Name: ___________________________ Class / Period: ____________________

Instructions: Please answer the questions below.

1. The most inexhaustible source of energy known to humans is the ___________ sun ________________.
2. The energy of the sun is a ___________ renewable ________________ natural resource.
3. Sunlight causes a predictable change within a PV cell because of a natural phenomenon called the ___________ photovoltaic effect ________________.
4. Through the photovoltaic effect, ___________ light ________________ energy is transformed into ___________ electric ________________ energy.
5. Electric energy is a flow of ___________ electrons ________________.
6. A ___________ model ________________ is a copy or imitation, a simplified or stylized representation of a real object or system.
7. A ___________ system ________________ is a set of interacting parts that function as an organized whole.
8. Circle the two subsystems within our model system:
   (a) the sun
   (b) the PV cell, including the silicon and the electric contact grid
   (c) the electric circuit, including the wire and bell (or other “electric” device)
   (d) people (living organisms) and chairs (nonliving things)
9. Circle the one external variable that caused change in our model system:
   (a) electrons
   (b) the photovoltaic effect
   (c) light energy from the sun
   (d) heat energy from the sun
10. Circle two differences between our model of a PV cell and a real PV cell:
    (a) Our model had fewer parts than a real PV cell
    (b) Our model had more parts than a real PV cell
    (c) A real PV cell has billions and billions of electrons
    (d) A real PV cell uses kinetic energy, or energy of motion