CHE151 Chapter 10 and 11 Problems

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1. Draw a Lewis structure for each of the compounds listed below.
2. Draw any resonance structures that may exist for the structure drawn.
3. Construct a molecular model for each Lewis structure drawn.
4. Draw a 3-D representation of the molecule.
5. For each Lewis structure drawn give the following:

   (a) the hybridization about the central atom or atoms.

   (b) the electron pair geometry about the central atom.

   (c) the molecular shape of the molecule.

   (d) whether the molecule is polar or non-polar. Ions are charged and can not be polar or non-polar. Indicate the polarity with $-\delta$ and $+\delta$

Compounds:

1. CF_3Cl	2. H_2O	3. H_3O^+
4. NH_3	5. NH_4^+	6. AsF_3
7. GaI_3	8. ClO_2^-	9. BF_4^-
10. PO_4^{-3}	11. SO_3	12. NO_3^-
13. CO_3^{-2}	14. SF_4	15. ClO_4^-
16. XeF_2	17. CH_4	18. XeF_4
19. N_2	20. C_2H_4	21. SiF_6^{-2}
22. $C_2H_2Br_4$	23. CO_2	24. SO_2
25. PCl_2F_3	26. C_2H_2	27. CH_3COOH
28. PF_5	29. CH_3OH	30. SF_6
31. CH_2O	32. AsF_5	33. BrF_3