

### Answer on the Question #63647, Chemistry / General chemistry

Determine the following about electron shells, electrons subshell, and electron orbitals. A) Find the number of electron subshells in shell. B) The number of electron orbital in a 3d subshell. C) The maximum number of electron that could be contained in a 2P subshell. D) The maximum number of electron in a 2P shell.

#### Answer:

- A) 1 shell – 1 subshell ( $1s^2$ )  
2 shell – 2 subshells ( $2s^2, 2p^6$ )  
3 shell – 3 subshells ( $3s^2, 3p^6, 3d^{10}$ )  
4 shell – 4 subshells ( $4s^2, 4p^6, 4d^{10}, 4f^{14}$ )  
5 shell – 5 subshells ( $5s^2, 5p^6, 5d^{10}, 5f^{14}, 5g^{18}$ )  
6 shell – 6 subshells ( $6s^2, 6p^6, 6d^{10}, 6f^{14}, 6g^{18}, 6h^{22}$ )  
7shell – 7 subshells ( $7s^2, 7p^6, 7d^{10}, 7f^{14}, 7g^{18}, 7h^{22}, 7i^{26}$ )
- B) There are 5 electron orbitals on the 3d subshell.
- C) There are 6 electros maximum could be on the 2p subshell.
- D) The maximum number of electrons in a 2 shell are 8 electrons.