

Physics 1214 - General Physics II

Quiz #4 - 2013.01.28

Solutions

1. Is the capacity of a parallel-plate capacitor directly proportional to the area of the plates, or the separation distance of the plates?

The capacity of a parallel-plate capacitor is directly proportional to the area of the plates.

2. What is the purpose of a dielectric in a capacitor?

There are several reasons: (1) Adding the dielectric between the two plates reduces the potential across the capacitor. (2) The capacitance of the capacitor is increased. (3) The dielectric material makes it easier to keep the plates a fixed distance apart.