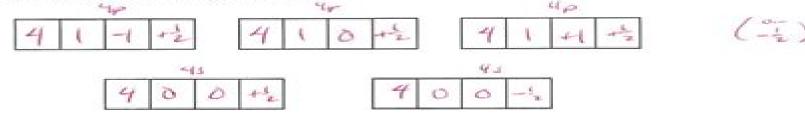
8 • Electron Configuration & the Periodic Table

(a) Write the ground state electron configuration (short form or long form) for an arsenic atom.

152 252 206 352 306 452 3d'0 4p3 [Ar] 4s; 3d" 1p3 or [Ar] 3d" 452 4p3

(b) Give one permissible set of four quantum numbers for each of the outermost electrons in a single As atom when it is in its ground state.



(c) Is an isolated arsenic atom in the ground state paramagnetic or diamagnetic? Explain briefly.



(d) What ion would As be expected to form? As Write the electron configuration for the arsenic ion.

As gains electrons and has the same electron configuration as Kr.

3-2-1-He

NO F NO

P S. Cl 4
AS S.L B. Kr.

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