

16. Which of the following statements in relation to the hydrogen atom is correct ?

- (1) 3s orbital is lower in energy than 3p orbital
- (2) 3p orbital is lower in energy than 3d orbital
- (3) 3s and 3p orbitals are of lower energy than 3d orbital
- (4) 3s, 3p and 3d orbitals all have the same energy

Solution:

The Auf-bau principle is not applicable for the Hydrogen atom.

Hence option (4) is the answer.