

Ch 16 Spark Note Review Questions

1. What is energy efficiency?
2. Explain why we can think of energy efficiency as an energy resources.
3. What percentage of energy used in the United States is unnecessarily wasted?
4. What are the major advantages of reducing energy waste and why have these sources of energy been neglected?
5. Describe three ways to save energy and money in:
 - Industry
 - Transportation
 - New buildings
 - Existing buildings
6. What is cogeneration?
7. Explain why the price of gasoline is much higher than what consumers pay at the pump.
8. Distinguish among hybrid, plug-in hybrid, and fuel-cell motor vehicles.
9. Describe the possible connection between wind farms and plug-in hybrid cars.
10. Describe two promising developments in the search for better batteries.
11. What is a living roof?
12. What is the importance of a light colored roof?
13. What is a super-insulated home?
14. Compare the energy efficiency of incandescent, compact fluorescent, and LED light bulbs.
15. Explain how using compact fluorescent light bulbs can reduce overall air pollution from toxic mercury.
16. What are green buildings and why are they important?
17. Describe two factors holding back a transition to renewable energy sources.
18. Distinguish between:
 - Passive solar heating systems
 - Active solar heating systems
19. What are three ways to cool houses naturally?
20. What is a solar cell (photovoltaic or PV cell)?
21. What is the potential for using tides and waves to produce electricity?
22. What is a wind turbine and wind farm?
23. Why is the U.S. the "Saudi Arabia of wind energy".
24. What are biofuels?
25. Evaluate the use of corn, sugarcane, and cellulose plants to produce ethanol.
26. Describe the potential for using algae and bacteria to produce gasoline and diesel fuel.
27. What is geothermal energy and what are three sources of such energy?
28. What is holding back hydrogen fuel cells from providing large amounts electricity to power motor vehicles?