

Energy Review

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

1. Which form of energy travels in waves through empty space?
 - a. sound energy
 - b. electrical energy
 - c. electromagnetic energy
 - d. none of the above
2. Which energy conversion occurs in a battery?
 - a. electrical energy → chemical energy
 - b. electromagnetic energy → light energy
 - c. chemical energy → light energy
 - d. chemical energy → electrical energy

True or False

Write true if the statement is true or false if the statement is false.

- _____ 3. Stars release electromagnetic energy into space.
- _____ 4. The energy stored in food is chemical energy.
- _____ 5. During photosynthesis, plants change thermal energy to chemical energy.
- _____ 6. A stretched rubber band has mechanical energy.
- _____ 7. When you plug in a lamp, electromagnetic energy is converted to light energy.

Short Answer

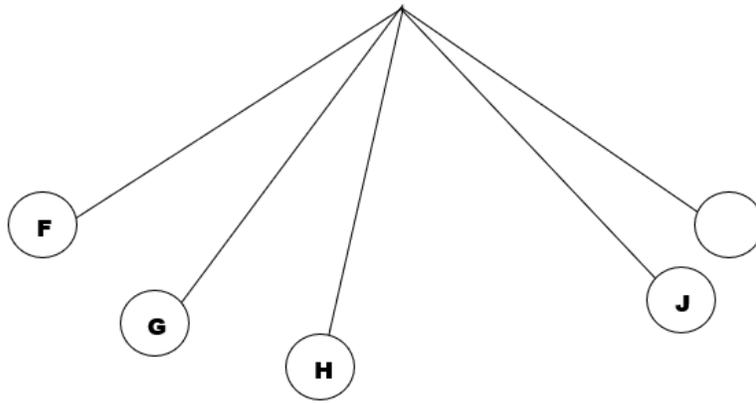
*Answer the following questions in **complete sentences**.*

8. Define energy. What is the SI unit for energy?
9. What does the Law of Conservation state?
10. Which of these statements is correct? **Explain your answer!**

A. An object with greater mass will have more gravitational potential energy than an object with lesser mass, when the objects are at the same height.

B. An object with greater mass will have less gravitational potential energy than an object with lesser mass, when the objects are at the same height.

11. At which point does this pendulum demonstrate the most kinetic energy? **EXPLAIN.**



12. What is the kinetic energy of a .145kg baseball as it is thrown at 44m/s.

$$KE = \frac{1}{2} mv^2$$

13. If I increase the velocity (or speed) of an object what will happen to its kinetic energy?

14. You are an engineer and have been tasked with increasing the kinetic energy of an object. The best thing to do would be to increase the mass or increase the velocity? **EXPLAIN.**

15. If I drop a 100 kg bag of sugar from a 50 m window, what would happen to its kinetic energy? What about its gravitational potential energy?