**Mini-quiz #6 Chemistry 1114 Monday 9 September 2013**

Your name:\_\_\_\_\_\_\_\_answers\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ A

1. **Which is the chemical version of an atom ? (circle your choice)**

1. **A mystery element X discovered in deep space . It’s isotopic abundance vs.**

 **atomic mass are below:**

**Isotope mass % isotopic abundance**

 **300 10**

 **304 65 300\*10+ 304\*65+306\*25**

 **306 25 100**

**Compute the average atomic mass of X : \_\_\_\_\_\_304.1\_\_\_\_\_\_\_\_\_\_\_\_\_\_ amu**

**average Atomic mass of X**

1. **If the speed of light is c=3\*108 m/s, what is the wavelength of light λ in**

 **meters with a frequency of 1.5\*107 Hz ?**

**λ\*f= 3\*108**

**λ=3\*108/1.5\*107 =20 m λ=\_\_\_\_\_20\_\_\_\_\_\_\_ m**

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Your name:\_\_\_\_\_\_\_\_\_\_\_answers\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ B

1. **Which is the chemical version of an atom ? (circle your choice)**

 **6**

 **C**

 **12.01**

1. **A mystery element Y discovered in deep space . It’s isotopic abundance vs.**

 **atomic mass are below:**

**Isotope mass % isotopic abundance**

 **290 20**

 **294 50 290\*20 + 294\*50 + 296\*30**

 **296 30 100**

**Compute the average atomic mass of Y : \_\_\_\_\_293.8\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ amu**

**average Atomic mass of Y**

1. **If the speed of light is c=3\*108 m/s, what is the frequency of light f in**

 **Hz with a wavelength of 20 m ?**

 **λ\*f= 3\*108**

 **f= 3\*108/20 =1.5\*107**

 **f=\_1.5\*107\_\_\_\_\_\_ Hz**