$$\text{Given : } F = \frac{q_1 q_2}{4\pi\varepsilon_0 r^2} \qquad \ldots(i)$$

When point charges q_1 and q_2 placed in medium with dielectric constant $k = 5$ and $r' = \frac{r}{5}$, then

$$F' = \frac{q_1 q_2}{4\pi\varepsilon_0 r'^2 k} = \frac{q_1 q_2}{4\pi\varepsilon_0 \times 5\left(\frac{r}{5}\right)^2} = 5F$$