

CONCEPTUAL PROBLEMS, Chapter 28

Phys 2401, Dr. Huang

Fill in a **T/F** answer for each statement below:

1. A healthy battery has a small internal resistance, and a weak battery has a large internal resistance.
2. The equivalent resistance of a parallel combination of resistors is always greater than any of the individual resistors.
3. The Kirchhoff's junction rule is based on the conservation of energy.
4. The Kirchhoff's loop rule is based on the conservation of charge.
5. The time constant of an RC circuit is $\tau = 1/RC$.
6. When charging a capacitor, the current decreases to 0.368 ($1/e$) of its initial maximum value at time = 1 time constant.