

1. F, F, T, F, F, F, T, T

2.  $\text{KF} < \text{CaO} < \text{MgO}$

3. 8  
Li  
F  
7

4.  $l$   
I  
Mn, Co

5.  $\begin{array}{|c|} \hline \uparrow\downarrow \\ \hline \end{array}$   $\begin{array}{|c|c|c|} \hline \uparrow\downarrow & \uparrow\downarrow & \uparrow \\ \hline \end{array}$  --- or the last  $4p$  electron can point down  
4s                  4p

6. V, Co, As

7. 1090

8.  $[\text{Xe}] 6s^2 4f^{14} 5d^{10}$   
 $[\text{Rn}] 7s^2 5f^9$

9.  $\text{In}^{3+}$ ,  $\text{Zn}^{2+}$ , He