

Alternative Energy Study Guide

NAME _____

- 1) What is the best description of energy? (Energy Definition) (Session 1)
 - a) intensity of action or effect
 - b) usable heat and power that comes in the forms of electrical, mechanical, chemical, thermal, or nuclear
 - c) any of the natural influences that exist especially between particles and determine the structure of the universe
 - d) a branch of physical science

Match the Energy with the correct type: (Session 1)

- | | |
|---------------------------------|--------------------------|
| 2) _____ Coal | a) Nonrenewable |
| 3) _____ Wind | b) Perpetual (Renewable) |
| 4) _____ Geothermal | |
| 5) _____ Natural Gas | |
| 6) _____ Solar | |
| 7) _____ Hydropower | |
| 8) _____ Fuel Cell Technologies | |
| 9) _____ Petroleum | |
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- 10) _____ is the energy resource that is identified with organic matter used to provide heat, generate electricity, and provide fuel for transportation systems. (Session 1)
 - 11) Energy in motion, or moving energy is commonly called what type of energy? (Session 1)
 - a) action energy
 - b) kinetic energy
 - c) potential energy
 - d) fast energy

12) Stored energy in any form is referred to as what type of energy? (Session 1)

- a) Kinetic Energy
- b) Possible Energy
- c) Potential Energy
- d) Concentrated Energy

Match the definition to the correct scientific law: (RCA 2)

- 13) _____ An object at rest stays at rest and an object in motion stays in motion with the same speed and in the same direction unless acted upon by an unbalanced force.
- 14) _____ When one form of energy is used, it changes into one or more other energy forms. Energy cannot be destroyed or created.
- 15) _____ Energy can be converted from one form into another
- a) Law of Conservation of Energy
 - b) Newtons First Law
 - c) Law of Thermodynamics

16) Assume a fuel cell car can store hydrogen in a pressurized tank at 3,500 pounds per square inch and can travel 200 miles at this pressure. What is the range of a hydrogen car that has a tank pressure of 12,000 pounds per square inch? (Round to the nearest whole number) (RCA 3)

- a) 740
- b) 590
- c) 686
- d) 649

17) What is the definition of Nuclear Fusion? (Session 3)

18) What is the solar technology that uses mechanical systems to take in solar energy and convert it to heat energy? (Session 3)

- a) Active Solar
- b) Passive Solar
- c) Solar Thermal
- d) Solar Cell

19) Identify the energy device that is made from thin slices of silicon and converts sunlight directly into electrical power. (Session 3)

- a) Solar Collector
- b) Fuel Cell
- c) Silicon Cell
- d) Solar Cell

20) A fuel cell produces electrical power as the result of a chemical reaction?

(Session 5)

(If false, what is the correct answer?)

- a) True
- b) False