

- _____ 12. Which of the following is a heterogeneous mixture?
- a. air
 - b. salt water
 - c. steel
 - d. soil
- _____ 13. Which of the following is a chemical property?
- a. color
 - b. hardness
 - c. freezing point
 - d. ability to react with oxygen
- _____ 14. Which of the following does NOT indicate that a chemical change may have taken place?
- a. fracture formation
 - b. gas production
 - c. precipitate formation
 - d. energy transfer
- _____ 15. Which of the following is a heterogeneous mixture?
- a. vinegar in water
 - b. milk
 - c. oil and vinegar
 - d. air
- _____ 16. Which of the following is a physical change?
- a. corrosion
 - b. explosion
 - c. evaporation
 - d. rotting of food
- _____ 17. Which of the following is true about homogeneous mixtures?
- a. They are known as solutions.
 - b. They consist of two or more phases.
 - c. They have compositions that never vary.
 - d. They are always liquids.
- _____ 18. Which of the following is true for all chemical reactions?
- a. The total mass of the reactants increases.
 - b. The total mass of the products is greater than the total mass of the reactants.
 - c. The total mass of the products is less than the total mass of the reactants.
 - d. The total mass of the reactants equals the total mass of the products.
- _____ 19. What happens to matter during a chemical reaction?
- a. Matter is neither destroyed or created.
 - b. Some matter is destroyed.
 - c. Some matter is created.
 - d. Some matter is destroyed and some is created.
- _____ 20. Which of the following is a homogeneous mixture?
- a. salt water
 - b. beef stew
 - c. sand and water
 - d. soil
- _____ 21. Which of the following are considered physical properties of a substance?
- a. color and odor
 - b. melting and boiling points
 - c. malleability and hardness
 - d. all of the above
- _____ 22. A substance that can be separated into two or more substances only by a chemical change is a(n) ____.
- a. solution
 - b. element
 - c. mixture
 - d. compound
- _____ 23. Which state of matter is characterized by having a definite shape and a definite volume?
- a. gas
 - b. liquid
 - c. solid
 - d. all of the above
- _____ 24. An example of a homogeneous mixture is ____.
- a. water
 - b. stainless steel
 - c. noodle soup
 - d. oxygen

- _____ 25. What is the density of an object having a mass of 8.0 g and a volume of 25.0 cm³?
- a. 0.32 g/cm³
 - b. 2.0 g/cm³
 - c. 3.1 g/cm³
 - d. 200 g/cm³
- _____ 26. Which of the following materials is a substance?
- a. air
 - b. gasoline
 - c. stainless steel
 - d. silver
- _____ 27. Which of the following items is NOT a compound?
- a. baking soda
 - b. salad dressing
 - c. sucrose
 - d. table salt
- _____ 28. In the chemical reaction in which sucrose is heated and decomposes to form carbon dioxide and water, which of the following is a reactant?
- a. sucrose
 - b. carbon dioxide
 - c. water
 - d. heat
- _____ 29. An example of an extensive property of matter is _____.
- a. temperature
 - b. pressure
 - c. mass
 - d. hardness
- _____ 30. What is one difference between a mixture and a compound?
- a. A compound consists of more than one phase.
 - b. A compound can only be separated into its components by chemical means.
 - c. A mixture can only be separated into its components by chemical means.
 - d. A mixture must be uniform in composition.