**Chemistry Quest Review**

**Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period \_\_\_\_\_\_\_\_\_\_\_\_**

1. **Complete the following table with the missing information.**

|  |  |  |
| --- | --- | --- |
| **Scientist** | **Model** | **Facts** |
| **Democritus** |  | **1.**  **2.**  **3.** |
| **Dalton** |  | **1.**  **2.**  **3** |
| **Thompson** |  | **1.**  **2.**  **3** |
| **Millikan** |  | **1.**  **2.** |
| **Rutherford** |  | **1.**  **2.**  **3** |
| **Bohr** |  | **1.**  **2.**  **3** |
| **Chadwick** |  | **1.**  **2.**  **3** |

**II, Subatomic Particles**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Subatomic Particle** | **Location** | **Charge** | **Mass** | **Composition** |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

**III. Use a Venn Diagram to compare and contrast:**

1. **Atomic number vs atomic mass**
2. **Protons vs Neutrons**
3. **Nucleus vs Orbitals**

**IV. Analyze the following atoms and answer the following questions.**

|  |  |
| --- | --- |
| **Macintosh HD:Users:leal_rosy:Desktop:question one.jpeg.jpg**  **Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **P= \_\_\_\_ Atomic # \_\_\_\_\_\_\_\_\_\_\_**  **N= \_\_\_\_ Atomic Mass \_\_\_\_\_\_\_\_**  **E= \_\_\_\_**  **Positive charge \_\_\_\_\_\_**  **Negative charge \_\_\_\_\_\_\_**  **Over all charge \_\_\_\_\_\_** | **Macintosh HD:Users:leal_rosy:Desktop:images.jpeg**  **Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **P= \_\_\_\_ Atomic # \_\_\_\_\_\_\_\_\_\_\_**  **N= \_\_\_\_ Atomic Mass \_\_\_\_\_\_\_\_**  **E= \_\_\_\_**  **Positive charge \_\_\_\_\_\_**  **Negative charge \_\_\_\_\_\_\_**  **Over all charge \_\_\_\_\_\_** |

**V. Compare and contrast the following: (Include Two similarities and 2 differences)**

**a. Family vs Period**

**b. Metals , Nonmetals, Metalloids**

**c, Atoms vs Ions**

**VI. Explain the importance and types of quarks.**

**VII. Complete the following statements.**

|  |
| --- |
| **1. The family number is related to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **2. The period numbers is related to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **3. Atoms will \_\_\_\_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_\_\_\_\_ electron to become \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **4. Positively charged ions will \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ electron and will be called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **5. Negatively charged ions will \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ electron and will be called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **6. Elements with \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ properties are placed in the same \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **7. The smallest subatomic particles are the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ they have a mass of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_amu.**  **8. The octet rule states that \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **9. The element in period 4 and a mass of 56 is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **10.The element in family 4A with an atomic number of 14 is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **11. Most stable family \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **12 The most reactive metals group is number\_\_\_\_\_\_\_\_\_\_\_\_ which are also known as the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **13. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is the only element that touches the zigzac line and is not a metalloid.**  **14. AMU stands for \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and is used for \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** |

**VIII. Compare and contrast Mendeleev’s periodic table and today’s modern periodic table. (Include two similarities and two differences)**

**IX. Complete the following chart.**

|  |  |
| --- | --- |
| **Name: Carbon**  **#p\_\_\_\_\_\_**  **#e\_\_\_\_\_\_**  **Charge \_\_\_\_\_\_\_**  **Symbol \_\_\_\_\_\_**  **Cation, Anion or Atom: \_\_ATOM\_\_** | **Bohr Diagram** |
| **Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **#p\_\_19\_\_\_\_**  **#e\_\_\_18\_\_\_**  **Charge \_\_\_\_\_\_\_**  **Symbol \_\_\_\_\_\_**  **Cation, Anion or Atom: \_\_\_\_\_\_\_\_\_** | **Bohr Diagram** |

**X. Draw a Bohr diagram for an Oxygen atom and ion.**

|  |  |
| --- | --- |
| **Oxygen Atom** | **Oxygen Ion** |
|  |  |

**XI. State the families name and number of each group of the periodic table.**

|  |  |  |  |
| --- | --- | --- | --- |
| **Family Name** | **Family Number** | **Family Name** | **Family Number** |
|  |  |  |  |
|  |  |  |  |
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|  |  |  |  |

**XII. Complete the following Atoms vs Ions table**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Symbol** | **#Protons** | **# Electrons** | **Atom/Ion** | **Neutral/Charged** | **If Ion:**  **Cation/Anion** | **Charge (oxidation #)** |
| **S-2** |  |  |  |  |  |  |
| **Ar** |  |  |  |  |  |  |
|  | **19** | **18** |  |  |  |  |
| **Al+3** |  |  |  |  |  |  |
| **Al** |  |  |  |  |  |  |
|  | **12** | **10** |  |  |  |  |
| **P-3** |  |  |  |  |  |  |