

Chapter 6

- 65) a) outer shell electrons involved in chemical bonding
b) inner shell electrons have electron configurations of the nearest noble gas
c) orbital
d) electron spin

66) a) Carbon - 6 total electrons
valence $e^- = 4$
core $e^- = 2$
unpaired = 2

	1↓	1↓	1↑
	1s	2s	2p

unpaired

b) phosphorus = 15 total electrons
valence $e^- = 5$
core $e^- = 10$
unpaired = 3

	1↓	1↓	1↓	1↓	1↓	1↓	1↑	1↑
	1s	2s	2p		3s		3p	

c) Neon = 10 total electrons
valence $e^- = 8$
core $e^- = 2$
unpaired = 0

	1↓	1↓	1↓	1↓
	1s	2s	2p	

- 67) a) Cs = [Xe] 6s¹
b) Ni = [Ar] 4s² 3d⁸
c) Se = [Ar] 4s² 3d¹⁰ 4p⁴
d) Cd = [Kr] 5s² 4d¹⁰

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