



Blue Print (As per PU Board)

Topic	1 mark questions	2 marks questions	3 marks questions	5 marks questions	Total Marks
The p-Block Elements	1	-	3	-	10

One mark questions

- Noble gases have very low boiling point. Why?**
Answer: Due to weak dispersion forces between their atoms, noble gases are monoatomic.
- Write the general electronic configuration of noble gases.**
Answer: $ns^2 np^6$
- What is the product formed when Xenon reacts with PtF_6 ?**
Answer: Xenon hexa fluoro platinate (IV) or $Xe^+[PtF_6]^-$
- Write the chemical composition of fluorapatite**
Answer: $Ca_{10}(PO_4)_6CaF_2$

Two marks questions

- Give one use each of inert gases:**
Answer: (a) Helium: Being lighter and non-inflammable it is filled in weather balloons (1 mark)
(b) It is used in discharge tubes and fluorescent lamps for advertising purpose (1 mark)
- Electron gain enthalpy of fluorine is less negative than chlorine. Why?**
Answer: Due to small size of F atom, there are strong inter electronic repulsions, thus the incoming electron does not experience much attraction. (2 marks)
- Which form of sulphur shows paramagnetic behaviours? Why?** (1 mark)
Answer: In vapour state, sulphur partly exists as S_2 molecule which has 2 unpaired electrons in antibonding orbitals and hence exhibits paramagnetism. (1 mark)

Three marks questions

- Name the gas liberated when conc. HCl is heated with MnO_2 . Give the equation for the reaction. Name the reagent used to obtain bleaching power from chlorine**
Answer: Chlorine (1 mark)
 $MnO_2 + 4HCl \rightarrow MnCl_2 + 2H_2O + Cl_2$ (1 mark)
Dry slaked lime (1 mark)
- Complete the following equations**
 - $2F_2 + 2H_2O \rightarrow$
 - $H_2S + Cl_2 \rightarrow$
 - $8 NH_3 + 3Cl_2 \rightarrow$
(excess)
 Answer: (i) $\rightarrow 4HF + O_2$ (1 mark)
 $\rightarrow 2HCl + S$ (1 mark)
 $\rightarrow 6NH_4Cl + N_2$ (1 mark)
- Mention three anomalous behaviour of oxygen**
Answer: (i) Oxygen is diatomic gas while other elements of this group are solids. (1 mark)
(ii) Oxygen forms hydrogen bonds while other elements do not (1 mark)
(iii) Oxygen has a maximum covalence of four while other elements can show a maximum of six. (1 mark)



11. White phosphorus is heated with excess of dry chlorine to get X . X on hydrolysis finally forms an oxoacid of phosphorous Y . What are X and Y ? What is the basicity of the acid Y ?

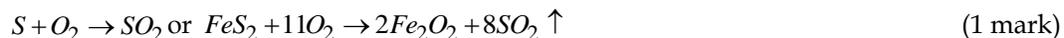
Answer: X is PCl_5 (1 mark)

Y is H_3PO_4 (1 mark)

Basicity of Y is 3 (1 mark)

12. Write the chemical reactions in the manufacture of concentrated sulphuric acid by contact process.

Answer: (a) Formation of SO_2



(b) Conversion of SO_2 to SO_3



(c) Absorption of SO_3 in 98% concentrated H_2SO_4

