

Chapter 21

Electromagnetic Waves

E is electric field in Newton/Coulomb and B is magnetic field in Tesla.

$E/B=c$ which is the speed of light and all electromagnetic waves, 3×10^8 m/s

$v=f\lambda$ where v is speed of light or "c" in m/s, f is frequency in Hz or 1/s, and λ is wavelength in meters.

Maxwell's Statements

- Electric Field lines go from + to –
- Magnetic Field lines form closed loops with no beginning or end.
- A varying magnetic field induces an emf or \mathcal{E} .
- Magnetic fields are generated by moving charges.