**Homework #5 Chemistry 1114 section 2 (Fong) due Friday 15 Sept 2017 10 pts (in class)**

**Your name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

1. What specifically defines an isotope of a given element ? (1 pt)
2. In the modern version of elements, what defines a specific element ? (1 pt)
3. Fill in the boxes: (2 pts per line)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Atomic # | Mass # | symbol | #p | #n | #e | Atom charge |
|  |  |  | 23 | 26 |  | 0 |
|  | 88 | Sr |  |  | 38 |  |
| 17 |  |  |  | 18 |  | -1 |

1. A hypothetic super-actinide Ug is discovered to have the following isotope distribution

**mass (amu) % abundance**

300Ug 299.85 80.0

302Ug 301.86 15.0

303Ug 302.89 5.0

What is the average mass of element Ug ??? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_= average Ug mass (amu)

(2 pts) (to nearest 0.01)