

7. Account for each of the following observations in terms of atomic theory and/or quantum theory.
- (a) Atomic size decreases from Na to Cl in the periodic table.
 - (b) Boron commonly forms molecules of the type BX_3 . These molecules have a trigonal planar structure.
 - (c) The first ionization energy of K is less than that of Na.
 - (d) Each element displays a unique gas-phase emission spectrum.