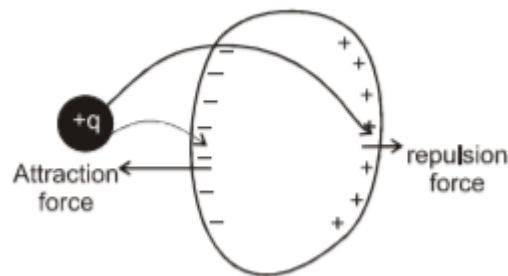


Problem 5) If a charged body is placed near a neutral conductor, will it attract the conductor or repel it ?

Solution:-



If a charged body (+ve) is placed on the left side near a neutral conductor, (-ve) charge will induce at the left surface and (+ve) charge will induce at the right surface. Due to a positively charged body -ve induced charge will feel attraction and the +ve induced charge will feel repulsion. But as the -ve induced charge is nearer, the attractive force will be greater than the repulsive force. So the net force on the conductor due to a positively charged body will be attractive. Similarly, we can prove for negatively charged bodies also. From the above example we can conclude that. "A charged body can attract a neutral body." If there is attraction between two bodies then one of them may be neutral. But if there is repulsion between two bodies, both must be charged (similarly charged). So "**repulsion is the sure test of electrification**".