**Science 9 – Chemistry of Matter Test Review – Date: November 22, 2016 – DUE: Nov 23/16**

**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ TEST ON THURSDAY, NOV 24/16**

1. **Complete the following using the terms below:**

*WORD LIST:*

corrosive heat physical muddy water malleability

moon energy plasma rust density steel Earth Viscosity melting chemical

brass slower boiling salt/pepper Pepsi

1. This term describes when a solid can be bent into different shapes (such as aluminum foil). ANS: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of a substance (expressed in g/cm3) is not an example of a chemical property.
3. This type of material may cause metal containers or structural materials to become weak, leak, or collapse (such as bleach, battery acid, or hydrochloric acid).

ANS \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. When a substance (metal) reacts with oxygen to form \_\_\_\_\_\_\_\_ it is an example of corrosion.
2. The following are examples of a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ property: The ability of paper to burn or dynamite to explode.
3. The boiling point of water is one hundred degrees Celsius is an example of a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ property.
4. The temperatures, the \_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_ points, at which substance change state are characteristic physical properties (changing a solid to a liquid or changing a liquid to a vapor).
5. The atoms in solid steel are moving \_\_\_\_\_\_\_\_\_\_\_\_\_\_ than the atoms in liquid steel.
6. In order to make a liquid, like water, into a solid, we need to take away some \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
7. \_\_\_\_\_\_\_\_\_\_\_\_\_ is defined as how easily a liquid flows.
8. \_\_\_\_\_\_\_\_\_\_\_\_\_\_ is a mixture that is a combination of more than one type of particle.
9. A chemical change is a change that usually causes \_\_\_\_\_\_\_\_\_\_\_\_\_\_, sound, light, odor, fizzing/foaming, and color changes.
10. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is a state of matter which includes florescent and neon light, lightning, and the aurora borealis.
11. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is an example of a heterogeneous mixture.
12. Calculate the density of a substance with a mass of 16 g and a volume of 2 cm3.
13. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is an example of a suspension (a mixture where particles will settle out if left alone).
14. An alloy, such as \_\_\_\_\_\_\_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_\_\_\_\_\_\_, is a homogeneous mixture of one or more metals or non-metals.
15. A person’s weight on the \_\_\_\_\_\_\_\_\_\_\_\_\_ is less than a person’s weight on the \_\_\_\_\_\_\_\_\_\_\_\_.
16. **All of the following *statements are false* (see underlined word). Provide the proper term/word to replace the underlined work to make each statement true.**
17. Mass is anything that has matter and takes up density. ANS: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
18. Energy causes molecules to move slower and move further apart. ANS: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
19. Absolute zero can be achieved. ANS: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
20. An explosion is an example of a physical property of a substance. ANS: \_\_\_\_\_\_\_\_\_\_\_\_\_\_
21. Everything in the universe is made of density. ANS: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
22. If a solid is malleable, it can be hammered or bonded into different shapes.

ANS: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Viscosity describes the ability of a substance (or solute such as sugar) to dissolve in a solvent (such as water). ANS: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Oil is the most universal solvent. ANS: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Pepper is soluble in water. ANS: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. An example of a colloid is brass or steel. ANS: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. The thinner a liquid the more viscous it is. ANS: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
6. Crushing an aluminum can is an example of a chemical change. ANS: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
7. Salty water is an example of a heterogeneous mixture. ANS: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
8. **Short Answer – ANSWER ALL OF THE FOLLOWING ON YOUR OWN PAPER**
9. Indicate *how energy (temperature) affects the phases of matter* (examples from Bill Nye video or information learned in class).
10. (a) Give an example of a *physical property of gold*.

(b) Give an example of a *chemical property of gasoline*.

1. Indicate the *difference between a solute, a solvent, and a solution*. *Provide examples*.
2. What is the *difference between a homogeneous mixture and heterogeneous mixture*? Give an *example of each*.
3. What is the difference between *the mass of an object* and the *weight of an object*?
4. What is meant by *the polarity* of a substance? Give an example.