

Name: Key

Date: \_\_\_\_\_

CHAPTER

5

## Chapter 5 Quiz

### Part A: Matching

1. Match the term with the appropriate definition.

- |                                   |   |
|-----------------------------------|---|
| <u>g</u> A. evaporation           | (a) macroscopic changes only, particles stay the same |
| <u>d</u> B. ductile               | (b) makes frost                                       |
| <u>f</u> C. mass                  | (c) can be separated using physical properties        |
| <u>j</u> D. solid                 | (d) non-metals do not have this property              |
| <u>e</u> E. chemical change       | (e) new substances are produced                       |
| <u>b</u> F. deposition            | (f) density multiplied by volume                      |
| <u>h</u> G. boiling point         | (g) creates water vapour from liquid                  |
| <u>i</u> H. volume                | (h) same temperature as condensation point            |
| <u>g</u> I. physical change       | (i) space something occupies                          |
| <u>c</u> J. heterogeneous mixture | (j) state with least particle movement                |

### Part B: Completion

Complete each sentence.

- The difference between a "cool" solid and a "hot" solid is that the particles vibrate less in the cool solid.
- The difference between a solid and a liquid at the same temperature is that the particles of the liquid can move past each other.
- One difference between a hot liquid and a gas is that the particles of the gas do not attract each other.
- When the water vapour in clouds is cooled rapidly, it experiences deposition and forms snow.
- A substance dissolving is considered a physical property, while a substance's reaction with acid is considered a chemical property.
- Car bodies can have interesting shapes because metals are malleable, a physical property.
- Car bodies can also rust, which is called corrosion, a chemical property.

## Chapter 5 Quiz (continued)

### Part C: Multiple Choice

Circle the letter beside the answer that best completes the statement or answers the question.

9. Which of the following is not a physical property?  
(a) state (b) density (c) ductility (d) flammability
10. Which of the following geological processes are chemically created?  
(a) erosion of a riverbank (c) heaving of rock by ice formation  
(b) flow of molten lava (d) formation of limestone cave
11. The 787 is a new airliner. Much of it is made of carbon fibre panels. What do you think is the primary combination of properties that make this a good choice?  
(a) flammable and low density (c) low density and high strength  
(b) high density and malleable (d) high density and flexibility
12. Which property of plastic makes it useful as a handle for pots and pans?  
(a) is brittle (c) does not conduct electricity well  
(b) conducts heat poorly (d) has high density
13. Giselle buys a ring and wants to find what type of gold alloy it is. She measures its volume using a graduated cylinder and finds it is  $1.9 \text{ cm}^3$ . Then she measures its mass and discovers it to be 29.5 g. Which alloy is it likely to be? Use the table to answer the question.
- | Gold (k) | Density ( $\text{g/cm}^3$ ) |
|----------|-----------------------------|
| 10       | 11.4                        |
| 14       | 13.1                        |
| 18       | 15.5                        |
| 24       | 19.3                        |
- (a) 10k (b) 14k (c) 18k (d) 24k
14. A particle is vibrating, it is able to slip by other particles, and it moves downward. The particle must be a part of a  
(a) solid (b) liquid (c) plasma (d) gas
15. Snow and hail are formed by which two different processes?  
(a) deposition and solidification (c) condensation and evaporation  
(b) deposition and evaporation (d) melting and solidification
16. Davy Lamps were used by coalminers of the 19th century. They were called safety lamps because their flame was surrounded by a copper metal screen to prevent the flame from igniting any explosive coal gas. How did the lamp work?  
(a) The screen prevented any gas from getting to the flame.  
(b) The screen cooled the heat of the flame to a temperature that would not ignite the gas.  
(c) The gas could not ignite inside the lamp.  
(d) The gas was not flammable.

### Chapter 5 Quiz (continued)

#### Part D: Short Answer

Use complete sentences or diagrams to answer each question.

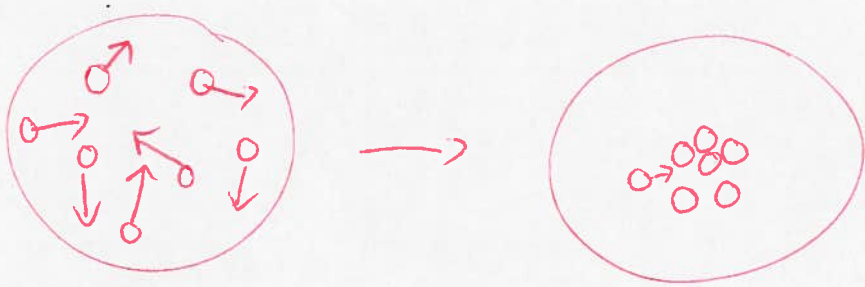
17. James accidentally spills two containers, mixing their contents. He checks and finds that one contained salt crystals, while the other contained powdered sand. Describe a method that he might use to separate the two mixtures without losing any of either mixture.

Put the mixture in warm water. Pour off the liquid & you'll have the sand. Evaporate the liquid & you'll be left with the salt.

18. Explain how pouring water on a fire puts out the fire in more than one way.

Water cools fire and also turns into steam - steam is denser than oxygen so displaces O<sub>2</sub> from flames.

19. Using diagrams, describe what happens to a gas as it is rapidly cooled to directly form a crystalline solid such as frost.



20. Describe the properties of diamonds that make them so valuable as

(a) gemstones

high internal reflection, hardness

(b) industrial cutting stones

hardness

