**APES Study Guide**

**Energy Resources**

Vocabulary

It is necessary that you know the meaning of the following terms in order to answer application and evaluation questions on your upcoming assessment. You may write out the definition, make notecards (handwritten or digital), use online vocabulary resources or simply review the terms in your notes. It is YOUR responsibility to ensure that you know these terms!

**IMPORTANT NOTE: For this Energy Resources unit, writing out and studying vocabulary terms is HIGHLY SUGGESTED.**

Petroleum Conservation Control Rods Biofuel

Primary extraction Efficiency Steam generator Passive solar

Secondary extraction Cogeneration Condenser PV cells

Synfuels Enrichment Breeder fission Renewable

Carbon sequestration Reactor core Half-life Non-renewable

Short Answer

You are REQUIRED to answer each of the following questions on separate paper. ALWAYS write in complete sentences. Use both your lecture notes AND your textbook for reference.

1. Compare developed and developing countries in terms of energy consumption.
2. Name the 3 countries that have the largest coal reserves.
3. List the stages of the formation of coal from “softest” to “hardest”.
4. Describe how crude oil is refined to produce different products.
5. Where are natural gas deposits usually found? What are the advantages of using natural gas over oil?
6. Describe the major environmental impacts from the extraction and production of fossil fuels, as well as from the combustion of fossil fuels.
7. List 4 methods used in the processes of “clean coal” technology. Has carbon sequestration been *proven* as an effective method?
8. Briefly explain the processes involved in the production of electricity from coal or uranium?
9. Name the major environmental advantages and disadvantages to using nuclear power.
10. Create a chart to summarize the benefits and drawbacks of each of the following:
    * Biomass
    * Hydropower
    * Solar PV cells
    * Wind Power
11. Why might the production of power from geothermal sources NOT be renewable?
12. What is the major drawback in using hydrogen as a power source?
13. Which type of fuel is most often used in developing countries?
14. What are the economic pros and cons of using renewable energy?

**NOTE:** You will be required to apply mathematical calculations using energy conversion factors, percent change, and half-life WITHOUT A CALCULATOR.

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