

1. Define Element. Give an example.

simplest form of matter

2. Define Compound. Give an example

a substance made of 2 or more elements

3. Define Homogeneous mixture. Give an example

uniform composition. Salt water

4. Define Heterogeneous mixture. Give an example

nonuniform composition. pizza

5. Define Homogeneous mixture. Give an example

6. What are intensive properties? Give an example.

don't depend on amount. Density, boiling

7. What are extensive properties? Give an example.

depends on amount. mass, volume

8. An object has a mass of 35 grams and a volume of 7.0 mL. What is its density?

$5 \text{ g/mL}$

9. What is the charge and location of protons, neutrons, and electrons? How much do they weigh?

protons	+1	nucleus	1 amu
neutrons	0	nucleus	1 amu
electron	-1	outside nucleus	0 amu

10. Define atomic number

# of protons

11. How many protons does a Na atom have? How many electrons does a  $\text{Na}^{+1}$  ion have?

7

10

12. How many electrons does a  $\text{O}^{2-}$  ion have?

10

13. Define mass number

protons + neutrons

14. If you know the mass number and atomic number, how do you find the number of neutrons?

mass number - atomic number = # of neutrons

15. Define isotope

atoms of same element with different mass (# of neutrons)

16. Where do you find the atomic mass of an element?

on periodic table

17. What are the chemical symbols for the elements Sodium, Potassium, Calcium, Copper, Carbon, and Chlorine?

Cl

Na K Ca Cu C

18. What are the names of the elements Fe, S, Mg, and I

iron, sulfur, magnesium, iodine

19. What determines the location of an element on the Periodic Table?

atomic number

20. How did Rutherford describe the nucleus?

small dense central area of atom

21. What did J.J. Thomson discover?

electron

22. What is the correct name of the compound  $C_2Cl_4$ ?

dicarbon tetrachloride

23. What is the correct name of the compound  $Na_2S$ ?

sodium sulfide

24. What is the correct chemical formula for Magnesium Iodide?

$MgI_2$

25. What is the correct chemical formula for Trinitrogen Pentafluoride?

$N_3F_5$

26. Define polyatomic ion. Give an example.

charged group of atoms.  $NH_4^+$   $CO_3^{2-}$

27. Which state of matter has constant volume and constant shape?

solid

28. A certain substance has luster, conducts an electric current, and is malleable. What is this substance classified as?

metal

Questions 29-32 Are the following: (A) physical changes; or (B) chemical changes:

29. souring of milk. 30. freezing water. 31. burning paper. 32. melting glass.

33. grinding coal to a powder 34. iron rusting. 35. hammering copper into a sheet.

A

B

A

1. In what column on the periodic table are the alkali metals? **1**
2. In what column on the periodic table are the halogens? **17**
3. In what column on the periodic table are the noble gases? **18**
4. What columns on the periodic table are the transition metals? **3-12**
5. The elements in the periodic table are in order by what number? **atomic number**
6. The vertical columns on the periodic table are called: **groups**
7. The horizontal rows are called: **periods**
8. Elements with similar properties are placed in the same: **group**
9. What element does the 3<sup>rd</sup> period start with? **Na**
10. What element does the 4th period end with? **Kr**
11. How many electrons that can go in the first energy level (orbit) of an atom? **2**
12. How many electrons that can go in the second energy level (orbit) of an atom? **8**
13. What does the dot diagram of a nitrogen atom look like?  **$\cdot \ddot{N} \cdot$**
14. How many **valence** electrons are there in a Fluorine (F) atom? **7**
15. What is the correct name of the compound  $C_2Cl_4$ ?
16. What is the correct chemical formula for Trinitrogen Pentafluoride?
17. What is the correct name of the compound  $Na_2S$ ?
18. What is the correct chemical formula for Magnesium Iodide?
19. Which is the electron configuration of a Sulfur atom?  **$1s^2 2s^2 2p^4$**
20. Which is the electron configuration of a Sodium atom?  **$1s^2 2s^2 2p^6 3s^1$**

} on other  
answer  
sheet

