Name:		Date:	HURBAN
			SCHOOL
Chomistry ~ Ms Hart	Class	Anions or Cations	FOR CRIMINAL

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Chemistry ~ *Ms. Hart* <u>Class:</u> Anions or Cations

2.16 Review for Unit 2 Matter Test!

Directions: create a "cheat sheet" for your exam on Friday. You will NOT be able to use that cheat sheet for the exam, but you should use it to take the practice test below. This practice test is shorter than the real test.

States of Matter

1. Which statement best describes the shape and volume of a metal cylinder at STP?

- a. It has a definite shape and no definite volume.
- b. It has no definite shape and a definite volume.
- c. It has no definite shape and no definite volume.
- d. It has a definite shape and a definite volume.

2. Draw a particle diagram that shows at least six molecules of vapor- $H_2O(g)$ in a box below:

3. Draw a particle diagram that shows at least six molecules of water (l) in a box below:

Physical and chemical properties/change

4. Which statement describes a chemical property of aluminum?

- a. Aluminum is malleable.
- b. Aluminum reacts with sulfuric acid.
- c. Aluminum conducts an electric current.
- d. Aluminum has a density of 2.698 g/cm3 at STP.
- 5. What are some examples of intensive properties?
- 6. Which statement describes a chemical property of the element magnesium?
- a. Magnesium is malleable.
- b. Magnesium conducts electricity.
- c. Magnesium reacts with an acid.
- d. Magnesium has a high boiling point.

Phase Change

7. [1 point] The heat energy required to change a unit mass of a solid into a liquid at constant temperature is called

- (1) heat of vaporization
- (2) heat of formation
- (3) heat of solution
- (4) heat of fusion

8. Sublimation is a phase change betw	een a	and a
1 0		

9. Fusion is a phase change between a ______ and a _____

10. Vaporization is a phase change between a ______ and a _____

11. What kind of phase change does a heating curve represent (from what state of matter to what state of matter)?

12. What kind of phase change does a cooling curve represent (from what state of matter to what state of matter)?

Heat Transfer

13. A person with a body temperature of 37°C holds an ice cube with a temperature of 0°C in a room where the air temperature is 20°C. The direction of heat flow is

- a. from the person to the ice, only
- b. from the person to the ice and air, and from the air to the ice
- c. from the ice to the person, only
- d. from the ice to the person and air, and from the air to the person

14. Heat always transfers from ______ to _____ mass doesn't matter

15. Which phase change is accompanied by the release of heat?

- a. $H2O(s) \rightarrow H2O(g)$
- b. $H_{2O}(s) \rightarrow H_{2O}()$
- c. $H_{2O}() \rightarrow H_{2O}(g)$
- d. $H_{2O}() \rightarrow H_{2O}(s)$

16. How many joules are required to completely vaporize 50.0 g of water at 100°C? [1 point for work shown, 1 point for correct answer, 1 point for correct significant figures]

17. A substance has a specific heat capacity of 2.0 J/g °C. How many joules are needed to raise the temperature of 20.0 g of this substance by 15°C? [1 point for work shown, 1 point for correct answer, 1 point for correct significant figures]

18. What is the total number of joules released with a 5.00-gram sample of water changes from liquid to solid at 0°C? [1 point for work shown, 1 point for correct answer, 1 point for correct significant figures]

Temperature

19. Which process increases the potential energy of the particles of a sample?

- a. condensation
- b. deposition
- c. solidification
- d. vaporization

20. Which temperature is equal to 120. K?

- a. −153°C
- b. –120.°C
- c. +293°C
- d. +393°C

21. Temperature is a measure of the ______ of the particles in a sample.

22. What is special about the units Kelvin?

Colligative Properties

23. Compared to pure water, an aqueous solution of calcium chloride has a

- a. higher boiling point and higher freezing point
- b. higher boiling point and lower freezing point
- c. lower boiling point and higher freezing point
- d. lower boiling point and lower freezing point