

Homework 2

Multiple Choice

Identify the choice that best completes the statement or answers the question. Please show all work and or explain why your answer is correct.

- _____ 1. In a chemical reaction, matter is neither created nor destroyed. Which law does this refer to?
- Law of Definite Proportions
 - Law of the Conservation of Mass
 - Law of Modern Atomic Theory
 - Law of Multiple Proportions
 - First Law of Thermodynamics
- _____ 2. Which of the following elements is a metal?
- Sb
 - O
 - Br
 - Ag
 - He
- _____ 3. Which of the following elements is a metalloid?
- As
 - O
 - I
 - Co
 - Xe
- _____ 4. Which of the following elements is a noble gas?
- As
 - C
 - F
 - Co
 - He
- _____ 5. Which of the following elements is a halogen?
- Po
 - S
 - I
 - Sn
 - Kr

- _____ 6. Which of the following elements is a nonmetal?
- Pu
 - C
 - Br
 - K
 - Be
- _____ 7. Which of the following elements is an alkali metal?
- U
 - C
 - F
 - K
 - Ca
- _____ 8. Which of the following elements is an alkaline earth metal?
- La
 - P
 - I
 - Rb
 - Ba
- _____ 9. Which of the following elements is a transition metal?
- Tc
 - P
 - F
 - Cs
 - Ca
- _____ 10. Molecules can be described as
- mixtures of two or more pure substances.
 - mixtures of two or more elements that has a specific ratio between components.
 - two or more atoms chemically joined together.
 - heterogeneous mixtures.
 - homogeneous mixtures.
- _____ 11. Identify a liquid.
- definite volume and definite shape
 - definite volume and no definite shape
 - definite shape and no definite volume
 - no definite shape and no definite volume
- _____ 12. Identify a solid.
- definite volume and definite shape
 - definite volume and no definite shape
 - definite shape and no definite volume
 - no definite shape and no definite volume

- _____ 13. Identify a gas.
- definite volume and definite shape
 - definite volume and no definite shape
 - definite shape and no definite volume
 - no definite shape and no definite volume
- _____ 14. A substance that can't be chemically broken down into simpler substances is
- a homogeneous mixture.
 - an element.
 - a heterogeneous mixture.
 - a compound.
 - an electron.
- _____ 15. A substance composed of two or more elements in a fixed, definite proportion is
- a homogeneous mixture.
 - a heterogeneous mixture.
 - a compound.
 - a solution.
 - an alloy.
- _____ 16. Decanting is
- a process in which the more volatile liquid is boiled off.
 - dissolving a solid into a liquid.
 - separating a solid from a liquid by pouring off the liquid.
 - pouring a mixture through a filter paper to separate the solid from the liquid.
 - heating a mixture of two solids to fuse them together.
- _____ 17. Distillation is
- a process in which the more volatile liquid is boiled off.
 - dissolving a solid into a liquid.
 - separating a solid from a liquid by pouring off the liquid.
 - pouring a mixture through a filter paper to separate the solid from the liquid.
 - heating a mixture of two solids to fuse them together.
- _____ 18. Filtration is
- a process in which the more volatile liquid is boiled off.
 - dissolving a solid into a liquid.
 - separating a solid from a liquid by pouring off the liquid.
 - pouring a mixture through a filter paper to separate the solid from the liquid.
 - heating a mixture of two solids to fuse them together.

- _____ 19. A physical change
- occurs when iron rusts.
 - occurs when sugar is heated into caramel.
 - occurs when glucose is converted into energy within your cells.
 - occurs when water is evaporated.
 - occurs when propane is burned for heat.
- _____ 20. A chemical change
- occurs when methane gas is burned.
 - occurs when paper is shredded.
 - occurs when water is vaporized.
 - occurs when salt is dissolved in water.
 - occurs when powdered lemonade is stirred into water.
- _____ 21. The outside temperature is 35°C . What is the temperature in K?
- -238 K
 - 308 K
 - 95 K
 - 31 K
 - 63 K
- _____ 22. Determine the density of an object that has a mass of 149.8 g and displaces 12.1 mL of water when placed in a graduated cylinder.
- 8.08 g/mL
 - 1.38 g/mL
 - 12.4 g/mL
 - 18.1 g/mL
 - 11.4 g/mL
- _____ 23. Identify a solid.
- gold
 - helium
 - water
 - neon
 - oxygen
- _____ 24. Identify a liquid.
- nitrogen
 - tin
 - potassium bromide
 - gasoline
 - sugar

Name: _____

ID: A

- _____ 25. Identify a gas.
- a. silver
 - b. mercury
 - c. hydrogen
 - d. iron
 - e. phosphorus
- _____ 26. Choose the pure substance from the list below.
- a. lemonade
 - b. salt
 - c. air
 - d. wine
 - e. juice
- _____ 27. Choose the element from the list below.
- a. sodium chloride
 - b. table salt
 - c. hydrogen peroxide
 - d. iron
 - e. rust
- _____ 28. Choose the compound from the list below.
- a. silver
 - b. methanol
 - c. helium
 - d. tin
 - e. sodium
- _____ 29. Choose the heterogeneous mixture from the list below.
- a. sports drink
 - b. fluorine gas
 - c. tea
 - d. lasagna
 - e. carbon (graphite)
- _____ 30. Choose the homogeneous mixture from the list below.
- a. cola
 - b. mud
 - c. ice water
 - d. a tree
 - e. salsa

Name: _____

ID: A

- _____ 31. Which of the following is an example of physical change?
- a. Dew forms on a blade of grass.
 - b. A Halloween light stick glows after shaking.
 - c. browning meat
 - d. An oxygen balloon explodes when contacted with a flame.
 - e. None of the above is a physical change.
- _____ 32. Which of the following is an example of a chemical change?
- a. dry ice sublimates
 - b. charcoal burning
 - c. ethanol evaporates
 - d. ice melting
 - e. All of the above are examples of chemical change.