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1. The correct sequence of increasing covalent character is represented by:
  - A.  $LiCl < BeCl_2 < NaCl$
  - B.  $BeCl_2 < LiCl < NaCl$
  - C.  $NaCl < LiCl < BeCl_2$
  - D.  $BeCl_2 < NaCl < LiCl$
2. In the case of alkali metal halides, the covalent character decreases in the order:
  - A.  $MF > MCl > MBr > MI$
  - B.  $MF > MCl > MI > MBr$
  - C.  $MI > MBr > MCl > MF$
  - D.  $MCl > MI > MBr > MF$
3. The resonance structure of a molecule should not have:
  - A. Identical arrangement of atoms
  - B. Nearly the same energy
  - C. The same number of paired electrons
  - D. Identical bonding

4.  $AlCl_3$  is covalent while  $AlF_3$  is ionic. This can be justified on the basis of:

- A.** Valence-bond theory
- B.** Fajan's rule
- C.** Molecular-orbital theory
- D.** Hydration energy

5. Which of the following compounds is colored?

- A.**  $HgI_2$
- B.**  $AgCl$
- C.**  $NaCl$
- D.**  $HgCl_2$