

1. The capacitance of a parallel-plate capacitor increases with a decrease in-

- A. the area of the plates
- B. distance between the plates
- C. the dielectric constant
- D. None of the above

2. Two capacitors, with capacitance of $10\ \mu\text{F}$ and $20\ \mu\text{F}$ respectively, are connected in series. What is the equivalent capacitance for this combination?

- A. $6.7\ \mu\text{F}$
- B. $30\ \mu\text{F}$
- C. $0.15\ \mu\text{F}$
- D. $2.3\ \mu\text{F}$

3. Which one is a NOT correct statement?

- A. Any movement of charges forms a current.
- B. The Ohm's LAW applies to any materials.
- C. Resistivity of a material is independent of its physical dimension.
- D. An electric potential difference over a section of a metal wire generates a current in it.

4. A certain wire has a resistance R . What is the resistance of a second wire, which is half as long and has half the diameter? Both wire are made of the same material (resistivity is the same for both wires)

- A. $2R$
- B. R
- C. $\frac{1}{2} R$
- D. $4R$