

## Revision Sheets

## Chapter 2 - Foundations of Chemistry

**Part A- Modified True/False**

Indicate whether the statement is true or false. If false, change the identified word or phrase to make the statement true.

1. A fruit salad is a homogeneous mixture. \_\_\_\_\_
2. Matter is anything that has mass and takes up space. \_\_\_\_\_
3. Matter that can vary in composition is a substance. \_\_\_\_\_
4. A(n) element is two or more atoms that are held together by chemical bonds and act as a unit. \_\_\_\_\_
5. The properties of a compound are usually the same as the properties of the elements from which it is made. \_\_\_\_\_
6. A homogeneous mixture is a mixture in which the substances are not evenly mixed. \_\_\_\_\_
7. Table salt is a compound of sodium and chlorine. \_\_\_\_\_
8. Density is an example of a size-dependent property. \_\_\_\_\_
9. Volume is an example of a size-dependent property. \_\_\_\_\_
10. The ability of a match to burn is an example of a chemical change. \_\_\_\_\_
11. A physical property is a characteristic of something that allows it to change to something new. \_\_\_\_\_
12. Matter is made up of motionless particles. \_\_\_\_\_
13. The ability to react with oxygen is a physical property. \_\_\_\_\_
14. In a physical change, the substance does not change its identity. \_\_\_\_\_

**Part B-Multiple Choice**

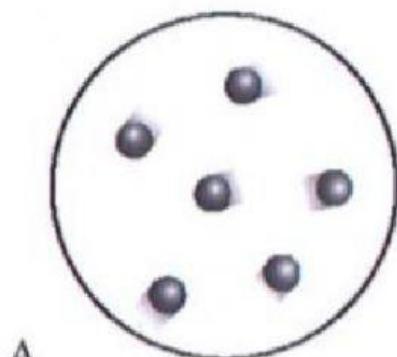
*Identify the choice that best completes the statement or answers the question.*

17. Which of the following is a pure substance?

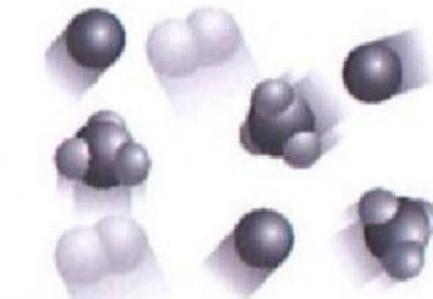
- a. soda
- b. trail mix

- c. granite
- d. gold

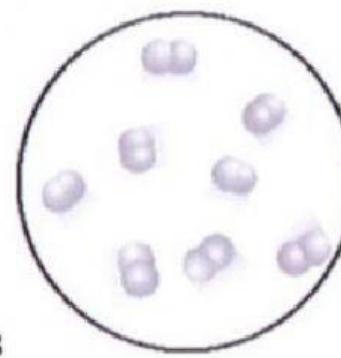
18. Which diagram shows a compound?



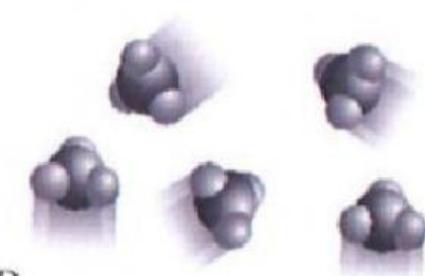
A



C



B

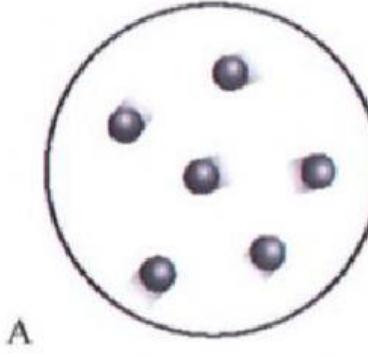


D

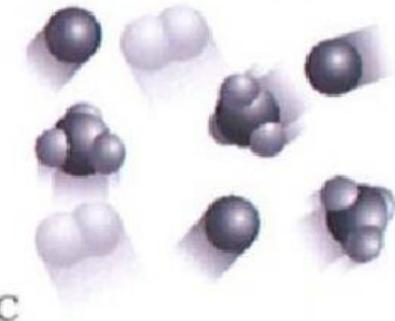
- a. A
- b. B

- c. C
- d. D

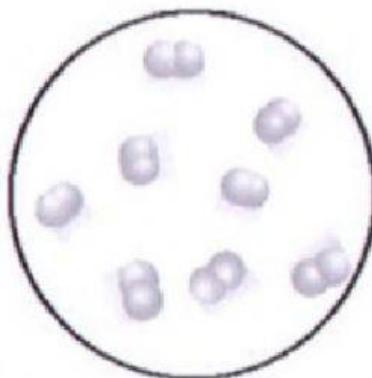
19. Which diagram shows individual atoms?



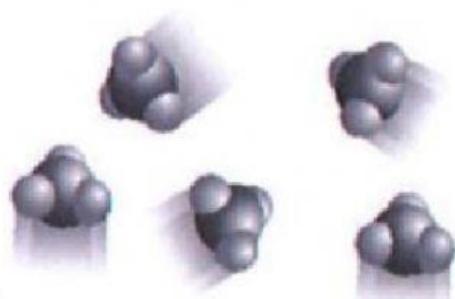
A



C



B



D

- a. A
- b. B

- c. C
- d. D

\_\_\_\_ 20. The following are examples of physical properties EXCEPT \_\_\_\_.

- a. density
- b. shape
- c. color
- d. ability to react with oxygen

\_\_\_\_ 21. A characteristic of matter that allows it to change to something new is a \_\_\_\_.

- a. physical property
- b. physical change
- c. chemical property
- d. chemical change

\_\_\_\_ 22. The following are examples of chemical properties EXCEPT \_\_\_\_.

- a. the ability to burn
- b. the ability to be crushed
- c. the ability to react with oxygen
- d. toxicity

\_\_\_\_ 23. All of the following are examples of physical changes EXCEPT \_\_\_\_.

- a. melting
- b. evaporating
- c. burning
- d. solidifying

\_\_\_\_ 24. Which of the following is an example of a chemical change?

- a. painting a house
- b. freezing water
- c. bending steel
- d. baking soda in water

\_\_\_\_ 25. Density depends on \_\_\_\_.

- a. weight
- b. mass
- c. mass and volume
- d. volume

\_\_\_\_ 26. Titanium reacts less with oxygen than most metals do. This is a \_\_\_\_.

- a. chemical property
- b. physical change
- c. chemical change
- d. physical property

27. The mass of the products of a chemical reaction \_\_\_\_\_ the mass of the reactants.

- a. is greater than
- b. is less than
- c. is the same as
- d. may be more or less than

28. Which formula listed below correctly finds density?

- a.  $D = m/V$
- b.  $D = V/m$
- c.  $D = g/V^3$
- d.  $D = g^3/V$

29. The rusting of iron is not a physical property because \_\_\_\_\_.

- a. it cannot be observed
- b. the identity of iron remains unchanged
- c. a new substance with new properties formed
- d. iron is magnetic

30. Which explains the law of conservation of mass?

- a. Mass cannot be created or destroyed in a reaction.
- b. The total mass before a chemical reaction is the same as the total mass after the reaction.
- c. Every reaction creates an equal amount of mass related to the amount of energy required for the reaction.
- d. The total amount of mass is equal to the volume of both chemicals in the reaction.

31. Photosynthesis is a chemical reaction which uses \_\_\_\_\_ as a form of energy.

- a. heat
- b. light
- c. iron
- d. gravity

### Part C- Matching

*Match each term with its correct description*

- a. element
- b. mixture
- c. substance
- d. compound
- e. matter

—    32. matter that can vary in composition

—    33. anything that has mass and takes up space

—    34. two or more elements chemically combined

—    35. consists of just one type of matter

—    36. it has a definite composition