ELECTRIC FIELD STRENGTH DUE TO A POINT CHARGE

$$E = k_C \frac{q}{r^2}$$

$$\text{electric field strength} = \text{Coulomb constant} \times \frac{\text{charge producing the field}}{(\text{distance})^2}$$

1. Air becomes a conductor when the electric field strength exceeds 3.0×10^6 N/C. Determine the maximum amount of charge that can be carried by a metal sphere 2.0 m in radius.