Science 9 – Spindlove – Chem Notes Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**ATOMS**

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| Diagram, schematic  Description automatically generated | **Subatomic Particles:**   * Neutrons: \_\_\_\_ nucleus; \_\_\_\_\_\_ charge * Protons: \_\_\_\_\_\_ nucleus; \_\_\_\_\_ charge * Electrons: \_\_\_\_\_\_\_\_\_\_\_\_\_ nucleus; \_\_\_ charge   *\*spread-out charge. We say electrons exist in* ***\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*** *(sometimes called shells or orbitals)*  *NOTE: We recognize this is not the current****, \_\_\_\_\_\_\_\_\_\_\_\_\_*** *model.* |
| Diagram  Description automatically generated with medium confidence | * Charges that are opposite **\_\_\_\_\_\_\_\_\_\_\_\_\_\_** each other * Charges that are alike **\_\_\_\_\_\_\_\_\_\_\_\_\_\_** each other * The charge on the proton and electron are exactly the same **\_\_\_\_\_\_\_\_\_\_\_\_\_\_** **(strength)** but **\_\_\_\_\_\_\_\_\_\_\_\_\_\_**, so they are **\_\_\_\_\_\_\_\_\_\_\_\_\_\_** to each other.   + *This is what holds the atom together* |
|  | * **Atomic Number**: the number of **\_\_\_\_\_\_\_\_\_\_\_\_\_\_** in the nucleus of each atom. It is always a whole number.   + *Pattern: atomic numbers increase one by one through the periodic table* * **Atomic Mass:** the mass of an average atom of an element. It is written as a decimal. Mass is a combo of **\_\_\_\_\_\_\_\_\_\_\_\_\_\_** & **\_\_\_\_\_\_\_\_\_\_\_\_\_\_**   + *Pattern: atomic mass tends to increase along with atomic number* * \*There are some exceptions, i.e. Co and Ni |
| A picture containing text  Description automatically generated |  |
| A close up of a ball  Description automatically generated | 1. How many electrons: **\_\_\_\_\_\_\_\_\_\_\_** 2. Which means there are how many protons: **\_\_\_\_\_\_\_\_\_\_\_** 3. And the # of protons represents the: **\_\_\_\_\_\_\_\_\_\_\_\_\_\_** 4. Which element has this atomic number: **\_\_\_\_\_\_\_\_\_\_\_\_\_\_** |
| Chart  Description automatically generated with medium confidence   * Electrons exist in **\_\_\_\_\_\_\_\_\_\_\_\_\_\_** pattern, filling from **\_\_\_\_\_\_\_\_\_\_\_\_\_\_** 🡪 **\_\_\_\_\_\_\_\_\_\_\_\_\_\_** shells * The electrons in the outermost shell (those farthest from the nucleus) have the **\_\_\_\_\_\_\_\_\_\_\_\_\_\_** influence on the properties of an atom   + These electrons in the outermost shell are called **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**   + The shell that contains the outermost electrons is called the **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**. | |
| Example: Let’s draw the Bohr model of Neon | 1. Atomic # = # protons **\_\_\_\_\_\_\_\_\_\_\_\_\_** 2. neutrons = atomic mass – protons **\_\_\_\_\_\_\_\_\_\_\_\_\_\_** 3. electrons = protons **\_\_\_\_\_\_\_\_\_\_\_\_\_\_** 4. Electrons arranged 2-8-8-18 pattern |
| Draw the Bohr model of Phosphorus | 1. Atomic # = # protons **\_\_\_\_\_\_\_\_\_\_\_\_\_** 2. neutrons = atomic mass – protons **\_\_\_\_\_\_\_\_\_\_\_\_\_\_** 3. electrons = protons **\_\_\_\_\_\_\_\_\_\_\_\_\_\_** 4. Electrons arranged 2-8-8-18 pattern |
| **LEWIS STRUCTURES**  The symbol of Argon atom is 40Ar18a) How many electrons are there in an  Argon atom?b) Draw the Bohr - Brainly.in | Show arrangement of **\_\_\_\_\_\_\_\_\_\_\_\_\_\_**electrons only |
| ***EXAMPLES: Draw Lewis Dot Diagrams of the following:***  Be Mg F Cl | |