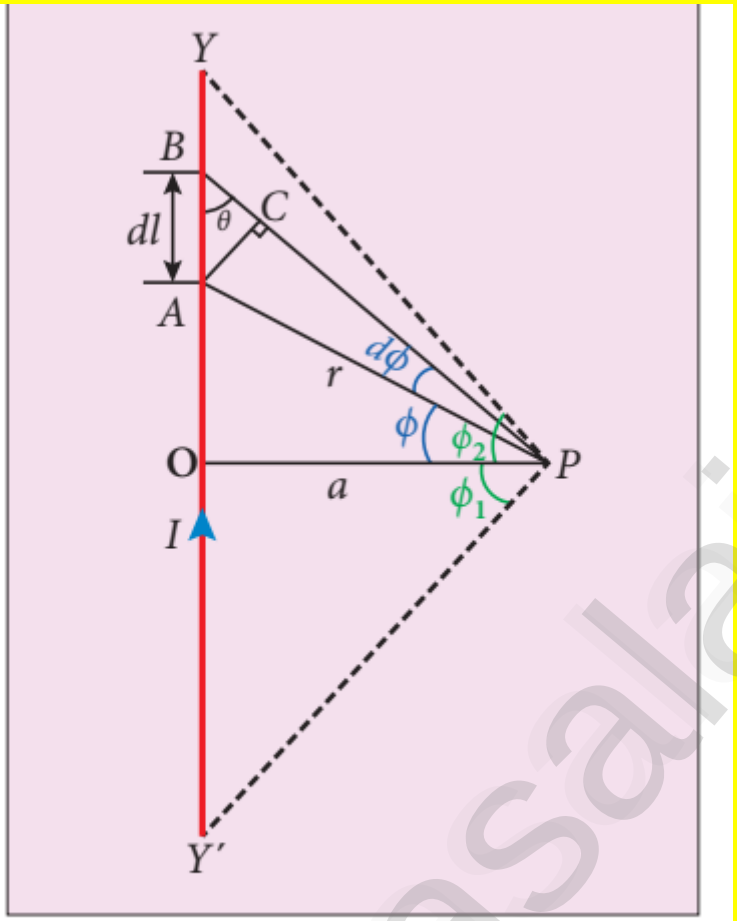


Figure 3.32 Magnetic field due to a long straight current carrying conductor

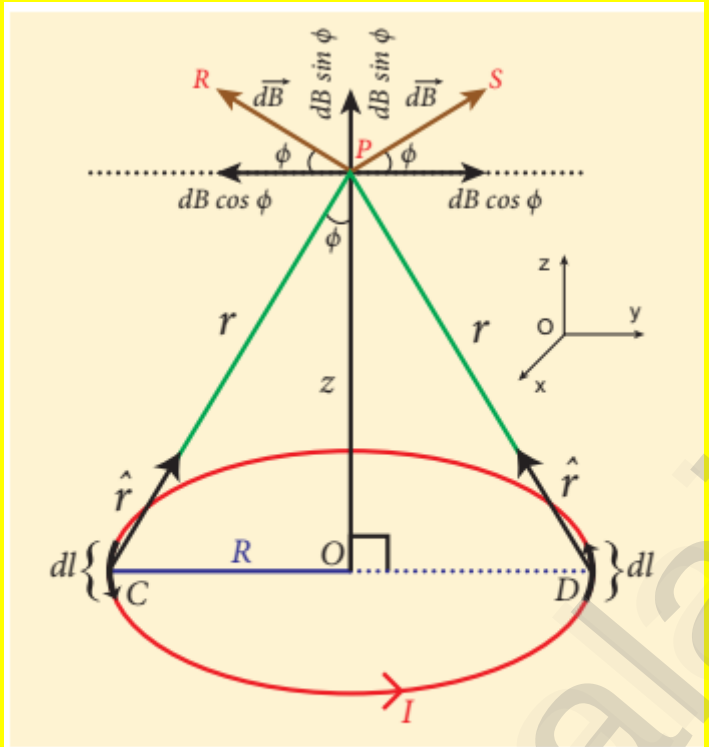


Figure 3.33 Magnetic field due to current-carrying circular loop

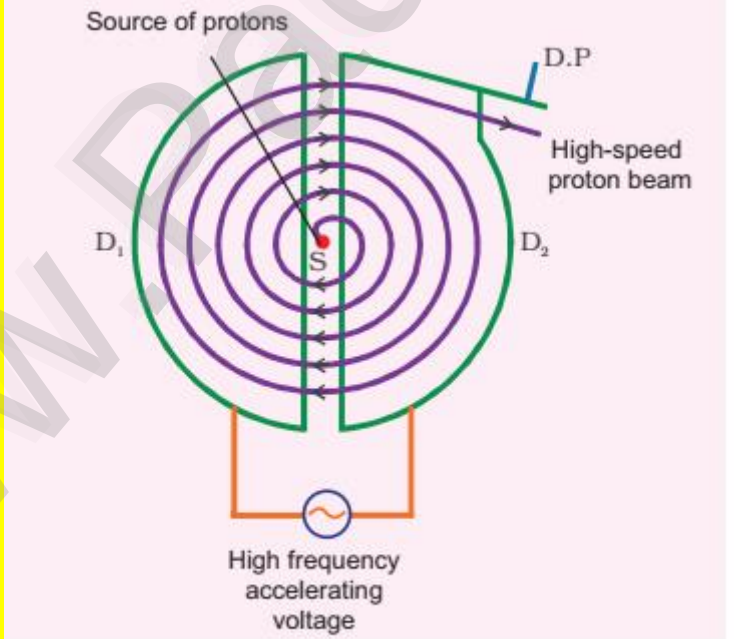


Figure 3.50 Working of cyclotron

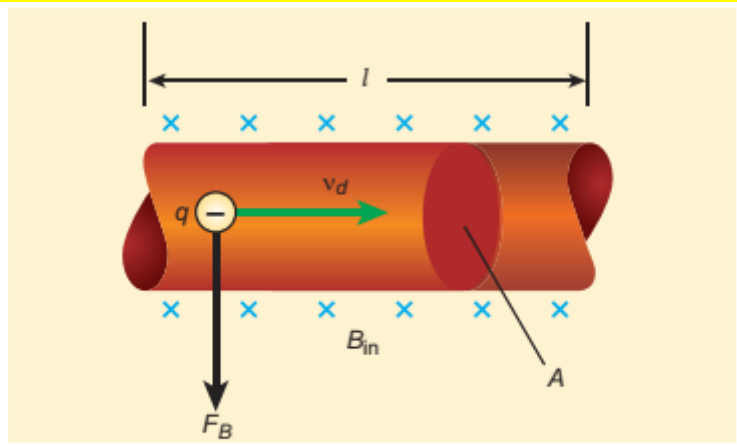


Figure 3.51 Current carrying conductor in a magnetic field

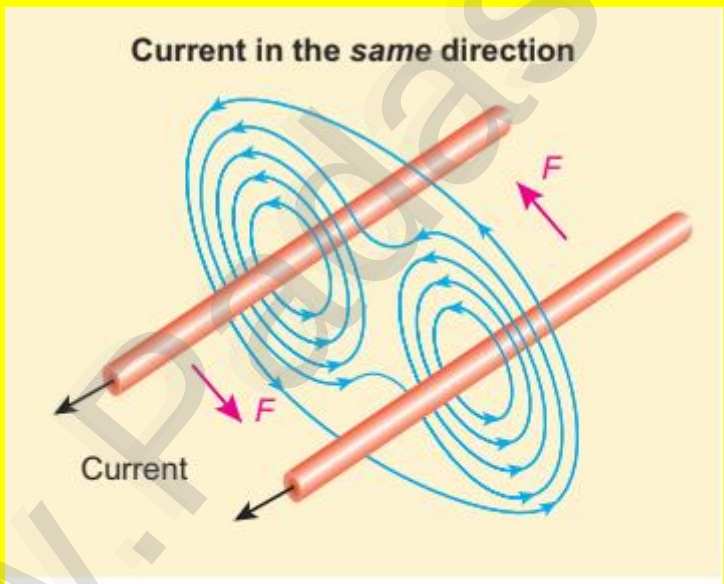


Figure 3.55 Two parallel conductors carrying current in same direction experience an attractive force

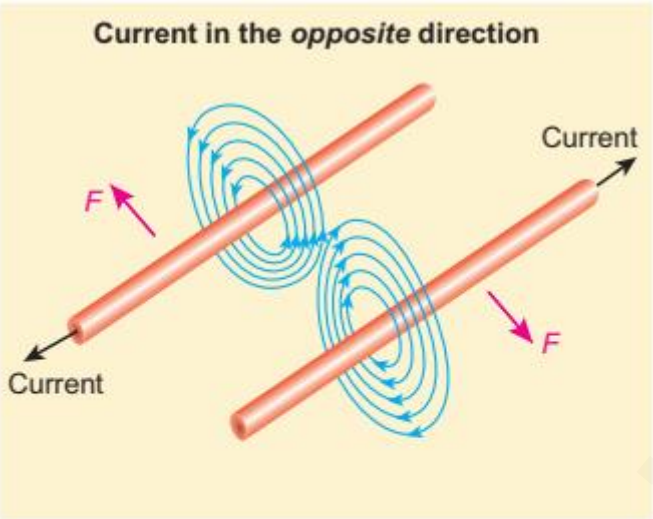


Figure 3.56 Two parallel conductors carrying current in opposite direction experience a repulsive force

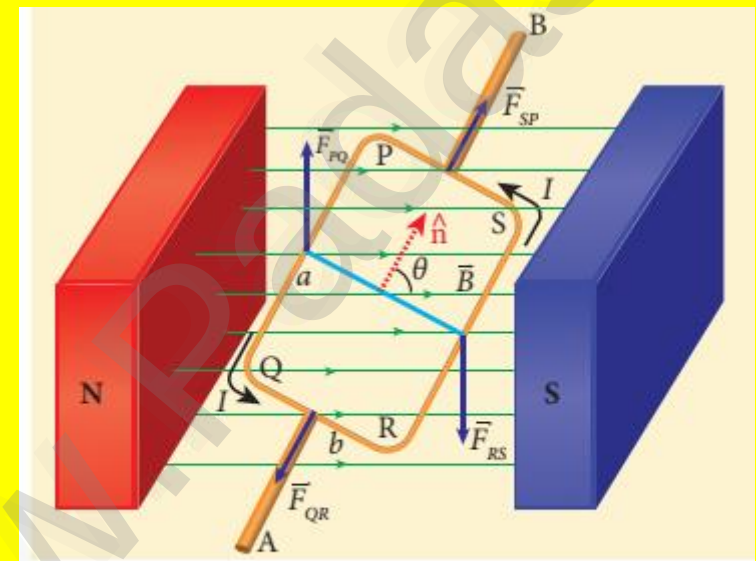


Figure 3.57 Rectangular coil placed in a magnetic field

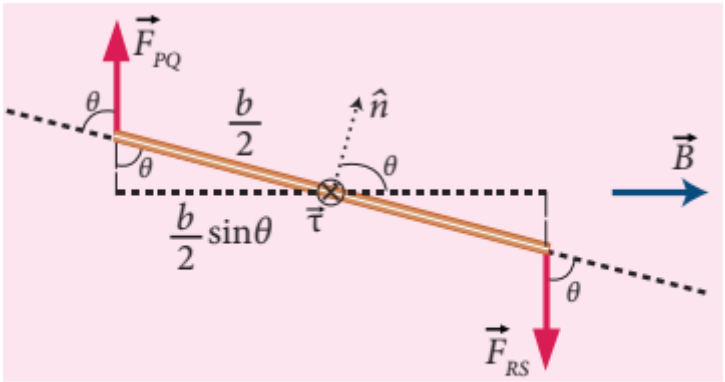
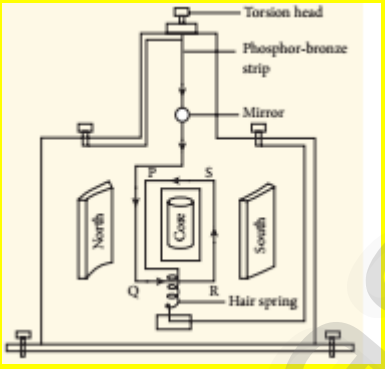


Figure 3.58 Side view of current loop



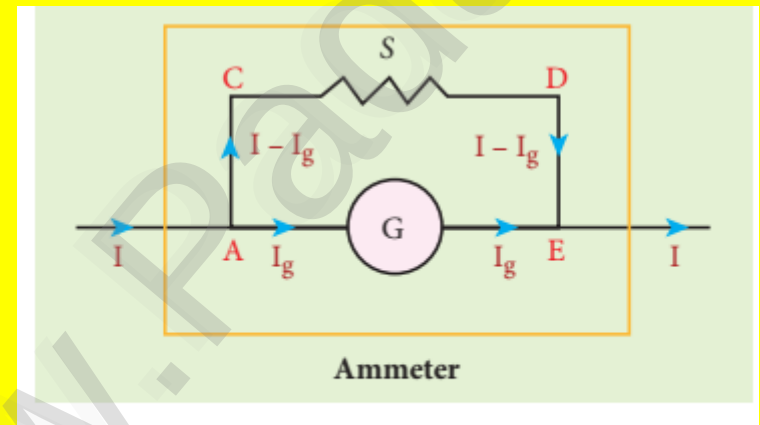


Figure 3.61 Shunt resistance connected in parallel

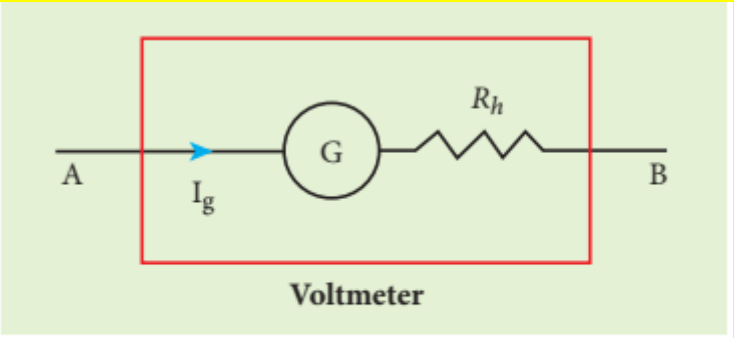


Figure 3.62 High resistance connected in series

PREPARED BY

Dr.G.THIRUMOORTHI ,M.Sc,B.Ed ,Ph.,D ,PHYSICS

IDAPPADI,SALEM

8610560810

Thiruphysics1994@gmail.com