**HomeWork 17**

**Due Wednesday Nov 18**

**Your name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_/6**

**1. The experimentally observed wavelength of light emitted by an H atom in the**

 **`red’ part of the spectrum occurs at 656 nm =6.56\*10-7 m. Bohr predicts that**

 **this light arises from the transition from the n=3🡪 n=2 level of his atomic**

 **model.**

**Given: En = -2.18\*10\_18 J**

 **n2**

**Find the predicted value for λ(m) given that hc= 1.989\*10-25 J\*m and:**

**ΔE = E3 - E2 =hc/λ(theory)**

 **\_\_\_\_\_\_\_\_\_=λ(theory) m**

 **(3 pts)**

**2. Name two problems with the Bohr model**

**a)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**b)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**3. What is the complete electronic configuration for Al ?**

**4. What is the abbreviated electronic configuration for Ca ?**