

# 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

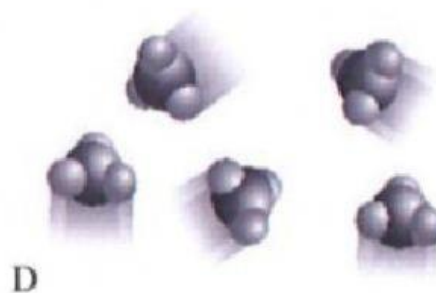
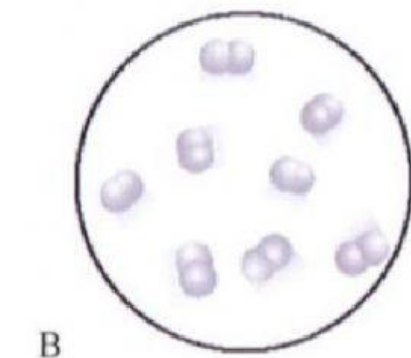
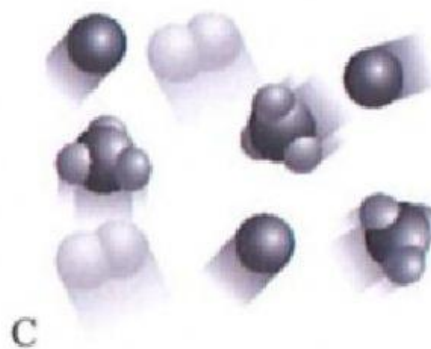
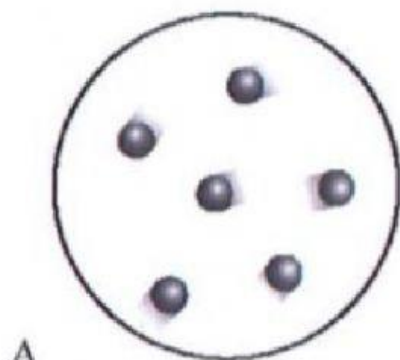
Identify the choice that best completes the statement or answers the question.

- \_\_\_\_\_ 15. \_\_\_\_\_ is another name for a homogeneous mixture.
  - a. Liquid
  - b. Solution
  - c. Substance
  - d. Suspension
- \_\_\_\_\_ 16. When two or more substances are combined so each substance can be separated by physical means, the result is a(n) \_\_\_\_\_.
  - a. chemical change
  - b. compound
  - c. element
  - d. mixture

17. Which of the following is a pure substance?

- a. soda
- b. trail mix
- c. granite
- d. gold

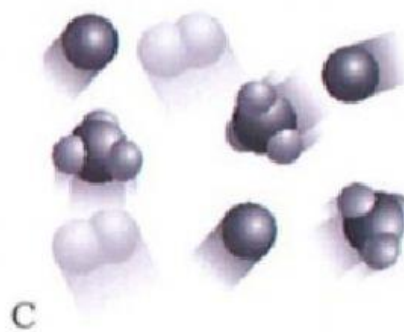
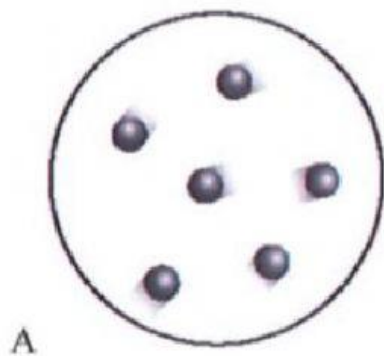
18. Which diagram shows a compound?

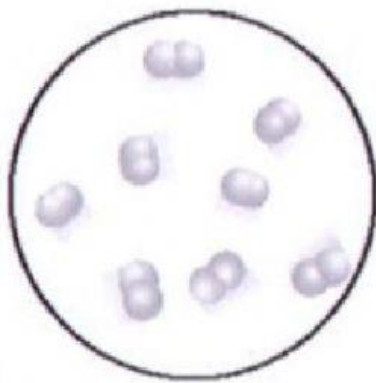


- a. A
- b. B

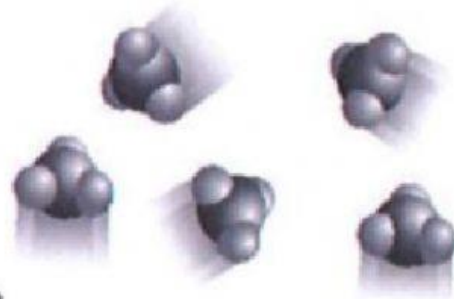
- c. C
- d. D

19. Which diagram shows individual atoms?





B



D

- a. A
- b. B

- c. C
- d. D

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- \_\_\_\_ 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