Questions 1-5 refer to the following generic chemical formulas

A) AB D) AB3

B) AB2  E)A2B3

C) A2B

A B

1. Mg O

2. NH4+ SO4-2

3. Ca OH-

4. Al S

5. Sr Cl

**Questions 6-10 refer to oxidation numbers.**

6. The oxidation number on carbon in a carbonate ion

7. The oxidation number for a chloride ion

8. The oxidation number of sulfur in sulfur dioxide

9. The oxidation number of oxygen in oxygen gas

10. The oxidation number of sulfur in sulfate ion

11. The oxidation number of chromium in dichromate

12. The common oxidation number of group II metals

13. The common oxidation number of cadmium and zinc

14. The common oxidation number for silver

15. The oxidation number for sulfur in a hydrogen sulfite ion (HSO3-1)

**Name the following acids**

16. HCl

17. HNO3

18. HClO4

19. HClO3

20. HCN

21. H2CO3

22. HBrO4

23. HBrO3

**Name the following compounds**

24. Fe2O3

25. ZnO

26. C2H6

27. CH4

28. C2H4

29. C2H2

30. C3H6OH

31. P2O5

**Tell the name and the charge on the following polyatomic ions**

32. NO3

33. ClO4

34. Cr2O7

35. SO3

36. SO4

37. List the elements that exist as diatomic molecules at ordinary atmospheric conditions.

38. A compound containing the element M has the formula MSO4, name a metal that could be M. (Hint: Determine what charge M has).

39. Another compound containing the element X has the formula X2SO4. Determine three possibilities for X.

Both the multiple choice and the free response sections of this test require you to be experts in writing chemical names and formulas for the following types of compounds:

-Ionic

-Covalent

-Acids