$$\begin{cases} \nabla \times \vec{E} = -\frac{\partial B}{\partial t} \\ \nabla \times \vec{H} = \vec{J} + \frac{\partial \vec{D}}{\partial t} \\ \nabla \cdot \vec{D} = \rho \\ \nabla \cdot \vec{B} = 0 \end{cases}$$

$$\begin{cases} D = \varepsilon E, \quad \varepsilon = \varepsilon_0 (1 + \chi_e) = \varepsilon_0 \varepsilon_r \\ B = \mu H \quad \mu = \mu_0 (1 + \chi_m) = \mu_0 \mu_r \end{cases}$$