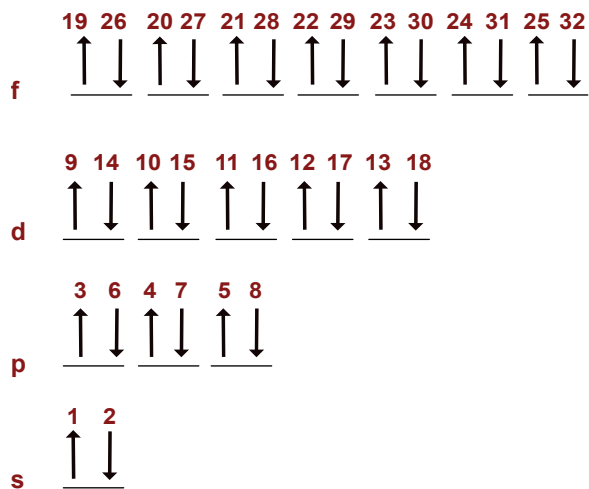


Assignment of Quantum Numbers to Electrons

Consider the figure below. The electrons are numbered according to filling order. Below are s, p, d, and f subshells.



Which electron could be assigned the following 4 quantum numbers?

$n = 5, l = 1, m_l = 0, m_s = +1/2$ 4

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

$n = 3, l = 2, m_l = +1, m_s = -1/2$ 17

$n = 6, l = 3, m_l = -3, m_s = -1/2$ 26

$n = 4, l = 2, m_l = +2, m_s = +1/2$ 9

$n = 7, l = 1, m_l = 0, m_s = +1/2$ 5

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

$n = 5, l = 3, m_l = -1, m_s = +1/2$ 21