**Topics – Test 3**

1) List each of Dalton’s five laws and indicate whether or not they are true: (2 pts each law, 1 pt for accurately indicating whether it is true):

2) Fill out the blanks in this table: (1 pt each)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Element** | **Protons** | **Neutrons** | **Electrons** | **Atomic mass**  **(amu)** | **Atomic number** |
| O |  | 10 |  |  |  |
|  | 116 |  |  | 284 |  |
|  |  |  | 81 | 206 |  |
|  |  | 115 |  | 187 |  |
|  |  | 121 |  |  | 78 |
| Sr |  |  |  | 89 |  |

3) Define the term “average atomic mass”. (2 pt)

4) Element X has two isotopes: X-114 has a mass of 114 amu and an abundance of 84% X-1167 has a mass of 117 amu and an abundance of 16%. Given this information, what is the average atomic mass of element X? (5 pt)

5) What is the difference between a line spectrum and a continuous spectrum? (4 pt)

6) Explain the process by which light is given off by an element when energy is added to it. (6 pt)

7) List three general properties of metals. (6 pt)