

**SUBJECT**

7. What is the hybridization of B in  $\text{BF}_3$ ?

- A.  $\text{S}^2\text{p}$
- B.  $\text{Sp}^3$
- C.  $\text{Spd}$
- D.  $\text{Sp}^2$

8. A solution of metal ions is treated with hydrochloric acid and  $\text{H}_2\text{S}$ , and no precipitate forms. When the solution is made basic, there is still no precipitate formation. When carbonate ions are added to the basic solution, a precipitate forms. Which type of ion could be present in the solution?

- A.  $\text{Ni}^{2+} / \text{Co}^{2+} / \text{Mn}^{2+} / \text{Zn}^{2+}$
- B.  $\text{Ba}^{2+} / \text{Ca}^{2+} / \text{Mg}^{2+} / \text{Sr}^{2+}$
- C.  $\text{Cd}^{2+} / \text{Cu}^{2+} / \text{Hg}^{2+}$
- D.  $\text{Cr}^{3+} / \text{Al}^{3+} / \text{Fe}^{3+}$

9. In neutralization:

- A. the base is neutralized
- B. the acid is neutralized
- C. a salt is formed
- D. all of the above