1- G11 Ch.1- Q1-W1- Revision Sheet

Multiple Choice
Identify the choice that best completes the statement or answers the question.

____ 1. A physical property of zinc metal is _____.
a. its color
b. whether it burns
c. how it reacts with nitrogen gas
d. whether it changes when placed into acid

____ 2. The best way to understand the submicroscopic world is with _____.
a. powerful microscopes
b. very accurate measuring devices
c. physical properties
d. models

____ 3. Which of the following materials cannot be broken down into a simpler form?
a. compound
b. solution
c. mixture
d. element

____ 4. An example of a pure substance in everyday life is _____.
a. pond water
b. sugar
c. a cola drink
d. concrete

____ 5. An example of a chemical change is _____.
a. melting
b. electrical conductivity
c. burning
d. density

____ 6. An example of a chemical formula is _____.
a. Na
b. 4.5 g/mL
c. H_2SO_4
d. d = 13.6 g/L

____ 7. The density of a material depends on _____.
a. its mass only
b. its volume only
c. its mass and volume
d. its weight

____ 8. In a list of the densities of common materials, the one density that might not seem reasonable is _____.
a. 35 885 g/mL
b. 0.45 g/mL
c. 2.54 g/mL
d. 1.000 g/mL

____ 9. The structure of matter refers to its _____.
a. behavior
b. composition
c. measurements
d. reactions

____ 10. Matter that is large enough to be seen is _____.
a. macroscopic
b. massive
c. a scientific model
d. submicroscopic

____ 11. Matter on the atomic level is _____.
a. macroscopic
b. massive
c. microscopic
d. submicroscopic

____ 12. Water and hydrogen peroxide are both composed of atoms of hydrogen and oxygen. The differences lie in the _____ arrangement of the atoms.
a. behavioral
b. composed
c. macroscopic
d. submicroscopic

____ 13. Which of the following is not an example of a model?
a. a floor lamp
b. a globe
c. a road map
d. a wind tunnel

____ 14. Classification based on measurements is said to be _____.
a. composed
b. observed
c. qualitative
d. quantitative

____ 15. The alloy brass is made from copper and zinc. Brass is a(n) _____.
a. compound
b. element
c. mixture
d. substance

____ 16. When ice melts and becomes liquid water, it has undergone a _____.
a. chemical change
b. chemical property
c. physical change
d. physical property

____ 17. Gold melts at 1064ºC. Melting point is a _____.
a. chemical change
b. chemical property
c. physical change
d. physical property

____ 18. A soft drink is an example of a(n) _____.
a. compound
b. element
c. heterogeneous mixture
d. homogeneous mixture

____ 19. In ocean water, salt is a(n) _____.
a. alloy
b. solute
c. solution
d. solvent

____ 20. Sugar, which is a substance, can be broken down into carbon, oxygen, and hydrogen. Sugar is a(n) _____.
a. compound
b. element
c. mixture
d. solution

____ 21. A 1-g sample of the compound hydrogen chloride was analyzed and found to be 2.74 percent hydrogen and 97.3 percent chlorine. What percentage of hydrogen is present in a 2-g sample of hydrogen chloride?
a. 1.37%
b. 2.74%
c. 5.48%
d. 97.3%

____ 22. How many atoms are present in one unit of sodium sulfate, Na_2SO_4?
a. 1
b. 2
c. 4
d. 7

____ 23. Which of the following liquids is most volatile?
a. alcohol
b. motor oil
c. cooking oil
d. water

____ 24. Which of the following has the greatest density?
a. a rock
b. oxygen
c. oil
d. ice

____ 25. A 26.0-g sample of a liquid was found to have a volume of 13.0 mL. What is the density of the liquid?
a. 0.500 g/mL
b. 2.00 g/mL
c. 39.0 g/mL
d. 338 g/mL

____ 26. Liquid chlorine bleach breaks down into other substances when exposed to light. The instability of bleach is a _____.
a. chemical change
b. chemical property
c. physical change
d. physical property

____ 27. Coal burns in a furnace, producing light and heat. This reaction is _____.
a. a physical change
b. endothermic
c. energetic
d. exothermic

____ 28. If 14 atoms of carbon react with 28 atoms of oxygen to form carbon dioxide, how many atoms are contained in the carbon dioxide that is produced?
a. 14
b. 21
c. 28
d. 42

Matching

Match each item with the correct statement below.

a. alloy	h. law of conservation of mass
b. aqueous solutions	i. mass
c. chemical property	j. matter
d. compound	k. physical change
e. energy	l. properties
f. exothermic	m. quantitative
g. formula	n. solute

____ 29. The type of change in which the identity of substances does not change.
____ 30. A chemical combination of two or more elements joined together in a fixed proportion.
____ 31. The fact that matter can be neither created nor destroyed in a chemical change.
____ 32. Solutions in which water is the solvent.
____ 33. The behavior of matter and its characteristics.
____ 34. A solid solution usually consisting of two or more metals.
____ 35. Any chemical reaction that gives off energy.
____ 36. The combination of chemical symbols that describes the composition of a chemical compound.
____ 37. The measure of the amount of matter that an object contains.
____ 38. An observation that makes use of measurement.
____ 39. Can be observed only when there is a change in composition of a substance.
____ 40. Anything that takes up space and has mass.
____ 41. The material that is dissolved in a solution.
____ 42. The capacity to do work.

Problem

Below are listed changes that can be observed in everyday life. Tell whether it is a physical change or a chemical change. Then explain the basis on which you made your decision.

A- physical Change
B- Chemical Change

43. an icicle melting
44. charcoal burning
45. magnetizing a piece of steel
46. iron rusting
47. rubbing alcohol evaporating from the skin

The lists give the density of selected substances. Answer the following questions.

	Substance	Density (g/mL)
A	water (at 4.0°C)	1.000
B	hydrogen	0.00090
C	carbon dioxide	XXX
D	gasoline	0.68
E	copper	8.89
F	silver	10.5
G	mercury	13.595
H	tungsten	19.3

48. Which of the substances listed has the greatest density?
49. Which of the substances listed has the lowest density?

50. If you were given a milliliter of copper and a milliliter of silver, which would weigh more?