Name: _____ N.B. p. _____

Ch 5 Study Guide

Single/Science

1. There are approximately _____ elements known today (how many?).
2. _____is the most abundant in the universe.
3. _____ is the most abundant in the Earth's crust.
4. _____ & _____ are the most abundant in the human body.
5. List 3 subatomic particles. Also list their charges & describe where each may be found in the atom.

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6. List the name of an element & record its symbol, atomic #, & atomic mass as it appears on the periodic table. Also, describe how you could find its proton #, neutron #, & electron #.

7. Avogrado's number is also known as one _____ of an element. If you have the same amount of an element as its atomic mass on the periodic table, how many atoms would be found in your sample? _____

8. Isotopes are atoms of the same element but with different #s of _____.
   For example: Carbon 12 has _____ neutrons; Carbon 14 has _____ neutrons

9. List the oxidation #s of these elements as they form ions:
   The elements in family 1 form _____ ions. Do they gain or lose electrons? _____
   The elements in family 2 form _____ ions. Gain or lose electrons? _____
   The elements in family 13 form _____ ions. Gain or lose electrons? _____
   The elements in family 15 form _____ ions. Gain or lose electrons? _____
   The elements in family 16 form _____ ions. Gain or lose electrons? _____
   The elements in family 17 form _____ ions. Gain or lose electrons? _____
   The elements in family 18 don't form ions because they are _____.

10. For each group shown below, put an <u>"M" in front of it if it's a metal</u> & <u>"NM" if it's a nonmetal</u>. Also, describe the general location of each:

____reactive metals	____rare earth metals	____lanthanides
____transition metals	____halogens	____noble gases
____metalloids	____actinides	____radioactive

11. _____ or _____ consists of columns of related elements.
12. _____ consists of rows of elements.
13. List 3 properties of metals:

14. Identify each group of elements:
    - Can be called lanthanides--
    - Inert--
    - Often used to kill bacterial in water—
    - Name comes from a Greek word meaning “salt former”
    - Most reactive metals—
    - Most reactive nonmetals—
    - Nonreactive—
    - Properties of both metals & nonmetals—
    - Radioactive—
    - Alkali metals—
    - Alkaline Earth metals—

15. For the element Sulfur, record each:
    _____atomic # _____proton # _____ electron #
    _____atomic mass _____neutron # _____ oxidation #
16. For the element Nitrogen, record each:
    _____atomic # _____proton # _____ electron #
    _____atomic mass _____neutron # _____oxidation #
17. For the element Magnesium, record each:
    _____atomic # _____proton # _____ electron #
    _____atomic mass _____neutron # _____oxidation #
18. A chemist shows an element is an isotope when a _____ is written after its name or symbol.
19. If an atom has a positive oxidation #, it has _____ electrons (gained or lost?).
20. If an atom has a negative oxidation #, it has _____ electrons (gained or lost?).

***Bonus: State the # of moles each has and state the # of atoms you would find in each:**

	# Moles	# Atoms
a. 12 g of Carbon =		
b. 24 g of Carbon =		
c. 36 g of Carbon=		
d. 6 g of Carbon =		
e. 3 g of Carbon =		