Ch 15 Spark Note Review Questions

1. What is net energy and why is it important for evaluating energy resources?
2. Explain why the nuclear fuel cycle has a low net energy yield.
3. What is crude oil and how is it extracted for the earth and refined?
4. What percentage of the commercial energy used in the world and in the U.S. are provided by crude oil?
5. What is peak production for an oil well and the world?
6. What is a petrochemical and why are such chemicals important?
7. What are proven oil reserves?
8. Describe the two types of unproven reserves.
9. What is tar sand and oil sand and how is it extracted and converted into heavy oil?
10. What are some environmental problems related to the use of this energy resource?
11. What is oil shale and how is it produced?
12. Define natural gas, liquefied petroleum gas (LPG) and liquefied natural gas (LNG). What three countries have the most of the world's natural gas reserves?
13. What are three sources of unconventional natural gas and what major problems are related to the use of these resources?
14. What is coal and how is it formed?
15. How does a coal burning power plant work?
16. What three countries have the largest proven reserves of coal?
17. Describe the problem of coal ash waste.
18. Explain why there is no such thing as "clean coal".
19. What is synthetic natural gas (SNG)?
20. How does a nuclear fission reactor work and what are it major safety features?
21. Describe the nuclear fuel cycle.
22. How do nuclear plant operators store highly radioactive spent fuel rods?
23. Why are spent fuel rods vulnerable to terrorist acts?
24. How can we deal with the highly radioactive wastes products produced by the nuclear fuel cycle?
25. What can we do with worn-out nuclear power plants?
26. What is nuclear fusion and what is its potential as an energy resource?