NAME \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ MONDAY 23 MARCH 2020: PRACTICE

DIRECTIONS: Once you have completed the notes on pages 63 – 67, try these problems. Send me this answer sheet at digaetanot.wcsu.edu. Have it into me by Thursday, 26 March

1) You have a number of “laws” from our course. Two of these are; the Law of the Conservation of Mass,

 The Law of the Conservation of Energy. Based upon your reading of the notes, and/or the web, should you

 wish more information, use one of these laws in an explanation as to the origin of visible light.

2) Your notes, on page 67 refer you to a website explaining the colors of Autumn leaves:

 <https://www.compoundchem.com/2014/09/11/autumnleaves/>

 Last semester a student brought in a leaf which was bright red on the front, but a light silver/green on the

 back. He asked why was there a difference in color. My answer surrounded the class of compounds called

 anthocyanins. What did I explain to the student about the front and back of the leaf, and anthocyanins?

3)

* Which two of the following elements will undergo the *most* similar chemical reactions and why?

(Think valence electrons and review page 59 of your notes)

* Will the pair tend to lose or gain electrons, when reacted with oxygen? Defend your thinking

* Which of the elements will NOT react with another element and will NOT be found in a compound, occurring here on Earth? Defend your thinking.

|  |  |
| --- | --- |
| Atom/Element | Ground State Electron Configuration |
| Sodium | 2-8-1 |
| Carbon | 2-4 |
| Aluminum | 2-8-3 |
| Potassium | 2-8-8-1 |
| Chlorine | 2-8-7 |
| Neon | 2-8 |

4) If you access the WCSU Reference Tables link on the Note Packets tab at [www.scientiaestubique.com](http://www.scientiaestubique.com)

 you will find a Periodic Table which identifies elements as metals/semimetals/nonmetals/noble gases. It is

 the second page of that document, when you scroll down. Identify the following as being classified as;

 metal, nonmetal or noble gas:

 a) oxygen (O):

 b) calcium (Ca):

 c) sulfur (S)

 d) neon (Ne)

 e) nitrogen (N)

 f) carbon (C)

 g) titanium (Ti)

 f) magnesium (Mg)