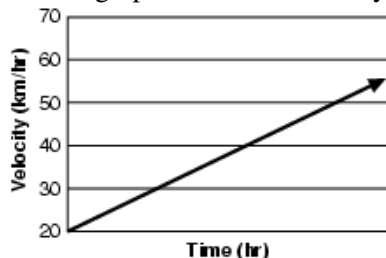


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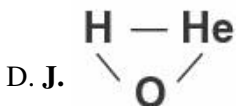
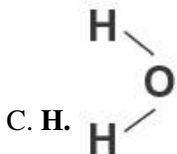
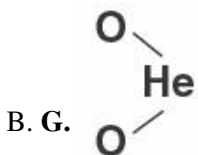
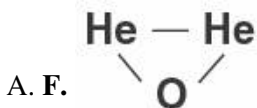
1. This graph shows the velocity of a car.



Which statement BEST explains how the car is moving?

- A. Velocity is increasing, so the car is accelerating.
- B. Velocity is decreasing, so the car is accelerating.
- C. Velocity is increasing, so the car is not accelerating.
- D. Velocity is decreasing, so the car is not accelerating.

2. Which picture illustrates the structure of a molecule of water?



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3. The force that holds you to Earth's surface is

- A. gravity.
- B. weight.
- C. mass.
- D. pressure.

4. As Maria stood knee-deep in the ocean, she noted how high the waves came up on her compared to the day before. Which property of waves was Maria observing?

- A. frequency
  - B. wavelength
  - C. amplitude
  - D. speed
- 

5. If a light ray hits the back of the spoon at a  $30^\circ$  angle, the angle that the ray will reflect off the spoon is

- A. less than  $30^\circ$ .
  - B.  $30^\circ$ .
  - C. more than  $30^\circ$ .
  - D. unpredictable.
- 

6. Which of the following is a compound?

- A. oxygen
  - B. water
  - C. nitrogen
  - D. air
- 

7. A pitcher throws a baseball as shown in the diagram below.



Which of these has MOSTLY kinetic energy?

- A. the pitcher
  - B. the ball
  - C. the batter
  - D. the catcher
-

8. The students saw the safety symbol below on the chemistry lab page that described the experiment they were about to do.



What does this experiment use that poses a potential danger of which they should be aware?

- A. fire
  - B. electricity
  - C. poisonous chemicals
  - D. sharp objects
- 

9.

What form of energy is associated with the movement of charges, usually electrons?

- A. chemical
  - B. electrical
  - C. heat
  - D. sound
- 

10.

When doing work using simple machines, what happens when the effort distance is increased?

- A. The effort force is decreased.
  - B. The effort force is increased.
  - C. The resistance force is increased.
  - D. The direction of the effort force is changed.
- 

11.

You can observe the color of your friends shirt with your eyes because

- A. the shirt produces light waves.
  - B. the shirt releases light waves.
  - C. light is reflected off of the shirt.
  - D. light is transmitted from the shirt.
-

12. For Kathy to see the image, light must have entered her eyes. What specifically entered Kathy's eyes?

- A. only matter
  - B. only energy
  - C. both matter and energy
  - D. neither matter nor energy
- 

13. Mike believes that electricity can be made using a strong magnetic field and a coil of wire. Which question would be appropriate for investigating this statement?

- A. How should the coil be moved in the magnetic field to make electricity?
  - B. What is the largest magnetic field that can be produced?
  - C. What should the diameter of the wire be?
  - D. Could solar power be used to generate electricity?
- 

14. Two jars are placed inside an insulated box. One jar contains ice water and the other contains hot soup. What will happen to the two liquids?

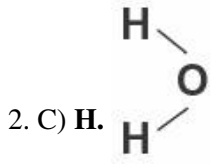
- A. Both the hot soup and the ice water will gain heat.
  - B. Both the hot soup and the ice water will lose heat.
  - C. The hot soup will gain heat and the ice water will lose heat.
  - D. The hot soup will lose heat and the ice water will gain heat.
- 

15. A different chemical substance is formed when a

- A. piece of cloth is cut.
- B. cup breaks.
- C. candle burns.
- D. piece of chalk breaks.

**Answer Key**

1. A) Velocity is increasing, so the car is accelerating.



3. A) gravity.

4. C) amplitude

5. B) 30°.

6. B) water

7. B) the ball

8. B) electricity

9. B) electrical

10. A) The effort force is decreased.

11. C) light is reflected off of the shirt.

12. B) only energy

13. A) How should the coil be moved in the magnetic field to make electricity?

14. D) The hot soup will lose heat and the ice water will gain heat.

15. C) candle burns.