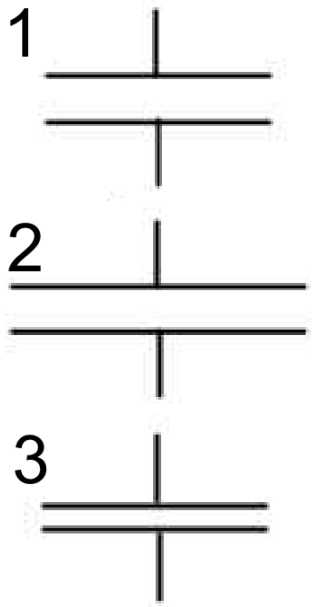
What happens to the capacitance of a capacitor if you put an insulator inside?

1. It increases
2. It decreases
3. It stays the same
4. I have no idea

Three capacitors 1, 2, 3 are connected to identical batteries so they each have the same ΔV.
Their plate areas and separations are as follows:
$A_2 = 2A_1 = 2A_3$; $d_1 = d_2 = 2d_3$.

How does the energy stored in each capacitor rank?

1. $U_2 = U_3 > U_1$
2. $U_3 > U_1 = U_2$
3. $U_2 > U_1 > U_3$
4. $U_2 > U_1 = U_3$
5. $U_1 = U_2 > U_3$
6. $U_1 = U_2 = U_3$
7. Other



What is the Debye length in a vacuum?

A. Zero
B. 1 meter
C. Infinity
D. Something else

At low temperature, should the Debye length be large or small?

A. Large
B. Small
C. Debye length doesn't depend on temperature
D. I don't know how to think about this

At high temperature, should the Debye length be large or small?

A. Large
B. Small
C. Debye length doesn't depend on temperature
D. I don't know how to think about this

At low concentration, should the Debye length be large or small?

A. Large
B. Small
C. Debye length doesn't depend on concentration
D. I don't know how to think about this

At high concentration, should the Debye length be large or small?

A. Large
B. Small
C. Debye length doesn't depend on concentration
D. I don't know how to think about this