CHEMISTRY UNIT 1

PRACTICE EXAM

1. Which of the following particles are found in the nucleus of an atom?
   1. Neutron
   2. Proton
   3. Electron
   4. All of the above
   5. ‘a’ and ‘b’ only
2. There are approximately 7,100,000,000 (over 7 billion) human beings on the planet currently. In scientific notation, that is how many people?
   1. 710 x 107
   2. .71 x 1010
   3. 7.1 x 109
   4. 71 x 109
   5. 71 x 108
3. An element has 12 protons, 11 neutrons and 12 electrons. The atomic mass (in AMU) of that element is:
   1. 35
   2. 24
   3. 23
   4. 1
   5. None of the above
4. Indicators of a chemical reaction include all of the below **except**:
   1. Change of phase (solid, liquid, gas)
   2. Change in temperature
   3. Change of color
   4. Production of gas
   5. Production of a solid
5. In a chemical reaction, matter is not created nor destroyed. This statement is consistent with:
   1. The ideas of Democritus
   2. The law of conservation of matter
   3. The law of constant composition
   4. The findings of Bohr
   5. None of the above
6. Two atoms with the same number of protons but different numbers of neutrons are:
   1. Ions
   2. Orbitals
   3. Precipitates
   4. Isotopes
   5. Isomers
7. The number 0.0004907 has how many significant figures?
   1. 3
   2. 5
   3. 7
   4. 9
   5. None of the above
8. A submarine sandwich measured 14.0 inches in length. How many centimeters is this?
   1. 5.6
   2. 21
   3. 28
   4. 36
   5. None of the above
9. A sample of liquid has a volume of 43 ml and a mass of 30.53 g. What is the density of the liquid?
   1. .71 g/ml
   2. 1.41 g/ml
   3. 1312.79 g/ml
   4. 12.47 g/ml
   5. None of the above
10. Liquid water freezes at 0 °C at sea level. The change from liquid to solid is a \_\_\_\_\_\_\_\_\_\_ change.
    1. Chemical
    2. Physical
    3. All of the above
    4. ‘a’ and ‘b’ only
    5. Uuhhh, what was the question?
11. In the chemical change lab, the reddish solid the accumulated on the aluminum wire was:
    1. Na
    2. NO3
    3. Al
    4. Cu
    5. HCl
12. Bohr showed that electrons occupied certain \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, and each \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ has a different specific amount energy and a different distance from the nucleus.
    1. Nuclei / nucleus
    2. Protons / proton
    3. Orbitals / orbital
    4. Neutrons / neutron
    5. Gold foils / gold foil
13. Qualitative measurements are always measurements of amount of something, (i.e. they have numeric values) while quantitative measurements are statements about the presence or absence of something.
    1. True
    2. False
14. The element zuccinium has 75.53% of its atoms with an atomic mass of 34.9689 amu and 24.47% of its atoms have an atomic mass of 36.9659 amu. What is the average atomic mass of zuccinium? Show your work.
15. The density of lead is 11.34 g/cm3. The density of gold is 19.29 g/cm3. How much smaller would a 25 lb anchor be if it were gold compared to a 25 lb lead anchor?