**Oxford High School**

**Chemistry**

**Chapter 1-19 Cumulative Review**

1. What is the hydrogen ion concentration, [H+(aq)], in a 0.01 M HCl solution?
   1. 2 M
   2. 2x10-1M
   3. 1x10-2 M
   4. 2x10-2­ M
2. According to the Bronsted-Lowry theory, a base is any substance that
   1. donates a proton
   2. accepts a proton
   3. donates an electron pair
   4. accepts an electron pair
3. What is the pH of a 0.01 M solution of sodium hydroxide, NaOH?
   1. 12
   2. 2
   3. 10-2
   4. 10-12
4. What is the molarity of hydrochloric acid, HCl, if 30 cm3 of the acid neutralizes 24 cm3 of 0.10 M sodium hydroxide, NaOH?
   1. 0.080 M
   2. 0.10 M
   3. 0.12 M
   4. 0.24 M
5. What atom has the electron configuration of 1s22s22p63s23p64s23d6?

|  |  |  |
| --- | --- | --- |
| Type of Bond | Position of Bonding Electron | Conductivity of the Solid Compound |
| Ionic |  |  |
| Covalent |  |  |
| metallic |  |  |

7.

|  |  |  |
| --- | --- | --- |
| Phase Change | Name of Change | Increase of decrease in energy |
| Solid – liquid |  |  |
| Liquid – solid |  |  |
| Liquid – gas |  |  |
| Gas – liquid |  |  |
| Solid – gas |  |  |
| Gas - solid |  |  |

8.

Why is Ca less reactive than K?

Why is Cl more reactive than S?

9. A. Sketch a graph of energy vs. reaction time that shows an exothermic reaction (Hint: Ch 12 of your book)

B. Sketch a graph of energy vs. reaction time that show an endothermic reaction

10. Sketch the shapes of

A. an s orbital B. a p orbital C. one the d orbitals

11. What is the electron configuration for

A. Cl-

B. S2-

C. Na+

D. Which of these are isoelectronic? Why?