**8-ELECTROMAGNETIC WAVES**

**1. Displacement, Current and Modified Ampere’s Circuital law**

1. Displacement current,  Also   2. Modified Ampere’s circuital law, 

**2. Equation, Speed, Amplitude and Average Density of an Electromagnetic Wave**

1. Wave velocity,  2. Energy of photon =  3. Speed of e.m. wave in vacuum,  4. Speed of e.m. wave in a material medium,  5. For a wave of frequency *v,* wavelength, propagating along *x*-direction, the equations for electric and magnetic fields are   6. Amplitude ratio of electric and magnetic fields,  7. Propagating constant,  8. Average energy density of B-field,  9. Average energy density of E-field,  10. Average energy density of e.m. wave,  or  11. Momentum delivered by an e.m. wave.  12. Intensity of a wave =  or 