

Name: KEY Ch. 2 Period: _____

Homework Chapter 2-Chemistry Comes Alive

Date: _____

Using your textbook, Chapter 2 pp25-59 and other outside sources. complete by _____

1. What is the chemical symbol for each of these biologically important elements?

O Oxygen

I Iodine

Ca Calcium

Mg Magnesium

C Carbon

H Hydrogen

Na Sodium

Cl Chloride

K Potassium

N Nitrogen

P Phosphorus

Fe Iron

2. From the list of elements in question 1, match the chemical symbol/s to the description below.

Ca 1. found as a salt in bones and teeth

C, H, O 2. Make up more than 96% of the mass of the cell

Fe 3. Essential for transport of oxygen in red blood cells

Ca, Na, K 4. Essential cations (+) in muscle contractions

I 5. Essential for production of thyroid hormones

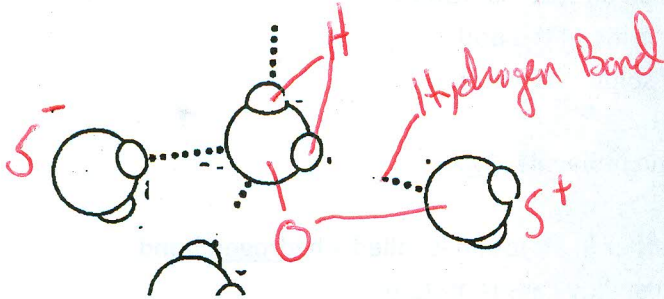
P 6. Present in nucleic acids (in addition to C, H, O, and N)

Cl 7. Most abundant negative ion in extracellular fluid.

What is the difference between polar and nonpolar molecules? (p34)

Polar has a charge on opposite sides of molecule Nonpolar has even charges

4. Refer to p37 to complete the diagram of five water molecules. Identify the Hydrogen atoms and the oxygen atoms. Identify the hydrogen bonds. Using the Greek letter sigma, σ , indicate which part of the molecule is slightly + and which slightly -.



5. Use the choices below to identify the substance described.

- A. Acid B. Base C. Buffers D. Salts

A 1. B 2. D 3. Substances that ionize in water; good electrolytes.

B 4. Proton (H^+) acceptors

A 5. Dissociate in water releasing H^+ and a negative ion other than OH^-

D 6. Substance dissociate in water to release ions other than H^+ and OH^-

D, C 7. Formed when an acid and a base are combined

C 8. substance that prevents rapid or large swings in pH



