

Problems discussed in the videos:

Video (5)

11.) How many electrons can share the quantum numbers  $n=3$ ,  $\ell=1$ ?

- A) 1                      B) 2                      C) 3                      D) 4                      E) 6

12.) Which set of quantum numbers is not possible?

- A)  $n = 2$ ,  $\ell = 0$ ,  $m_\ell = 0$ ,  $m_s = \frac{1}{2}$   
B)  $n = 2$ ,  $\ell = 1$ ,  $m_\ell = 0$ ,  $m_s = \frac{1}{2}$   
C)  $n = 3$ ,  $\ell = 3$ ,  $m_\ell = 1$ ,  $m_s = \frac{1}{2}$   
D)  $n = 4$ ,  $\ell = 2$ ,  $m_\ell = 1$ ,  $m_s = \frac{1}{2}$   
E)  $n = 5$ ,  $\ell = 4$ ,  $m_\ell = 2$ ,  $m_s = \frac{1}{2}$