

**#50** Which of these compounds contains *both* ionic and covalent bonds?  
(A)  $K_2O$       (B)  $CO_2$       (C)  $K_2CO_3$       (D)  $O_2$

Note: #52 and #54 may have been presented in the opposite order.

**#52** Which of the following molecules would have dipole-dipole forces as its strongest intermolecular force?  
(A)  $CO_2$       (B)  $OCl_2$       (C)  $SO_4^{2-}$       (D)  $CCl_4$

**#54** The element at which location has the highest electronegativity?  
(A) Period 3, Group 1      (B) Period 3, Group 2  
(C) Period 3, Group 17      (D) Period 3, Group 18

**#56** Which elements can react to produce a molecular compound?  
(A) calcium & chlorine      (B) hydrogen & sulfur  
(C) lithium & fluorine      (D) barium & oxygen

**#58** What is the formula for zinc sulfate?  
(A)  $ZnSO_4$       (B)  $Zn_2SO_4$   
(C)  $Zn(SO_4)_2$       (D)  $Zn_2(SO_4)_3$

**#60** Which of these compounds contains the highest percent of carbon by mass?  
(A)  $CO_2$       (B)  $CaCO_3$   
(C)  $Al_2(CO_3)_3$       (D)  $Mg(CN)_2$