

Section

19-1

HOLT PHYSICS

Concept Review*Electric Current*

1. The sphere of a Van de Graaff generator had 6.00 C of charge. When connected to the ground, it was discharged in 24.0 ms. What was the average discharge current?

2. The current through a light bulb in a flashlight is 0.750 A.

- a. How much charge passed through the filament

• in 20.0 s? _____

• in 5.00 min? _____

• in 2.00 h? _____

- b. How many electrons enter the filament every second?

- c. How many exited the filament every second?

- d. Where do the electrons entering the filament come from? Where do they go after exiting?

3. A battery supplies a 0.015 A current to a small radio. How long should the radio stay on so that 4.80 C passes through each of the following parts of the circuit:

a. through the battery _____

b. through the radio _____

c. through the connecting wires _____