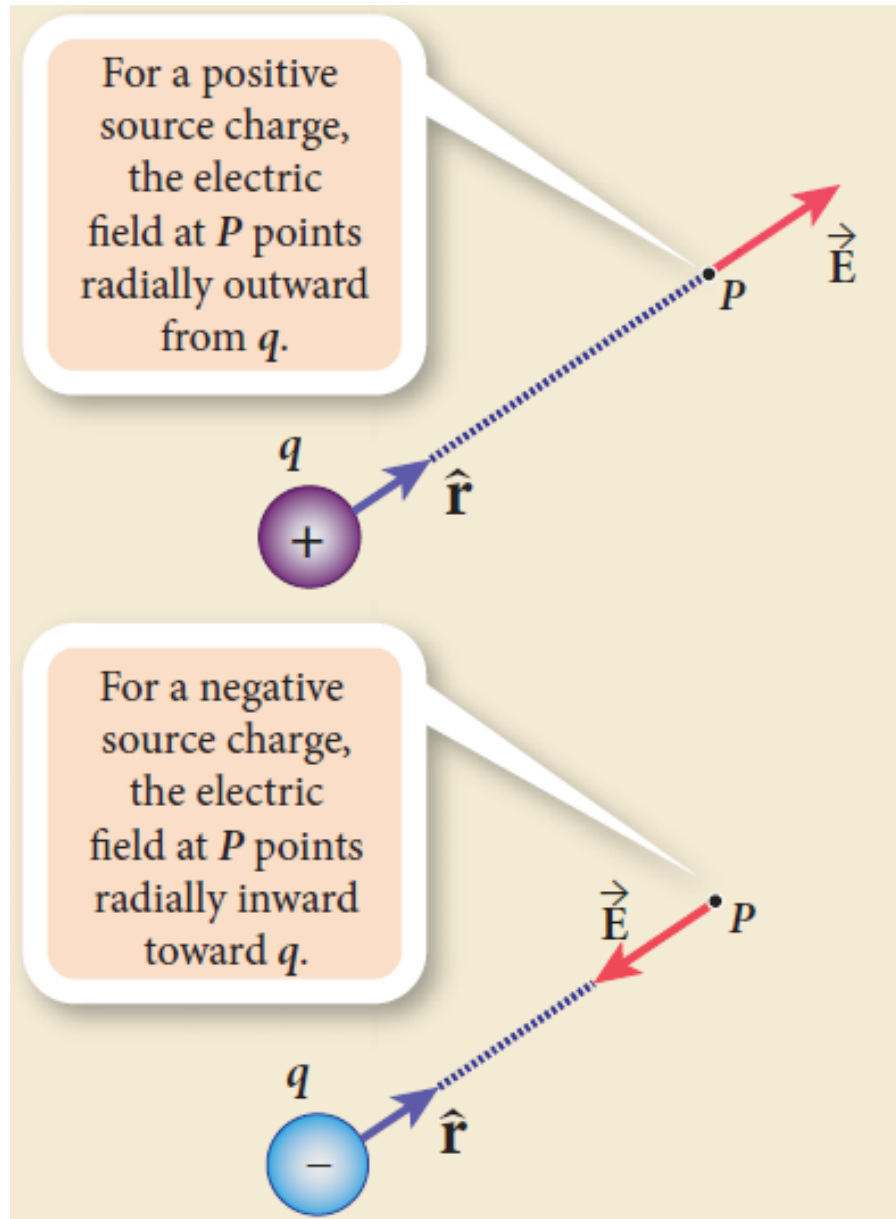
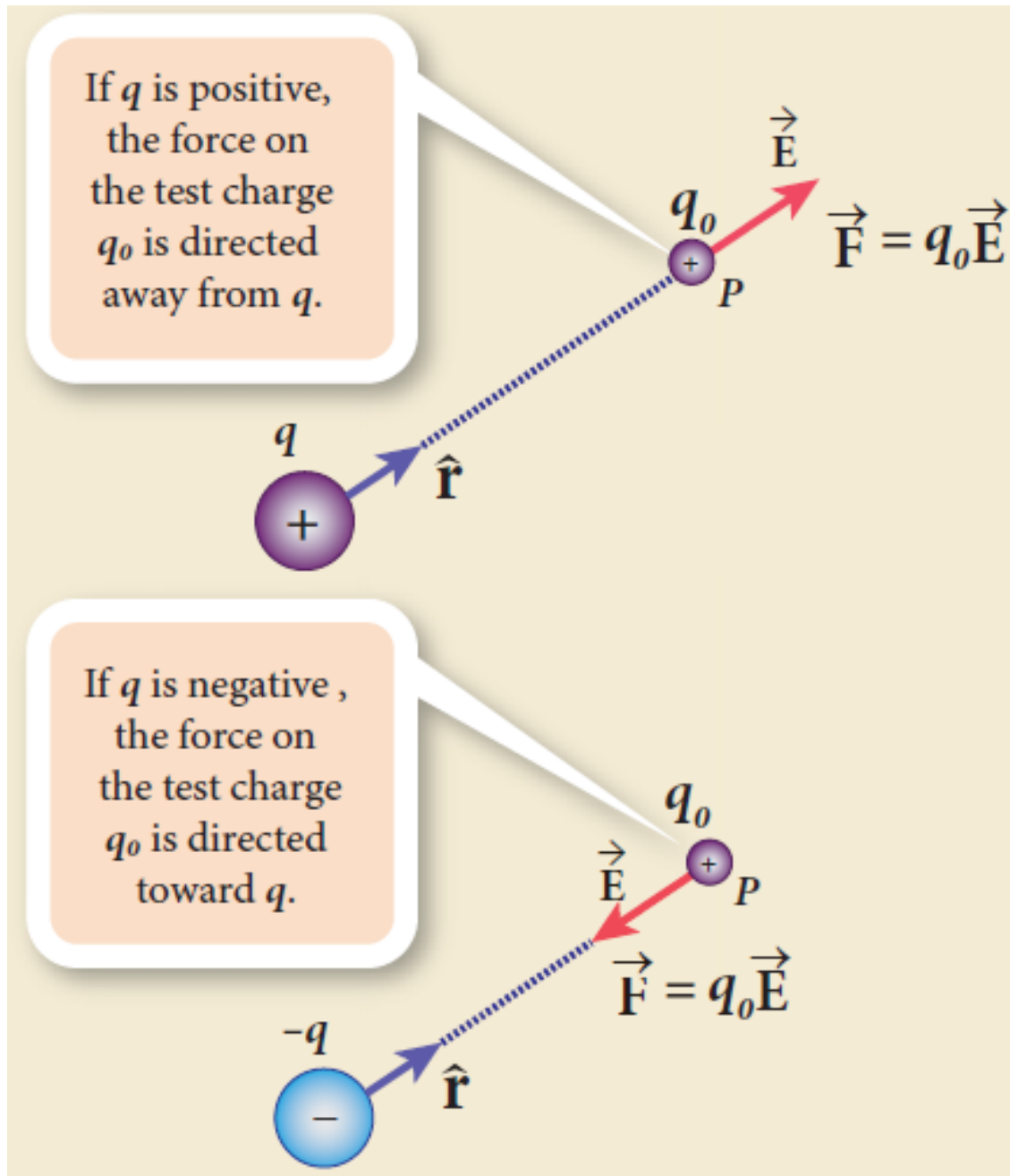


Important aspects of Electric field

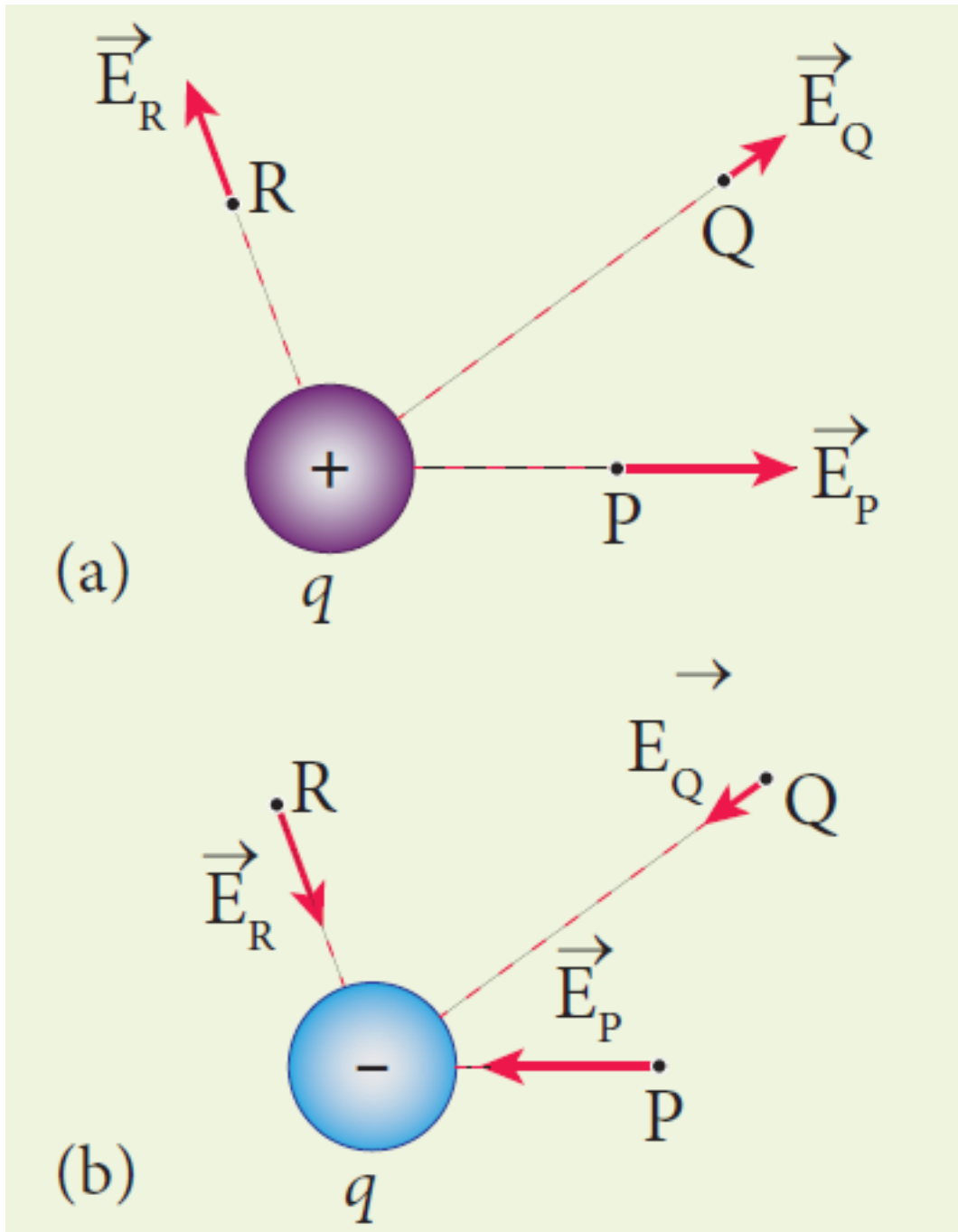
(i) If the charge q is positive then the electric field points away from the source charge and if q is negative, the electric field points towards the source charge q . This is shown in the Figure



(ii) If the electric field at a point P is \vec{E} then the force experienced by the test charge q_0 placed at the point P is $\vec{F} = q_0\vec{E}$. This is Coulomb's law in terms of electric field. This is shown in Figure



(iii) The electric field is a vector quantity, at every point in space, this field has unique direction and magnitude as shown in Figures. Here (a) Electric field due to positive charge (b) Electric field due to negative charge



(iv) There are two kinds of the electric field: uniform (constant) electric field and non-uniform electric field. Uniform electric field will have the same direction and constant magnitude at all points in space. Non-uniform electric field will have different directions or different magnitudes or both at different points in space. These are shown in Figure

