

Test Your Knowledge: Introduction to Chemistry For Anatomy & Physiology I



Fill in the blank for the following questions:

Matter- Anything that has _____ and takes up space.

Element- Basic building blocks of matter; composed of chemically identified _____.

Atoms- Smallest unit of an _____; composed of subatomic particles.

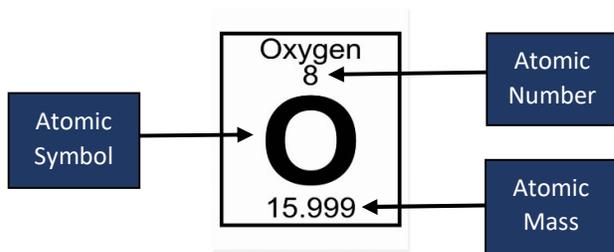
Understanding the Chemistry of Human life:

Over 90% of the human body is composed of only **four elements**:

Oxygen, _____, _____, _____.

Subatomic Particles	Charge	Atomic Mass Unit (AMU)
Proton	+1	
Neutron		1
Electron	-1	

Protons and _____ make up the nucleus. While _____ orbit around the nucleus.



Atomic Number- Number of _____ within the nucleus of one atom.

*Each element has its own unique atomic number.

Atomic Mass- Sum of the protons & _____ in one atom.

Isotopes/Molecules/Compounds, Select true or false for the following questions:

Isotopes are atoms of the same element, with a different number of protons. _____

Unstable isotopes emit energy called radiation. _____

Radiation is good for cells, preventing cancer. _____

A molecule is simply atoms bonded together. _____

A compound is when two or more atoms of different elements chemically combine. _____

Atom Bonding, Fill in the blank for the following questions:

Electrons orbit around the nucleus in _____.

Atoms are most stable when their outer electron shell, the _____ shell is full.

For atoms with atomic numbers of 18 elements or less, the first shell can only hold up to _____ electrons. Then the second and third shell can hold up to _____ electrons.

Ions are _____ charged atoms because it has gained or lost one or more electrons.

Cations are _____ charged because they have _____ electrons.

Anions are _____ charged because they have _____ electrons.

Therefore, an ionic bond is the attraction between a/an _____ and a/an _____. In which electrons are transferred.

A covalent bond on the other hand, are atoms that _____ electrons to fill their valance shells.

Polar molecules are a result of _____ bonds. Where electrons are not shared equally.

Hydrogen bonds are weak attractions between the _____ end of one polar molecule and the _____ end another polar molecule.

Electrolytes, Fill in the blank for the following questions:

Electrolytes are substances that release ions in _____.

Acids are substances that dissociate in water, releasing _____ ions (H+).

Bases are substances that release hydroxide ions (OH-), that can combine with _____ ions.

References

Shier, D., Butler, J., & Lewis, R. (2016). Hole's Human Anatomy & Physiology (14th ed.). New York, NY: McGraw-Hill Education