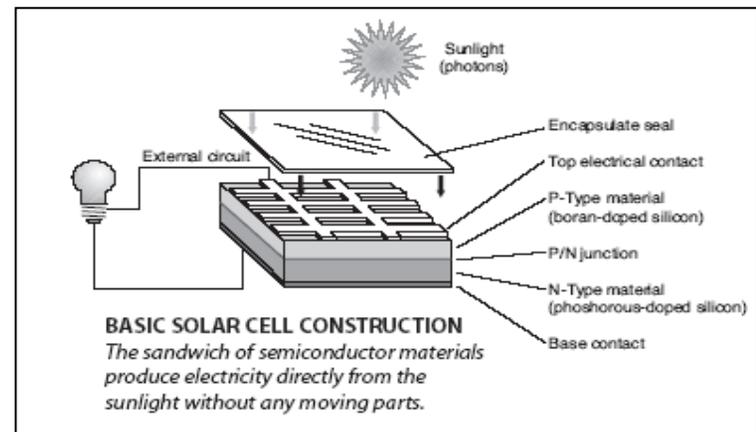
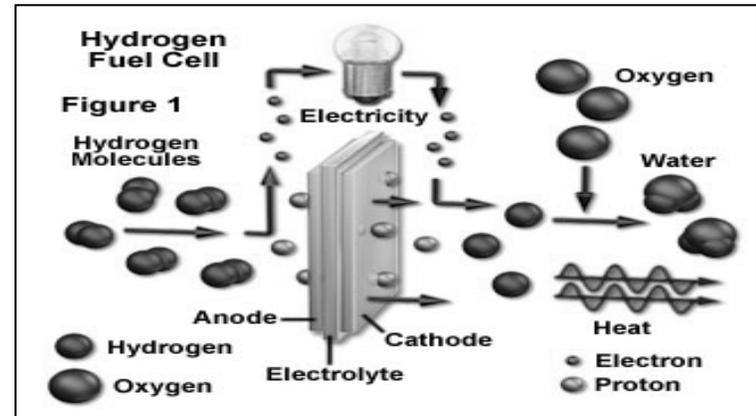
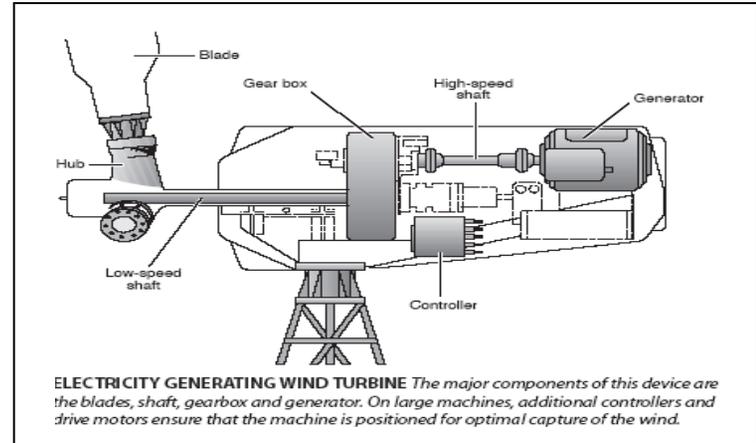


## Renewable Energy

### General Terms:

1. energy efficiency-
2. renewable energy sources-
3. “off the grid”-
4. r-value-
5. passive solar-
6. convection-
7. active solar-
8. photovoltaic cell-
9. array-
10. photon-
11. joule-
12. fuel cell-
13. wind farms-
14. geothermal energy-

### Illustrations:



6 Types of Renewable Energy		
Type	Advantages	Disadvantages
Solar		
Flowing water		
Wind		
Biomass		
Geothermal		
Hydrogen		

*Multiple Choice Questions*

- All of the following are methods of biomass energy production except
  - Burning manure to cook food
  - Collecting wood to burn for heat
  - Collecting methane from animal waste to produce electricity
  - Using moving water to generate electricity
  - Producing ethanol to be used in automobiles
- Biofuels include which of the following
  - Ethanol
  - Biodiesel
  - Vegetable oil
  - I only
  - I and II only
  - I and III only
  - I, II, and III
  - None of the above
- All of the following are negative environmental impacts of hydroelectric power except
  - Damming rivers destroys habitat
  - Damming disrupts the natural flooding of rivers
  - Hydroelectric power contributes directly to acid rain
  - Hydroelectric dams can create thermal pollution downstream
  - Sediment, and nutrients, are trapped behind dams

- Which of the following is a benefit of using biomass to produce energy?
  - Biomass energy production is near Carbon neutral.
  - Using biomass supports local economies
  - Biomass is a perpetual resource
  - Both A and B
  - All of the above

*Questions 5-9 refer to the following choices.*

- Biomass
- Hydroelectric
- Passive solar
- Geothermal
- Wind

- This type of renewable energy relies on a constant source of moving water.
- Involves the combustion of organic material associated with living organisms.
- This type of energy production is the fastest growing renewable energy sector.
- This type of energy is not directly derived from the sun.
- Involves the direct use of radiant energy from the sun to heat water or air.

*Free Response*

- Renewable energy resources will become more and more important as countries look for ways to meet their energy demands while fossil fuel resources begin to dwindle.
  - Identify and describe two renewable energy resources.
  - Identify and describe one negative impact and one positive impact for each of the renewable energy resources identified in part A.
  - Imagine that you are the president of a country, and describe two incentives that you would provide to encourage your citizens to use renewable energy resources.