

THIRD PERIODICAL TEST IN SCIENCE 8

NAME: _____ **GR. & SEC.** _____ **SCORE:** _____

Directions: Read carefully the sentences below and identify what they refer to from the given choices below each. Write the letter of your answer directly in the blank.

- _____ 1. When you are observing a sample of matter you are focusing a particular characteristic. What term refers to the characteristics that describe a sample of matter?
A. color
B. mass
C. property
D. volume
- _____ 2. Which of the following given sets of samples are solids?
A. stone, nail, pen
B. ice, water, crayon
C. radio, car, gasoline
D. oxygen, stone, ice cream
- _____ 3. Which of the following is NOT true about the particles of solids, liquids, and gases?
A. Liquids have definite volume.
B. Gas particles are far from each other.
C. Solids have indefinite shape and volume.
D. Liquids take the shape of their containers.
- _____ 4. Which of the following statements is FALSE regarding the particle model of matter?
A. The particles of matter in solid attract each other.
B. The particles of matter in solid are vibrating in a fixed position.
C. The space in between the particles of matter in solid is filled with air.
D. The particles of matter in a gas are randomly moving in any direction.
- _____ 5. Which of the following states of matter allow an easy flow of particles?
A. Gas and liquid
B. Liquid and solid
C. Solid and gas
D. Solid, liquid and gas
- _____ 6. Which of the following has the strongest force of attraction between the particles?
A. gas
B. liquid
C. solid
D. vacuum
- _____ 7. Which BEST describes the particles of a solid?
A. completely unmoving
B. vibrating at a fixed position
C. have weak attractive force
D. have large spaces in between
- _____ 8. Which of the following states of matter has an indefinite shape and definite volume?
A. gas
B. liquid
C. solid
D. both a and b
- _____ 9. When you inflate a balloon with air, it takes the shape and volume of the container. Why do gases like air do NOT have definite shape and volume?
A. Because gases are free to move slowly.
B. Because gases have weak attractive forces.
C. Because gases do not have attractive forces.
D. Because gases have strong attractive forces.
- _____ 10. Which pair of states of matter has indefinite shape?
A. gas and solid
B. liquid and gas
C. solid and liquid
D. none of the above
- _____ 11. Which transformation process changes a solid state of matter to a gaseous state?
A. evaporation
B. freezing
C. melting
D. sublimation

- _____ 12. Which of the following processes changes a gaseous state of matter to a solid state?
A. deposition C. melting
B. evaporation D. sublimation
- _____ 13. Which transformation process changes a solid state of matter to a liquid state?
A. condensation C. freezing
B. evaporation D. melting
- _____ 14. What phase transformation occurs when clouds precipitate in the form of rain?
A. condensation C. melting
B. evaporation D. freezing
- _____ 15. What will happen to the kinetic energy of the particles of matter if the temperature will increase?
A. decrease C. remains the same
B. increase D. neither increase nor decrease
- _____ 16. What happens to the arrangement of particles of solid, liquid and gas as the temperature of particles decreases?
A. Particles are becoming closer together
B. Particles move farther apart from each other
C. There is no change in the arrangement, it stays the same.
D. It becomes disordered and then changes back to become ordered
- _____ 17. What conditions favor evaporation?
A. Increase of temperature and increase of kinetic energy.
B. Decrease of temperature and decrease of kinetic energy.
C. Increase of temperature and decrease of kinetic energy.
D. Decrease of temperature and increase of kinetic energy.
- _____ 18. Which situations undergo phase change?
A. cleaning of room C. melting of ice drop
B. opening of tin can D. chewing of bubble gum
- _____ 19. What phase change takes place as ice candy solidifies?
A. condensation C. freezing
B. evaporation D. sublimation
- _____ 20. Which of the following processes leads to the decrease in the movement of particles?
A. melting → evaporation C. condensation → freezing
B. freezing → sublimation D. deposition → sublimation
- _____ 21. Which of the following activities turns liquid into another state of matter?
A. boiling of water C. pouring water in a glass
B. stirring of lemon juice D. discarding used water in a sink
- _____ 22. What phase change occurs in drying wet clothes?
A. condensation C. melting
B. evaporation D. sublimation
- _____ 23. Which of the following phase changes needs a decrease in temperature and kinetic energy?
A. solid to gas C. solid to liquid
B. liquid to gas D. liquid to solid
- _____ 24. What happens to the arrangement of particles in mothballs once it is placed inside the cabinet for a month?
A. The particles are freezing.
B. The particles are coming closer.
C. The particles are getting heavier.
D. The particles are getting farther apart.

____ 25. What happens to temperature and kinetic energy of a substance when it undergoes change of state from liquid to solid?

- A. Both increases
- B. Both decreases
- C. Both remains the same
- D. One either increase or decrease

____ 26. Which of the following subatomic particles determine the identity of an atom?

- A. protons
- B. neutrons
- C. protons plus neutrons
- D. electrons plus protons

____ 27. An atom of an element is electrically neutral because the number of protons is equal to the number of _____.

- A. electrons
- B. neutrons
- C. nucleons
- D. nucleus

____ 28. Which particles have approximately the same size and mass?

- A. protons and neutrons
- B. electrons and protons
- C. neutrons and electrons
- D. None because all are different in terms of size and mass

____ 29. Which two particles would be attracted to each other?

- A. protons and neutrons
- B. electrons and protons
- C. electrons and neutrons
- D. All particles are attracted to each other.

____ 30. Which of the following statements are TRUE about the subatomic particles?

- I. The charge of electron is opposite to the charge of proton.
- II. Proton has approximately the same mass with neutron.
- III. Electrons and protons are located within the nucleus.
- IV. The mass of an atom is concentrated at the nucleus. Scoring Rubrics:

- A. I, II, and III
- B. I, II, and IV
- C. I, III, and IV
- D. I, II, III, and IV

____ 31. What was Thomson's atomic model called?

- A. Spherical Model
- B. Solar System Model
- C. Plum Pudding Model
- D. Model of the Atomic Theory

____ 32. Which of the following statements BEST describes the location of electrons in Rutherford's model of the atom?

- A. The electrons are inside the nucleus.
- B. The electrons are outside the nucleus.
- C. There are no electrons in the Rutherford Model.
- D. Electrons are both inside and outside of the nucleus.

____ 33. How do we call the protons and neutrons that are found together in the nucleus?

- A. nuclei
- B. nucleons
- C. atomic mass
- D. mass number

____ 34. What observations in the gold foil experiment made Rutherford conclude that atoms are mostly empty space?

- A. Some alpha particles were deflected at smaller angles.
- B. Most alpha particles passed through the gold foil undeflected.
- C. Few alpha particles deflected almost back towards the source.
- D. Very few particles were deflected from their path, indicating that the positive charge of the atom occupies very large space.

____ 35. What conclusion did Rutherford's gold foil experiment lead to?

- A. Atoms are indivisible.
- B. Neutrons are located in the nucleus.

- C. Atoms contain a positively charged nucleus.
D. Electrons move in definite energy levels called shells.
- ____ 36. Which of the following statements concerning subatomic particles is correct?
A. Three fundamental types exist, all of which are charged.
B. Three fundamental types exist, one of which is charged.
C. Three fundamental types exist, two of which are charged.
D. Three fundamental types exist, none of which are charged.
- ____ 37. One isotope of oxygen has the atomic number 8 and the mass number 18. An atom of this isotope contains _____.
A. 8 protons
B. 8 neutrons C. 9 neutrons D. 18 electrons
- ____ 38. Element A has a mass number of 100 while element B has an atomic number of 118. What will be the number of electrons of element B?
A. 59 B. 60 C. 118 D. 120
- ____ 39. How many protons, neutrons and electrons are in the neutral atom of Cl 17 35 ?
A. 17 protons, 15 neutrons and 17 electrons
B. 17 protons, 17 neutrons and 17 electrons
C. 17 protons, 17 neutrons and 18 electrons
D. 17 protons, 18 neutrons and 17 electrons
- ____ 40. Which of the following statements CORRECTLY describes atoms, ions and isotopes?
I. Neutral atom has equal number of protons, neutrons and electrons.
II. Atoms are the smallest particles of matter that retain the characteristics of an element.
III. Isotopes are atoms of the same element with unequal number of neutrons in the nucleus.
IV. Ions are atoms with unequal number of protons and electrons and are formed when an atom loses or gains electrons.
A. I, II and III C. I, III and IV
B. II, III and IV D. I, II, III and IV
- ____ 41. Which of the following paths was most likely to occur?
A. Path 1 C. Path 3
B. Path 2 D. Path 4
- ____ 42. Which of the following paths was least likely to occur?
A. Path 1 C. Path 3
B. Path 2 D. Path 4
- ____ 43. The charge on an alpha particle is positive. Based on this information, what must be the charge of the nucleus?
A. neutral C. negative
B. positive D. both positive and negative
- ____ 44. According to Rutherford's experiment, the atom is composed largely of _____.
A. empty space C. a charged nucleus
B. alpha particles D. cannot be determined
- ____ 45. Which term is used to the vertical columns of the periodic table?
A. group C. rows
B. line D. table
- ____ 46. What are Group 1 elements known as?
A. Alkali metals C. Representative elements

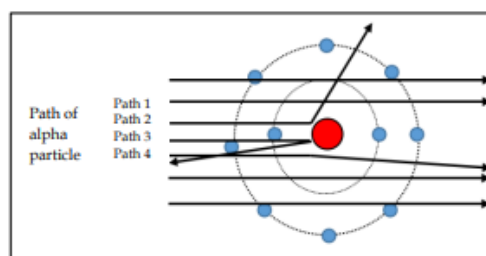


Figure 4. Rutherford's gold foil experiment representations
Illustrated by: Mary Lou A. Abamongga

- B. Transition elements D. Inner transition elements
 ____ 47. Which element is found in period 6, group 4?
 A. Cr B. Hf C. Pb D. Ti
 ____ 48. Elements in the same group have the same number of _____.
 A. protons C. electrons
 B. neutrons D. valence electrons
 ____ 49. In which period and group is Silver (Ag) located?
 A. Period 2, Group 1 C. Period 4, Group 2
 B. Period 3, Group 8 D. Period 5, Group 11
 ____ 50. How are elements arranged in the Periodic Table?
 A. increasing atomic radii C. decreasing atomic masses
 B. increasing atomic masses D. increasing atomic numbers
 ____ 51. Why do elements of the same group have similar chemical properties?
 A. They have different atomic masses.
 B. They have one electron in the outer shell.
 C. They have different number of electrons in the outermost shell.
 D. They have the same number of electrons in the outermost shell.
 ____ 52. In which arrangement of elements will reactivity generally become lesser?
 A. left to right C. top to bottom
 B. bottom to top D. both A and B

For questions, 53-55, use the list of elements in decreasing order of reactivity as shown in the box.

K, Na, Ca, Mg, Zn, Fe, H, Cu

- ____ 53. Which statement about the reactivity of these metals is correct?
 A. Zinc is less reactive than Iron.
 B. Sodium is less reactive than Calcium.
 C. Copper is more reactive than Potassium.
 D. Calcium is more reactive than Magnesium.
 ____ 54. Based on the reactivity series, which metal is the most reactive?
 A. Copper C. Sodium
 B. Lithium D. Zinc
 ____ 55. Which of the following sets of metals is arranged according to increasing reactivity?
 A. K, Mg, Na, Li C. Mg, Na, Li, K
 B. Mg, Li, Na, K D. Na, Li, Mg, K
 ____ 56. Which one of the following metals reacts most vigorously with cold water?
 A. Copper C. Magnesium
 B. Iron D. Sodium
 ____ 57. Which set of substances would allow rusting to take place the fastest?
 A. Iron, salt and water C. Steel, salt and weak acid
 B. Steel, salt and water D. Iron, salt and weak acid
 ____ 58. If the metal is more reactive, the metal in the compound replaces the less reactive metal.
 Based on this, which of the following statements is true?
 A. The less reactive metal repels the more reactive metal from its compound.
 B. The more reactive metal bonds with the less reactive metal from its compound.
 C. The more reactive metal pushes out or displaces the less reactive metal from its

compound.

D. The less reactive metal pushes out or displaces the more reactive metal from its compound.

_____ 59. Which metal is preferred to be used for water pipes? because it is unreactive?

A. Copper

C. Iron

B. Gold

D. Potassium

_____ 60. Sodium, Magnesium, and Aluminum belong to period 2.

Which of the following statements is correctly stated?

A. Aluminum repels Magnesium from its compound.

B. Sodium bonds with Aluminum from its compound.

C. Aluminum displaces Sodium from its compound.

D. Sodium pushes out Aluminum from its compound.