

PYQSide

JEE MAIN STRUCTURE OF ATOM — SHAPES OF ATOMIC ORBITALS — PYQS

Max. Marks: 8

Questions: 2

Section A (MCQ)

Q.1 Which one of the following about an electron occupying the 1s orbital in a hydrogen atom is incorrect?

(Bohr's radius is represented by a_0)

[JEE Main 2025 (Online) 4th April Morning Shift]

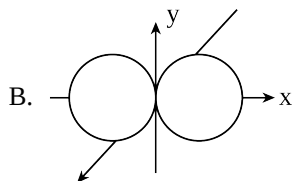
- (1) The probability density of finding the electron is maximum at the nucleus
- (2) The total energy of the electron is maximum when it is at a distance a_0 from the nucleus
- (3) The electron can be found at a distance $2a_0$ from the nucleus
- (4) The 1s orbital is spherically symmetrical

Scan or tap for the full solution



Q.2 Which of the following statements are true?

A. The subsidiary quantum number l describes the shape of the orbital occupied by the electron.



is the boundary surface diagram of the $2p_x$ orbital.

- C. The + and - signs in the wave function of the $2p_x$ orbital refer to charge.
- D. The wave function of $2p_x$ orbital is zero everywhere in the xy plane.

Choose the correct answer from the options given below:

[JEE Main 2025 (Online) 2nd April Evening Shift]

- (1) (A) and (B) only
- (2) (B) and (D) only
- (3) (C) and (D) only
- (4) (A), (B) and (C) only

Scan or tap for the full solution



ANSWER KEY

Ques.	1	2											
Ans.	2	1											