

Name: _____

N.B. p. _____

Ch 5 Study Guide

Single/Science

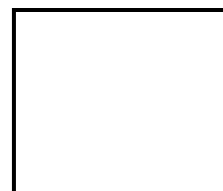
1. There are approximately _____ elements known today (how many?).
2. _____ is the most abundant in the universe.
3. _____ is the most abundant in the Earth's crust.
4. _____ & _____ are the most abundant in the human body.
5. List 3 subatomic particles. Also list their charges & describe where each 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. Avogadro'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 "M" in front of it if it's a metal & "NM" if it's a nonmetal.
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:

- | | <u># Moles</u> | <u># Atoms</u> |
|---------------------|----------------|----------------|
| 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 = | | |