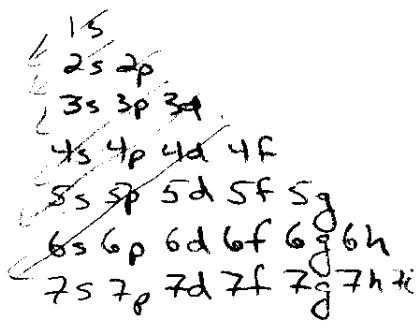
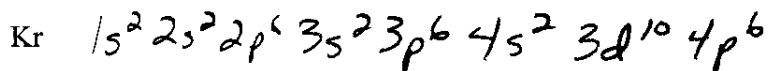
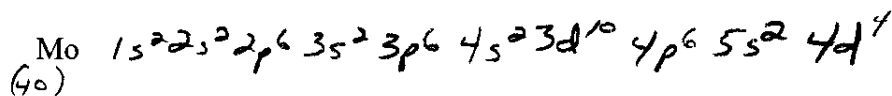
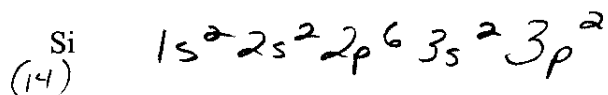


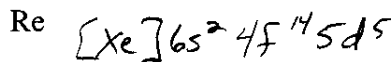
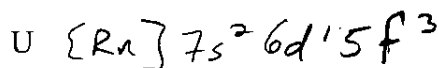
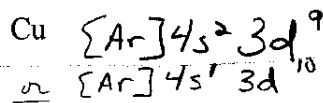
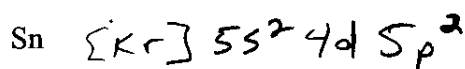
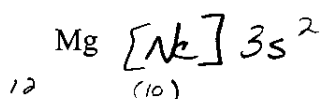
Quantum Chemistry 2



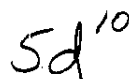
1. Write full electron configurations for the following atoms in the ground state.



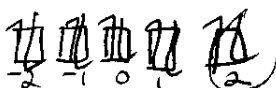
2. Write abbreviated electron configurations for the following atoms in the ground state.



3. A) What is the last orbital term filled in the Hg atom?



B) Write the full set of quantum numbers for the last electron to fill in the Hg atom's ground state

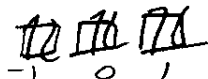


$n=5, l=2, m_l=+2, m_s=-1/2$

4. A) What is the last orbital term filled in the Ne atom?



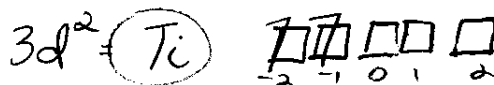
B) Write the full set of quantum numbers for the last electron to fill in the Ne atom's ground state



$n=2, l=1, m_l=+1, m_s=-1/2$

5. In each case, what atom's outermost electron would have the following set of four quantum numbers?

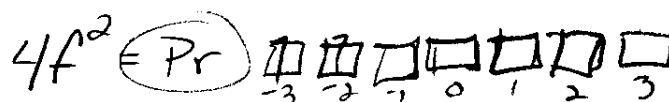
A) $n=3, l=2, m_l=-1, m_s=+1/2$



B) $n=7, l=0, m_l=0, m_s=-1/2$



C) $n=4, l=3, m_l=-2, m_s=+1/2$



D) $n=6, l=1, m_l=+1, m_s=+1/2$

