

**Answer on question #52782, Physics, Electric Circuits**

**Question** a 1.5V cell supplies 0.20A to a lamp for 7 hours before the lamp goes out. what is a sensible estimate for the initial chemical energy content of the cell? A)  $1 \cdot 10^2 \text{ J}$  B)  $1 \cdot 10^4 \text{ J}$  C)  $1 \cdot 10^6 \text{ J}$  D)  $1 \cdot 10^8 \text{ J}$

**Solution** Energy is power multiplied by time

$$E = Pt = UIt = 1.5 \cdot 0.2 \cdot 7 \cdot 3600 = 7560 \text{ J}$$

Hence, answer is B.