

Name: _____

Answer the following questions using your knowledge of chemistry and the NYS Chemistry Reference Tables.

- A** 1) The chemical properties of elements are periodic functions of their
A) atomic numbers C) oxidation states
 B) mass numbers D) ionic charges
- A** 2) Who was credited with creating the first Periodic Table that organized the elements according to atomic mass?
A) Dmitri Mendeleev C) Henry Moseley
 B) John Dalton D) Ernest Rutherford
- C** 3) Which element is in Group 2 and Period 7 of the Periodic Table?
 A) manganese B) radon **C) radium** D) magnesium
- D** 4) An atom of an element contains 20 protons, 20 neutrons, and 20 electrons. This element is
 A) a halogen C) an alkali metal
 B) a noble gas **D) an alkaline earth metal**
- D** 5) Alkali metals, alkaline earth metals, and halogens are found respectively in Groups
 A) 1, 2, and 14 B) 2, 13, and 17 C) 1, 2, and 18 **D) 1, 2, and 17**
- A** 6) In the Periodic Table of the Elements, *all* the elements within Group 16 have the same number of
A) valence electrons C) neutrons
 B) energy levels D) protons
- A** 7) The pair of elements with the *most* similar chemical properties are
A) Mg and Ca B) Mg and S C) S and Ar D) Ca and Br
- A** 8) As the atoms of the metals of Group 1 in the ground state are considered in order from top to bottom, the number of occupied principal energy levels
A) increases B) remains the same C) decreases
- B** 9) Which of the following statements *best* explains why Na is *not* found in nature?
 A) Na is very unreactive, and it forms unstable compounds.
B) Na is very reactive, and it forms stable compounds.
 C) Na is very reactive, and it forms unstable compounds.
 D) Na is very unreactive, and it forms stable compounds.
- A** 10) Which group of the Periodic Table is represented by the electron-dot symbol $\cdot \ddot{X} \cdot$?
A) 16 B) 17 C) 14 D) 15
- A** 11) An aqueous solution of XCl_2 contains colored ions. Element X is *most* likely
A) a transition metal C) an alkali metal
 B) an alkaline earth D) a halogen
- C** 12) Which halogen is a liquid at STP?
 A) I_2 B) F_2 **C) Br_2** D) Cl_2
- A** 13) Which of the following is the atomic number of an alkali metal?
A) 19 B) 31 C) 18 D) 20
- C** 14) Which gas is monatomic at STP?
 A) oxygen B) hydrogen **C) helium** D) chlorine