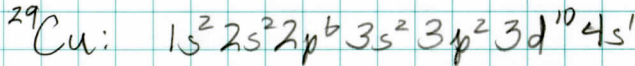
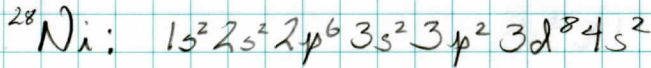


10. a) FIND THE GROUND STATE CONFIGURATIONS OF Ni AND Cu FROM A PERIODIC TABLE

b) DRAW ENERGY LEVEL DIAGRAMS LIKE FIG 10.7 FOR THEM

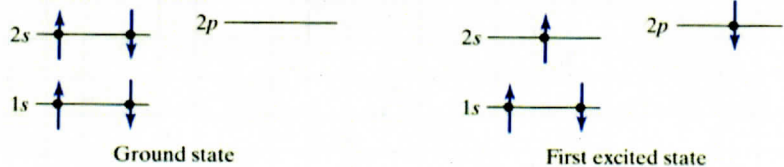
a) FROM THE INSIDE FRONT COVER



b) FIG 10.7 SHOWS Be:

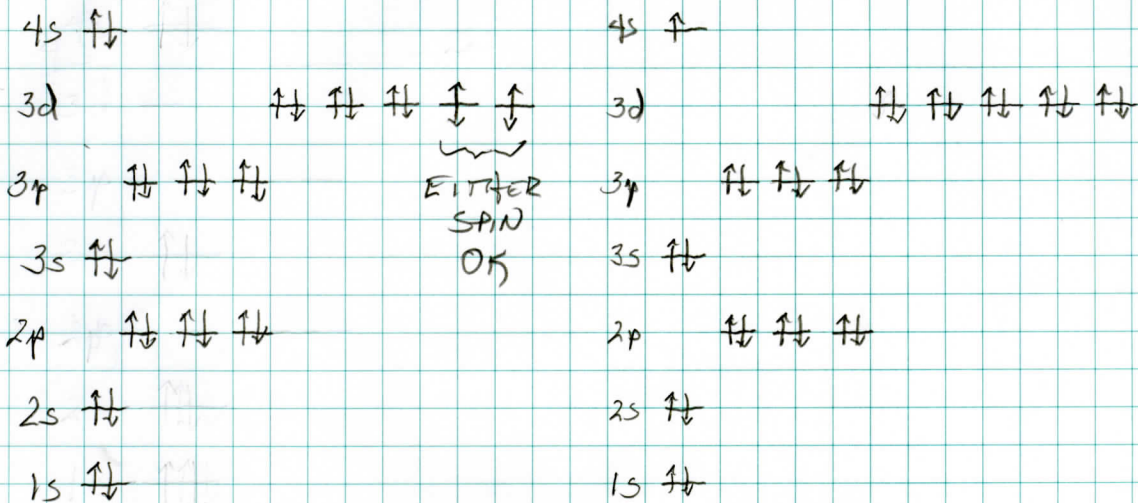
FIGURE 10.7

Excitation of beryllium ($Z = 4$) requires only 2.7 eV to lift one of the 2s electrons to the nearby 2p level. In the excited state the spins of the 2s and 2p electrons can point either way.



Ni

Cu



• 3d NOT QUITE FULL

• 4s FULL

⇒ CLOSER TO A FULL OUTER SHELL THAN AN ALKALI METAL

• 3d FULL!

• 4s WITH 1e

⇒ MUCH LIKE AN ALKALI METAL WITH LOOSELY BOUND OUTER e^- !

⇒ GOOD CONDUCTOR!