

Quiz 3 (2)

1) Which of the following quantum numbers values represent an electron in the orbital $3p_x$?

- (a) $n = 3, \ell = 2, m_\ell = -1$
- (b) $n = 3, \ell = 0, m_\ell = 0$
- (c) $n = 3, \ell = 0, m_\ell = +1$
- (d) $n = 3, \ell = 1, m_\ell = -1$

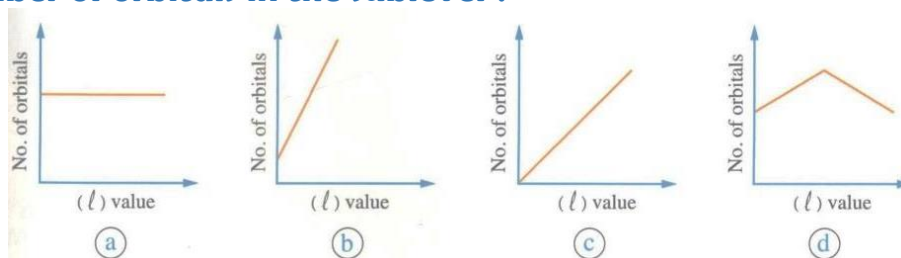
2) Which of the following quantum numbers values represent an electron in 5f orbitals?

- (a) $n = 5, \ell = 3, m_\ell = +4, m_s = +\frac{1}{2}$
- (b) $n = 5, \ell = 2, m_\ell = -2, m_s = +\frac{1}{2}$
- (c) $n = 5, \ell = 3, m_\ell = +1, m_s = +\frac{1}{2}$
- (d) $n = 5, \ell = 4, m_\ell = -4, m_s = -\frac{1}{2}$

3) The five electrons present in the sublevel $3d^5$ are similar in all the following, except the

- a) principal quantum number.
- b) subsidiary quantum number.
- c) magnetic quantum number.
- d) spin quantum number.

4) Which of the following graphical figures represents the relation between (ℓ) value and the number of orbitals in the sublevel ?



5) Estimate the number of the orbitals which can be occupied with electrons in the principal level ($n = 2$).