MULTIPLE CHOICE

1. Which of the following is the correct type of energy utilized to produce tidal power?
   a. Radiation
   b. Kinetic energy
   c. Solar energy
   d. Potential energy
   e. Heat energy

2. Which of the following would NOT be classified as biomass?
   a. Straw
   b. Animal dung
   c. Charcoal
   d. Uranium
   e. Wood

3. Nondepletable energy resources include all of the following EXCEPT
   a. wind
   b. biomass
   c. solar
   d. geothermal
   e. hydroelectric

4. Energy resources that can be regenerated rapidly, such as biomass energy sources, are considered to be
   a. perpetual
   b. nonrenewable
   c. nondepletable
   d. fossil fuels
   e. potentially renewable

5. All of the following are ways to conserve energy EXCEPT
   a. using a desktop computer as opposed to a laptop
   b. consolidating errands while in your car
   c. replacing incandescent bulbs with compact fluorescent bulbs
   d. using a power strip for electronics
   e. lowering thermostats during cold months

6. An electric company's tiered rate system charges customers
   a. increasingly higher rates for less renewable resources
   b. different rates based on the square footage of their dwelling
   c. lower rates for first increments of energy and higher rates as the usage goes up
   d. different rates based on high peak events
   e. increasingly higher rates for renewable resources

7. Governments can encourage energy conservation by
   I. Raising taxes on fossil fuel use
   II. Offering tax credits for replacing old appliances with new ones
   III. Investing in smart grid technology
   a. I only
   b. II only
   c. I and III only
   d. II and III only
   e. I, II, and III

8. If a 100 W incandescent light bulb uses 360 kJ of energy per hour, and a compact fluorescent bulb uses $1/4$ as much, how much energy would a compact fluorescent bulb use in 30 minutes?
   a. 4.5 kJ
   b. 9 kJ
   c. 45 kJ
   d. 90 kJ
   e. 900 kJ

9. LED bulbs are six times as efficient as incandescent bulbs. If a household replaced ten 100-watt bulbs with LED bulbs, how many watts would be saved?
   a. 175 watts
   b. 400 watts
   c. 600 watts
   d. 833 watts
   e. 1700 watts

10. An important aspect of utility companies is reducing peak demand events. This is best accomplished by
    a. building power plants with larger generating capacity.
    b. implementing rolling black outs.
    c. keeping an ample supply of coal on hand.
    d. allowing customers to pay lower prices for energy when peak demand is low
    e. using renewable sources to generate peak electricity needs

11. Environmentally sound ways to maximize our energy resources include
    I. Increasing energy efficiency
    II. Increasing energy conservation
    III. Using fewer renewables
    a. I only
    b. III only
    c. I and II only
    d. II and III only
    e. I, II, and III

12. An energy efficient home, in the northern hemisphere, using a passive solar energy design for heating and cooling would include all of the following EXCEPT
    a. windows along the west-facing wall
    b. light-colored roofing material
    c. double-paned windows
    d. a roof with an overhang
    e. flooring material with heat absorbing qualities

Table 13-1

Type of Television	On Mode Power Rating
50" Plasma Television	400 watts
52" LCD Television	220 watts
52" LCD Energy Star Television	120 watts

13. Use Table 13-1. If both the LCD televisions are on for 4 hours per day for the month of April –
    30 days – how much less energy does the Energy Star television use over the course of the month?
    a. 400 kWh
    b. 100 kWh
    c. 120 kWh
    d. 12 kWh
    e. 1.2 kWh

14. Use Table 13-1. If the cost of electricity is $0.10 per kWh and both LCD televisions are used for
    four hours per day for the period of one year (365 days), how much less does the Energy Star
    model cost for that year?
    a. $480
    b. $146
    c. $120
    d. $14.60
    e. $1.46

15. Use Table 13-1. What is the difference in kWh between the Energy Star TV and the Plasma TV,
    if each TV is used 4 hours per day for a full year (365 days)?
    a. 175 kWh
    b. 262 kWh
    c. 409 kWh
    d. 584 kWh
    e. 2453 kWh