

Chapter 2- Foundations of Chemistry

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

- ### Part B-Multiple Choice

☐ 15. _____ is another name for a homogeneous mixture.

a. Liquid c. Substance

b. Solution d. Suspension

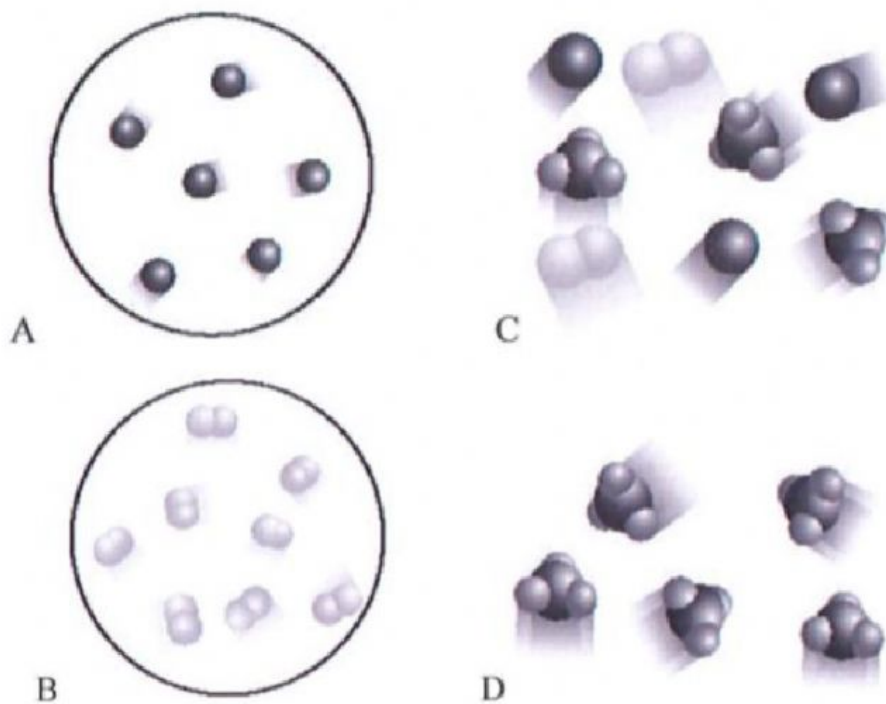
☐ 16. When two or more substances are combined so each substance can be separated by physical means, the result is a(n) _____.

a. chemical change c. element

b. compound d. mixture

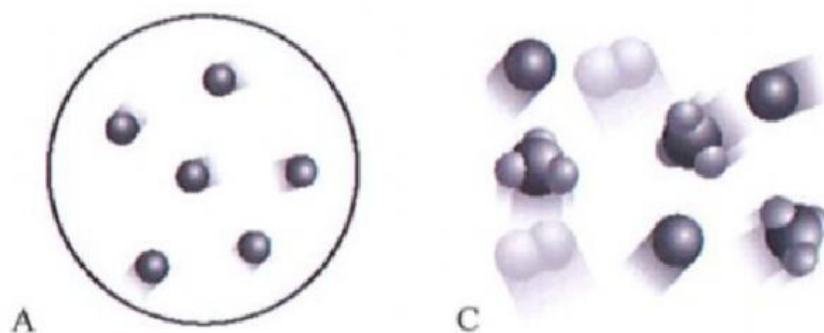
- _____ 17. Which of the following is a pure substance?
- | | |
|--------------|------------|
| a. soda | c. granite |
| b. trail mix | d. gold |

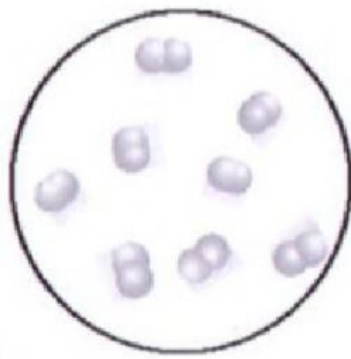
- _____ 18. Which diagram shows a compound?



- | | |
|------|------|
| a. A | c. C |
| b. B | d. D |

- _____ 19. Which diagram shows individual atoms?





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