INDIAN SCHOOL MUSCAT
SENIOR SECTION
DEPARTMENT OF CHEMISTRY
CLASS XII
CHAPTER -The p- Block Elements
WORKSHEET– 12

1. Fluorine does not exhibit any positive oxidation state. Why?
2. Name a compound in which chlorine displays '+7' oxidation number
3. Explain why
   a. Noble gases form compounds with oxygen and fluorine only.
   b. H_2S is gas while water is liquid at room temperature
   c. Helium is used in diving apparatus.
   d. Iron dissolves in HCl to form $FeCl_2$ and not $FeCl_3$.
   e. Sulphur in vapour state exhibits paramagnetic behavior
   f. XeF_2 has a linear shape and not a bent structure
   g. SF_4 is hydrolysed whereas SF_6 is not easily hydrolysed.
   h. H_2S is less acidic than H_2Te.
   i. Bleaching by Cl_2 is permanent but by SO_2 is temporary
4. Give equations for the manufacture of
   a) Sulphuric acid b) Chlorine

5. Arrange the following in order of the property mentioned.
   a. HF, HCl, HBr, HI (increasing acid strength)
   b. HOCl, HOClO, $HOClO_3$ (increasing oxidizing power)
6. What are interhalogen compounds? How are they prepared? Why are they more reactive than molecular halogens?
7. Complete the following reactions:
   a. $Cl_2 + NaOH$ (hot, Con) →
   b. $S_8 + HNO_3$(conc.) →
   c. $P_4 + NaOH + H_2O$ →
   d. $C + H_2SO_4$ (conc.) →
   e. $O_3 + I^- + H_2O$ →

8. Account for the following
   a. Reducing character decreases from SO_2 to TeO_2.
   b. $HClO_4$ is a stronger acid than HClO.
   c. Fluorine is a stronger oxidizing agent than chlorine.
   d. S has greater tendency for catenation than O.
   e. Bond dissociation energy of F_2 is less thanCl_2

9. Draw the structures of the following
    a. $H_2S_2O_8$
    b. $XeOF_4$
    c. H_3PO_3
    d. XeF_2
    e. BrF_3