

## GROUP QUIZ UNIT 02

NAMES

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### Answer Key:

- |           |           |           |
|-----------|-----------|-----------|
| 1. _____  | 25. _____ | 33. _____ |
| 2. _____  | 26. _____ | 34. _____ |
| 3. _____  | 27. _____ | 35. _____ |
| 4. _____  | 28. _____ | 36. _____ |
| 5. _____  | 29. _____ | 37. _____ |
| 6. _____  | 30. _____ | 38. _____ |
| 7. _____  | 31. _____ | 39. _____ |
| 8. _____  | 32. _____ |           |
| 9. _____  |           |           |
| 10. _____ | 40.       |           |
| 11. _____ |           |           |
| 12. _____ |           |           |
| 13. _____ |           |           |
| 14. _____ |           |           |
| 15. _____ |           |           |
| 16. _____ |           |           |
| 17. _____ |           |           |
| 18. _____ |           |           |
| 19. _____ | 41.       |           |
| 20. _____ |           |           |
| 21. _____ |           |           |
| 22. _____ |           |           |
| 23. _____ |           |           |
| 24. _____ |           |           |

## Classification of Matter – GROUP QUIZ

Multiple choice: Choose the BEST answer (2 pts. each)

- An experiment that determines the density of water is investigating \_\_\_\_\_.  
a) a chemical change    b) an extensive property    c) a chemical property    d) an intensive property
- A chemical property of oxygen is that it \_\_\_\_\_.  
a) is the most abundant element in Earth's crust    c) boils at  $-183^{\circ}\text{C}$   
b) combines with hydrogen to form water    d) has a density of 1.43 g/L
- A mixture of different gases is typically \_\_\_\_\_.  
a) heterogeneous    b) homogenous    c) a compound    d) an ore
- Which of the following is NOT a sign of a chemical change?  
a) unexpected color change    b) precipitate formation    c) gas formation    d) change in appearance
- Homogeneous matter \_\_\_\_\_.  
a) will always contain different phases    c) is not a solution  
b) is not uniform throughout    d) is evenly mixed
- When two or more kinds of matter retain their own characteristic properties when combined, that combined sample is called \_\_\_\_\_.  
a) an ore    b) a compound    c) a pure substance    d) a mixture
- If every sample of a mixture has exactly the same uniformity (looks the same throughout), it is \_\_\_\_\_.  
a) heterogeneous    b) a solution    c) a compound    d) a pure substance
- A substance with **fixed proportions** (definite proportions) of 11.2% hydrogen and 88.8% oxygen by mass must be a \_\_\_\_\_.  
a) a mixture    b) a solution    c) heterogeneous    d) compound
- To separate the vegetables from broth in vegetable soup, it may be strained. This indicates that vegetable soup is \_\_\_\_\_.  
a) homogeneous    b) a pure substance    c) a mixture    d) a solution
- Which of the following is a compound composed of three types of elements?  
a) blood, sweat and tears    b) sand, salt and water    c) sugar ( $\text{C}_6\text{H}_{12}\text{O}_6$ )    d) carbon dioxide ( $\text{CO}_2$ )
- Ice melting is considered a \_\_\_\_\_.  
a) chemical change    b) physical change    c) miracle    d) exothermic change
- A pure substance is a(n) \_\_\_\_\_.  
a) mixture or element    b) solution    c) element or chemical compound    d) element or solution

Identify the following as either a physical (P) or chemical (C) CHANGE (2 pts. each).

- |  |  |
|--|--|
| 13. ____ Building a box from cardboard | 16. ____ A loaf of bread is sliced in two      |
| 14. ____ Letting milk turn sour        | 17. ____ Platinum wire reacts with acid        |
| 15. ____ Allowing silver to tarnish    | 18. ____ Magnesium chloride dissolves in water |

Identify the following as either a physical (P) or chemical (C) PROPERTY (2 pts. each).

- |   |                                 |
|---|---------------------------------|
| 19. ____ Reactivity of francium metal         | 22. ____ Silver is very luster  |
| 20. ____ Hydrogen gas is highly combustible   | 23. ____ Conductivity of copper |
| 21. ____ Hydrogen peroxide is a good oxidizer | 24. ____ Sulfur has a bad odor  |

Identify the following physical property as either an extensive (E) or intensive (I) property (2 pts. each).

25. \_\_\_\_ Volume of the gas decreased

28. \_\_\_\_ Density

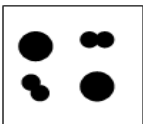
26. \_\_\_\_ Boiling point of magnesium

29. \_\_\_\_ The length of the gold bar was cut in half

27. \_\_\_\_ Mass

30. \_\_\_\_ Color of phosphorous is white

Identify the following as an element (E), compound (C), homogeneous mixture (HO), or heterogeneous mixture (HE) (2 pts. each). Some questions MAY HAVE MORE THAN ONE answer choices!

31.  \_\_\_\_\_

32. A solution \_\_\_\_\_

33. Nitrogen gas \_\_\_\_\_

34. Air \_\_\_\_\_

35. Fruit salad \_\_\_\_\_

36. Distilled (pure) water \_\_\_\_\_

37. Sugar \_\_\_\_\_

38. Sugar solution \_\_\_\_\_

39.  \_\_\_\_\_

40. Create a step-by-step procedure to separate a mixture of sugar, iron filings, and water using the techniques you learned in class. Be as specific as possible including what equipment you will use (10 points).

*Law of conservation of mass problem:*

41. If 13.5 g of lithium (Li) is added to 24.0 g of NaOH, and 17.5 g of sodium (Na) is produced, how much LiOH was produced as well?

