SCH3U B-R and Nomenclature Quiz 2014 **/43 (+ 16)**
Answer all questions on foolscap
Answer Section

MULTIPLE CHOICE

1. ANS: E PTS: 1 REF: K/U OBJ: 1.3
   STA: MC1.01
2. ANS: E PTS: 1 REF: K/U OBJ: 1.3
   STA: MC1.01
3. ANS: D PTS: 1 REF: C OBJ: 2.5
   STA: MC2.05
4. ANS: A PTS: 1 REF: C OBJ: 2.5
   STA: MC2.05
5. ANS: C PTS: 1 REF: K/U OBJ: 2.1
   STA: MC1.03
6. ANS: B PTS: 1 REF: K/U OBJ: 2.3
   STA: MC1.03

SHORT ANSWER

7. ANS:
   - the ball on the steps is restricted to specific levels; it cannot sit between steps
   - the ball can only possess fixed amounts (quanta) of energy, specific to each step
   - In the B-R model, atoms possess specific quanta of energy at each energy level and cannot have a quantity of energy between the level

   PTS: 1 REF: I OBJ: 1.6 STA: MQ1.03
8. ANS:
   - analyzing the line spectrum of the sample will allow the scientist to compare it to the line spectra of known elements
   - from that information, the scientist can infer the identity of the element(s) in the gas

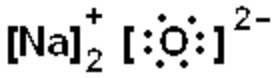
   PTS: 1 REF: MC OBJ: 1.4 STA: MQ2.01
9. ANS:
   Since Hydrogen has 1 valence electron it is usually placed in the alkali metal group. However, similar to the halogens, hydrogen also only needs one electron to have a full valence and shares other properties with the halogens (gas state, reacts with metals) .

   PTS: 1
10. ANS:
    x= 100 - 92.2-3.1= 4.7%
    Therefore, the percent abundance of silicon-29 is 4.7%

You can get the same percentage (4.7%) by a longer method for full marks as well.

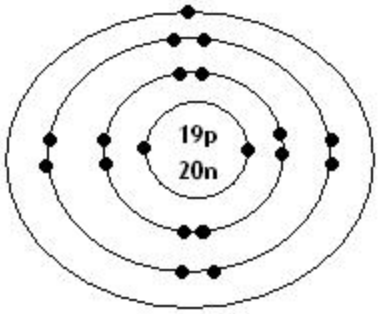
PTS: 1

11. ANS:
Sodium forms an ion with a 1+ charge and oxygen forms an ion with a 2– charge. This means that the smallest unit with a zero charge would require two sodium ions and one oxide ion.



PTS: 1 REF: K/U OBJ: 2.2 STA: MC2.04

12. ANS:



PTS: 1

13. ANS:

1. MgO - magnesium oxide	1. Gold (I) nitride - Au_3N
2. PbO_2 - lead (IV) oxide	2. Copper (II) chloride - $CuCl_2$
3. SO_3 - sulfur trioxide	3. Diphosphorus pentoxide - P_2O_5
4. $CoCl_3$ - cobalt (III) chloride	4. Zinc sulphate- $ZnSO_4$
5. $CuNO_3$ - copper (I) nitrate	5. Silver carbonate - Ag_2CO_3
6. NH_4OH - ammonium hydroxide	6. Cobalt (II) Phosphite - Co_3P_2
7. $Ca(HCO_3)_2$ - calcium bicarbonate OR calcium hydrogen carbonate	7. Calcium fluoride - CaF_2

PTS: 1

14. ANS:
a. 2+ b. 3- c. neutral d. Ca_3P_2

PTS: 1