

Name: _____

Regents Chemistry Chapter 4.1 - 4.2 Worksheet

- 1) What are two properties of *most* nonmetals?
 - A) high ionization energy and good electrical conductivity
 - B) low ionization energy and good electrical conductivity
 - C) high ionization energy and poor electrical conductivity
 - D) low ionization energy and poor electrical conductivity

- 2) As the atoms of the Group 17 elements in the ground state are considered from top to bottom, each successive element has
 - A) the same number of valence electrons and similar chemical properties
 - B) the same number of valence electrons and identical chemical properties
 - C) an increasing number of valence electrons and identical chemical properties
 - D) an increasing number of valence electrons and similar chemical properties

- 3) In Period 3, from left to right in order, each successive element will
 - A) decrease in electronegativity
 - B) increase in number of protons
 - C) increase in metallic character
 - D) decrease in atomic mass

- 4) In which shell are the valence electrons of the elements in Period 2 found?
 - A) 1
 - B) 2
 - C) 3
 - D) 4

- 5) Germanium is classified as a
 - A) metal
 - B) noble gas
 - C) metalloid
 - D) nonmetal

- 6) Which pair of symbols represents a metalloid and a noble gas?
 - A) As and Ar
 - B) Si and Bi
 - C) Ne and Xe
 - D) Ge and Te

- 7) Antimony is classified as a
 - A) metalloid
 - B) noble gas
 - C) nonmetal
 - D) metal

- 8) Given: Samples of Na, Ar, As, Rb
 - (a) Which *two* of the given elements have the most similar chemical properties?
 - (b) Explain your answer to *part (a)* in terms of the *Periodic Table of the Elements*.

- 9) Which element is classified as a noble gas at STP?
 - A) nitrogen
 - B) oxygen
 - C) neon
 - D) hydrogen

- 10) The element in Period 4 and Group 1 of the Periodic Table would be classified as a
 - A) nonmetal
 - B) noble gas
 - C) metal
 - D) metalloid

- 11) On the present *Periodic Table of the Elements*, the elements are arranged according to increasing
 - A) atomic mass
 - B) number of neutrons
 - C) atomic number
 - D) number of oxidation states

- 12) Which element is malleable and conducts electricity?
A) iron B) phosphorus C) iodine D) sulfur
- 13) Which set of symbols represents atoms with valence electrons in the same electron shell?
A) Mn, Hg, Cu B) Ba, Br, Bi C) O, S, Te D) Sr, Sn, I
- 14) Which is a property of *most* nonmetallic solids?
A) malleability C) brittleness
B) high thermal conductivity D) high electrical conductivity
- 15) What is a property of most metals?
A) They are poor conductors of heat. C) They tend to lose electrons easily when bonding.
B) They are poor conductors of electricity. D) They tend to gain electrons easily when bonding.
- 16) Which element has chemical properties that are *most* similar to the chemical properties of sodium?
A) Mg B) Cl C) K D) Se
- 17) In which group of the Periodic Table do most of the elements exhibit *both* positive and negative oxidation states?
A) 7 B) 2 C) 17 D) 12