

NEET STRUCTURE OF ATOM — ENERGIES OF ORBITALS — PYQS

Max. Marks: 16

Questions: 4

Section A (MCQ) — 4 questions

Q.1 The quantum numbers of four electrons are given below :

I. $n = 4; l = 2; m_l = -2; s = -\frac{1}{2}$

II. $n = 3; l = 2; m_l = 1; s = +\frac{1}{2}$

III. $n = 4; l = 1; m_l = 0; s = +\frac{1}{2}$

IV. $n = 3; l = 1; m_l = -1; s = +\frac{1}{2}$

The correct decreasing order of energy of these electrons is

[RE-NEET (UG) 2024]

- (1) $IV > II > III > I$ (2) $I > III > II > IV$
 (3) $III > I > II > IV$ (4) $I > II > III > IV$

 Scan or tap for the
full solution


Q.2 4d, 5p, 5f and 6p orbitals are arranged in the order of decreasing energy. The correct option is :

[NEET (UG) 2019]

- (1) $6p > 5f > 4d > 5p$ (2) $5f > 6p > 4d > 5p$
 (3) $5f > 6p > 5p > 4d$ (4) $6p > 5f > 5p > 4d$

 Scan or tap for the
full solution


Q.3 Which one is the wrong statement ? [NEET 2017]

- (1) The uncertainty principle is $\Delta E \times \Delta t \geq \frac{h}{4\pi}$
 (2) Half filled and fully filled orbitals have greater stability due to greater exchange energy, greater symmetry and more balanced arrangement.
 (3) The energy of 2s-orbital is less than the energy of 2p-orbital in case of hydrogen like atoms.
 (4) de-Broglie's wavelength is given by $\lambda = \frac{h}{mv}$,
 where m = mass of the particle, v = group velocity of the particle.

 Scan or tap for the
full solution


Q.4 Which is the correct order of increasing energy of the listed orbitals in the atom of titanium ? (At. no. $Z = 22$) [AIPMT 2015]

- (1) 4s 3s 3p 3d (2) 3s 3p 3d 4s
 (3) 3s 3p 4s 3d (4) 3s 4s 3p 3d

 Scan or tap for the
full solution


ANSWER KEY

Ques.	1	2	3	4							
Ans.	2	3	3	3							