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

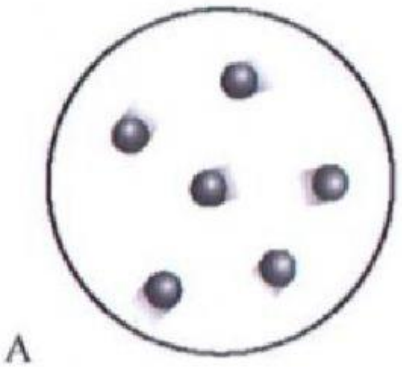
____ 16. When two or more substances are combined so each substance can be separated by physical means, the result is a(n)____.

a. chemical change
b. compound
c. element
d. mixture

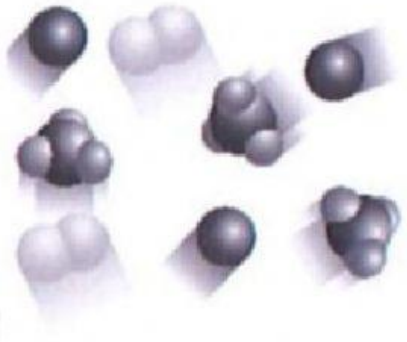
____ 17. Which of the following is a pure substance?

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

____ 18. *Which diagram shows a compound?*



A



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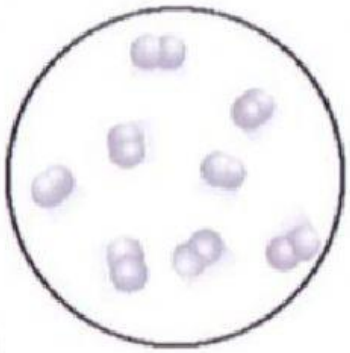

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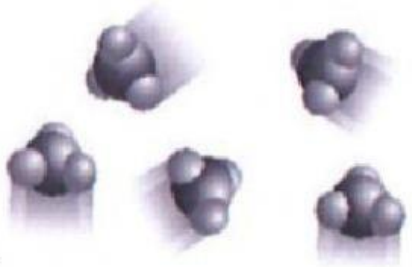
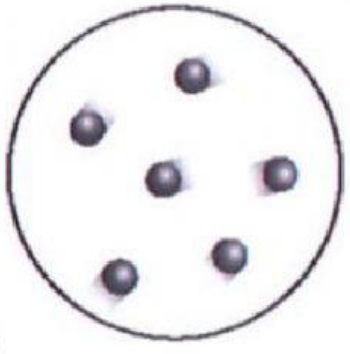


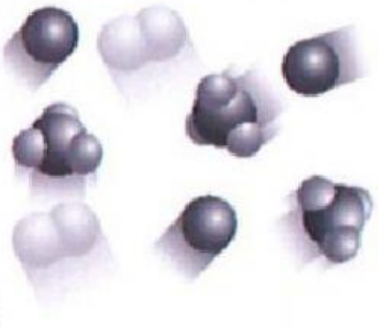
D

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

____ 19. *Which diagram shows individual atoms?*



A



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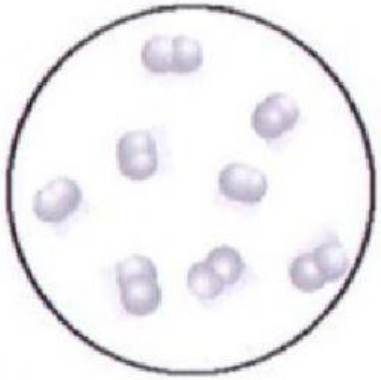

B

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