

Name: _____

Date: _____

1.

Based on the following characteristics, classify the state of matter.

high energy
found in stars
consists of freely moving charged particles

- A. gas
 - B. solid
 - C. plasma
 - D. liquid
-

2. What is the negatively charged particle that flows through a circuit?

- A. electron
 - B. proton
 - C. neutron
 - D. ion
-

3. Water is

- A. a compound.
 - B. an element.
 - C. a solution.
 - D. a mixture.
-

4.

Two or more atoms, joined covalently, that act as a unit, are called a(n)

- A. ion.
 - B. atom.
 - C. mixture.
 - D. molecule.
-

5.

In general, metals are solid at room temperature, malleable, ductile, good conductors of heat and electricity, and react in acids to produce hydrogen gas. Which of the properties mentioned is a chemical property?

- A. ductile
 - B. malleable
 - C. good conductors
 - D. reacts with acids
-

6. 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.
-

7. Water that flows from behind a large dam can cause machines to produce electricity. What change takes place?

- A. Heat energy changes into mechanical energy.
 - B. Sound energy changes into electrical energy.
 - C. Chemical energy is used to produce electrical energy.
 - D. Mechanical energy is used to produce electrical energy.
-

8. Suppose you had four spoons the same size and shape made out of glass, plastic, steel, and wood. Which spoon handle would get hot the quickest when the spoons are placed in a pan of hot water?

- A. the glass spoon
 - B. the plastic spoon
 - C. the steel spoon
 - D. the wooden spoon
-

9. The highest point of a wave is its

- A. crest.
 - B. breaker.
 - C. trough.
 - D. swell.
-

10. Which of the following is an example of kinetic energy?

- A. a child jumping rope
 - B. a swimmer ready to dive
 - C. a stuffed toy lying on a table
 - D. firewood stacked in a fireplace
-

11. In which state of matter are molecules in contact with each other but free to move around?

- A. solid
 - B. liquid
 - C. gas
 - D. plasma
-

12.

The speed of a sound wave depends MOSTLY on

- A. the amplitude of the wave.
 - B. the frequency of the wave.
 - C. the angle at which it approaches the listener.
 - D. the medium through which the wave travels.
-

13.

Green plants look "green" because they

- A. transmit green light.
 - B. reflect green wavelengths of the visible spectrum.
 - C. absorb green wavelengths of the visible spectrum.
 - D. reflect blue and yellow wavelengths of the visible spectrum.
-

14.

Sound waves are transmitted fastest through

- A. air.
 - B. liquids.
 - C. solids.
 - D. a vacuum.
-

15.

It was a cold, sunny day and the ground was covered with fresh snow. Maria wore her black sweatshirt outside to play in the snow. She knew that black would _____ light waves and help keep her warm.

- A. absorb
 - B. diffract
 - C. reflect
 - D. refract
-

16. What type of simple machine is used to pull a flag up to the top of a flagpole?

- A. screw
 - B. wheel and axle
 - C. inclined plane
 - D. pulley
-

17. On Earth, an astronaut has a mass of 140 kg. When the astronaut goes into space, she

- A. will have a mass of 140 kg, but will have less weight.
 - B. will have less mass and weight.
 - C. will have a mass of 140 kg, and have a weight of 140 kg.
 - D. will have less mass and a weight of 140 kg.
-

18. The distance between a wave's crest and its trough is known as its

- A. low tide measurement.
 - B. water depth.
 - C. wave height.
 - D. wave length.
-

19. A glass of water kept at room temperature long enough will become empty because

- A. water molecules slowly leak through the walls of the glass.
- B. water molecules move into the air as gas molecules.
- C. water left in a glass starts to boil and becomes a gas.
- D. water slowly combines with oxygen to become carbon dioxide.

20.

As the fire truck approached Mary, the pitch of the siren got higher. Once the fire truck passed and moved away, the siren's pitch got lower. This change in pitch is because of a change in the sound wave's

- A. amplitude.
 - B. concussion.
 - C. frequency.
 - D. reflection.
-

21. The lowest point of a wave is its

- A. trough.
 - B. breaker.
 - C. swell.
 - D. crest.
-

22. What is the process by which heat energy gets to Earth from the Sun?

- A. conduction
 - B. radiation
 - C. subduction
 - D. convection
-

23.

A circuit contains four light bulbs. One light bulb goes out but the other three stay lit. This must be a(n) _____ circuit.

- A. open
 - B. series
 - C. parallel
 - D. resistant
-

24. When a hair dryer is being used, one of the energy transformations that takes place is

- A. electrical to chemical.
 - B. electrical to mechanical.
 - C. mechanical to electrical.
 - D. chemical to electrical.
-

25. Which term refers to the rate of change of motion?

- A. acceleration
 - B. speed
 - C. momentum
 - D. velocity
-

26. What must happen to an object in order to accelerate it?

- A. A net force must be applied.
 - B. Some weight must be removed.
 - C. Its frictional coefficient must be reduced.
 - D. It must contain momentum.
-

27. A car stopped at the top of a ramp has

- A. heat energy.
 - B. potential energy.
 - C. kinetic energy.
 - D. mechanical energy.
-

28. All objects in the universe are attracted to each other by the force of

- A. effort.
 - B. friction.
 - C. gravity.
 - D. inertia.
-

29. As an astronaut travels from Earth to a space station orbiting Earth, what happens to her mass and weight?

- A. Her mass decreases, but her weight remains the same.
 - B. Her mass increases as her weight decreases.
 - C. Her mass remains the same, but her weight decreases.
 - D. Her mass decreases and her weight also decreases.
-

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

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

31. Which of these is **not** a form of energy?

- A. electrical
 - B. light
 - C. heat
 - D. friction
-

32.

A(n) _____ circuit has only one path for the current to take.

- A. open
 - B. parallel
 - C. resistant
 - D. series
-

33. Through which of the following materials does heat travel the fastest?

- A. glass
 - B. metal
 - C. plastic
 - D. wood
-

34. Which formulas represent compounds?

- A. O_2 , H_2O_2
 - B. CO_2 , H_2O
 - C. H_2 , CO_2
 - D. H_2 , O_2
-

35. Which of the following is a compound?

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

36. Which symbol represents carbon?

- A. Ca
 - B. N
 - C. K
 - D. C
-

37. Evidence of a chemical change would be a

- A. melting popsicle.
 - B. spinning top.
 - C. spilled bucket of water.
 - D. rusting car fender.
-

38. Moisture that collects on the outside of a cold glass results from the process of

- A. evaporation.
 - B. condensation.
 - C. sublimation.
 - D. vaporization.
-

39. 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.
-

40. Carbon dioxide is

- A. an element.
 - B. a compound.
 - C. a solution.
 - D. a mixture.
-

41. John has a mixture of salt, sand, and iron filings. To remove the iron filings from the mixture, John should

- A. run a magnet through the mixture.
 - B. put the mixture in water and stir it.
 - C. throw the mixture into the air and see which material falls first.
 - D. blow on it and keep what does not blow away.
-

42. A magnet will attract which of these objects?

- A. bar of soap
 - B. iron nail
 - C. plastic bottle cap
 - D. glass marble
-

43. When mud and water are combined, the result is

- A. a mixture.
 - B. a compound.
 - C. an element.
 - D. a molecule.
-

44. All metallic elements are

- A. powdery solids.
 - B. good thermal insulators.
 - C. good conductors of electricity.
 - D. easily melted into liquids.
-

45. All plant and animal life on Earth contains what element?

- A. sulfur
 - B. carbon
 - C. silicon
 - D. aluminum
-

46. When a gas forms a liquid, which process is taking place?

- A. freezing
 - B. condensation
 - C. boiling
 - D. evaporation
-

47. Which is an example of a chemical change?

- A. ice melting
 - B. salt crystals being ground to powder
 - C. water evaporating
 - D. wood burning
-

48. Which action would result in a chemical change?

- A. crumpling several sheets of paper
 - B. pounding a nail into a piece of wood
 - C. peeling and slicing a carrot
 - D. making blueberry muffins
-

49. The amount of matter in an object is called its

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

50. A chemical change for a piece of metal would be

- A. being bent in half.
 - B. getting cut into two pieces.
 - C. being painted.
 - D. getting rusty.
-

51. Putting sand and salt together makes

- A. a compound.
 - B. an element.
 - C. a mixture.
 - D. a solution.
-

52. On the periodic table, nitrogen is represented by N (atomic number 7). N is a chemical

- A. equation.
 - B. period.
 - C. symbol.
 - D. group (family).
-

53. All of the substances on the periodic table are classified as elements because they

- A. are pure substances.
 - B. are composed of atoms.
 - C. cannot be broken down into other substances.
 - D. cannot be dissolved in water or other liquids.
-

54.

Which of the following particles combine to form molecules?

- A. atoms
 - B. protons
 - C. electrons
 - D. compounds
-

55.

As you move across the periodic table from right to left within a period, the elements

- A. become less stable.
- B. become more reactive.
- C. change from gases to solids.
- D. change from metals to nonmetals.

Answer Key

1. C) plasma
2. A) electron
3. A) a compound.
4. D) molecule.
5. D) reacts with acids
6. D) The hot soup will lose heat and the ice water will gain heat.
7. D) Mechanical energy is used to produce electrical energy.
8. C) the steel spoon
9. A) crest.
10. A) a child jumping rope
11. B) liquid
12. D) the medium through which the wave travels.
13. B) reflect green wavelengths of the visible spectrum.
14. C) solids.
15. A) absorb
16. D) pulley
17. A) will have a mass of 140 kg, but will have less weight.
18. C) wave height.
19. B) water molecules move into the air as gas molecules.
20. C) frequency.
21. A) trough.
22. B) radiation
23. C) parallel
24. B) electrical to mechanical.
25. A) acceleration
26. A) A net force must be applied.

27. B) potential energy.
28. C) gravity.
29. C) Her mass remains the same, but her weight decreases.
30. A) gravity.
31. D) friction
32. D) series
33. B) metal
34. B) CO₂, H₂O
35. B) water
36. D) C
37. D) rusting car fender.
38. B) condensation.
39. C) candle burns.
40. B) a compound.
41. A) run a magnet through the mixture.
42. B) iron nail
43. A) a mixture.
44. C) good conductors of electricity.
45. B) carbon
46. B) condensation
47. D) wood burning
48. D) making blueberry muffins
49. C) mass.
50. D) getting rusty.
51. C) a mixture.
52. C) symbol.
53. C) cannot be broken down into other substances.
54. A) atoms

55. D) change from metals to nonmetals.