**CH 7 MC**

**Multiple Choice**

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

\_\_\_\_ 1. Which of the following is NOT part of an atom?

|  |  |  |  |
| --- | --- | --- | --- |
| a. | proton | c. | positron |
| b. | neutron | d. | electron |

\_\_\_\_ 2. All atoms have the same number of \_\_\_\_\_.

|  |  |  |  |
| --- | --- | --- | --- |
| a. | electrons | c. | protons |
| b. | neutrons | d. | None of the above. |

\_\_\_\_ 3. Approximately \_\_\_\_\_ atoms can fit across a human hair.

|  |  |  |  |
| --- | --- | --- | --- |
| a. | 1 million | c. | 10,000 |
| b. | 100,000 | d. | 1,000 |

\_\_\_\_ 4. Which of the following is NOT matter?

|  |  |  |  |
| --- | --- | --- | --- |
| a. | air | c. | sound |
| b. | rocks | d. | water |

\_\_\_\_ 5. Which of the following is NOT matter?

|  |  |  |  |
| --- | --- | --- | --- |
| a. | force | c. | sunlight |
| b. | moon | d. | grass |

\_\_\_\_ 6. Which of the following is considered a building block of matter?

|  |  |  |  |
| --- | --- | --- | --- |
| a. | light wave | c. | drop of water |
| b. | atom | d. | pebble |

\_\_\_\_ 7. Which of the following is NOT an aspect of the state of matter that can be used to separate mixtures?

|  |  |
| --- | --- |
| a. | size independent |
| b. | whether something is a solid, liquid or a gas |
| c. | the ability of one substance to dissolve in another |
| d. | A liquid can be poured off a solid. |

\_\_\_\_ 8. Which of the following is NOT an aspect of density that can be used to separate mixtures?

|  |  |
| --- | --- |
| a. | size independent |
| b. | attractive force |
| c. | amount of mass per unit of volume |
| d. | Objects with greater density sink in objects with less density. |

\_\_\_\_ 9. Which of the following methods to separate mixtures is NOT an aspect of solubility?

|  |  |
| --- | --- |
| a. | size of the matter |
| b. | the ability of one substance to dissolve in another |
| c. | the inability of one substance to dissolve in another |
| d. | Each part of a mixture will boil or melt at a different temperature. |

\_\_\_\_ 10. A sample of water has a mass of 193 g. Salt is added to the water, and the final solution weighs 238 g. How much salt was added?

|  |  |  |  |
| --- | --- | --- | --- |
| a. | 138 g | c. | 431 g |
| b. | 45 g | d. | not enough information |

\_\_\_\_ 11. A cup of orange juice weighs 250 g. Three cubes of ice weigh 10 g each. How much does the cup of orange juice weigh after the ice is added?

|  |  |  |  |
| --- | --- | --- | --- |
| a. | 260 g | c. | 280 g |
| b. | 240 g | d. | Not enough information. |

\_\_\_\_ 12. Solution A has a mass of \_\_\_\_\_ g. Solution B has a mass of 60 g. When they are mixed, the total mass is 120 g. Find the mass of Solution A.

|  |  |  |  |
| --- | --- | --- | --- |
| a. | 60 g | c. | 100 g |
| b. | 180 g | d. | not enough information |

\_\_\_\_ 13. When atoms rearrange and bond into new substances, the process is called a \_\_\_\_\_.

|  |  |  |  |
| --- | --- | --- | --- |
| a. | physical change | c. | solution |
| b. | mixture | d. | reaction |

\_\_\_\_ 14. In a chemical equation, the formulas to the left of the arrow represent the \_\_\_\_\_.

|  |  |  |  |
| --- | --- | --- | --- |
| a. | reactants | c. | mixture |
| b. | products | d. | solution |

\_\_\_\_ 15. In a chemical equation, the formulas to the right of the arrow represent the \_\_\_\_\_.

|  |  |  |  |
| --- | --- | --- | --- |
| a. | reactants | c. | mixture |
| b. | products | d. | solution |

\_\_\_\_ 16. Which of the following is NOT a factor that affects the rate of a chemical reaction?

|  |  |  |  |
| --- | --- | --- | --- |
| a. | concentration | c. | surface area |
| b. | pressure | d. | temperature |

\_\_\_\_ 17. The amount of substance in a certain volume is the \_\_\_\_\_.

|  |  |  |  |
| --- | --- | --- | --- |
| a. | concentration | c. | surface area |
| b. | pressure | d. | temperature |

\_\_\_\_ 18. You can speed up a reaction if you break the solid reactant up into smaller pieces. Which factor does this describe?

|  |  |  |  |
| --- | --- | --- | --- |
| a. | concentration | c. | surface area |
| b. | pressure | d. | temperature |

\_\_\_\_ 19. The shape of an apple is a \_\_\_\_\_.

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

\_\_\_\_ 20. When a log burns in a fire, \_\_\_\_\_.

|  |  |  |  |
| --- | --- | --- | --- |
| a. | a physical change has occurred | c. | mass is lost |
| b. | mass is gained | d. | new substances are formed |

\_\_\_\_ 21. \_\_\_\_\_ is another name for a homogeneous mixture.

|  |  |  |  |
| --- | --- | --- | --- |
| a. | Liquid | c. | Substance |
| b. | Solution | d. | Suspension |

\_\_\_\_ 22. 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 |

\_\_\_\_ 23. \_\_\_\_\_ is NOT a homogeneous mixture.

|  |  |  |  |
| --- | --- | --- | --- |
| a. | Permanent-press fabric | c. | Vinegar |
| b. | Glue | d. | Gelatin |

\_\_\_\_ 24. The measurement of an object's mass is a \_\_\_\_\_.

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

\_\_\_\_ 25. The ability of an apple to change color when exposed to air is a \_\_\_\_\_.

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

\_\_\_\_ 26. The ability of a pond to freeze over in winter is a \_\_\_\_\_.

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

\_\_\_\_ 27. Which of the following is NOT a possible sign of a chemical change?

|  |  |  |  |
| --- | --- | --- | --- |
| a. | a change in state | c. | the release of a gas |
| b. | a change in color | d. | the release of energy |

\_\_\_\_ 28. When a newspaper is left in direct sunlight for a few days, the paper begins to turn yellow. The yellow color is evidence of a \_\_\_\_\_.

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

\_\_\_\_ 29. Three examples of physical change are \_\_\_\_\_.

|  |  |
| --- | --- |
| a. | boiling water, a nail rusting, a melting candle |
| b. | a pond freezing, breaking glass, a burning candle |
| c. | melting ice, mowing the lawn, carving a statue |
| d. | applying lipstick, making lemonade, baking bread |

\_\_\_\_ 30. When a chunk of dry ice is at room temperature, a cloud of carbon dioxide vapor forms. The carbon dioxide is changing from a \_\_\_\_\_.

|  |  |  |  |
| --- | --- | --- | --- |
| a. | solid to a liquid | c. | liquid to plasma |
| b. | solid to a gas | d. | liquid to a gas |

**Matching**

*Match the reactants with the correct products. Make sure the elements are balanced.*

|  |  |
| --- | --- |
| a. | 4Al + 3O2 |
| b. | 2C2H6 + 7O2 |
| c. | CO2 + 4H2 |

\_\_\_\_ 1. CH4 + 2H2O

\_\_\_\_ 2. 2Al2O3

*Match each term with the correct definitions below.*

|  |  |  |  |
| --- | --- | --- | --- |
| a. | element | c. | substance |
| b. | matter | d. | compound |

\_\_\_\_ 3. has mass, takes up space

\_\_\_\_ 4. two or more elements combined

\_\_\_\_ 5. all atoms the same

\_\_\_\_ 6. composition definite

*Match the type of property with the example.*

|  |  |  |  |
| --- | --- | --- | --- |
| a. | physical property | b. | chemical property |

\_\_\_\_ 7. a box measures 4 cm by 3 cm by 8 cm

\_\_\_\_ 8. the liquid burned easily

\_\_\_\_ 9. the muffins baked for 20 minutes until done

\_\_\_\_ 10. the dessert tasted rich and chocolaty