

## Chemistry - 12th Class Chemistry Chapter 5 Short Questions Preparation

Q1. Why oxidizing power of halogens decreases down the group?

**Ans 1:** Oxidizing power of halogens depends upon the following factors:

1. Energy of dissociation
2. Electron affinity of atoms
3. Hydration energy of ions
4. Heat of vapourization

While going down the group all above mentioned factors decrease. All the free halogens act as oxidizing agents when they react with metals or non-metals. On forming ionic compounds with metals, the halogens gain electrons and are converted to negative halide ions.

Q2. What are the major applications of Neon?

**Ans 1:** Neon is largely used in making neon advertising signs, in high voltage indicators and TV tubes. Neon and helium are used in making glass lasers.

Q3. Give one method of preparation and one use of  $I_2O_5$ ?

**Ans 1:** Preparation: It can be prepared by heating iodic acid at  $240^\circ\text{C}$ . It is used for the quantitative analysis of CO.

Q4. Halogens are strong oxidizing agents. Justify.

**Ans 1:** All the free halogens act as oxidizing agents when they react with metals or non-metals. On forming ionic compounds with metals, the halogens gain electrons and are converted to negative halide ions.

Q5. HF is a weak acid while HCl is a strong acid. Give reason.

**Ans 1:** The strength of hydrogen halogen bond is very high in HF. The bond strength is reflected in the ease of dissociation of hydrogen and halides. Hydrofluoric acid is a weak acid due to limited ionization than hydrochloric acid.

Q6. Arrange the following oxyacids in increasing order of acid strength and oxidizing power;  $\text{HClO}_4 > \text{HClO}_2 > \text{HClO}$

**Ans 1:**  $\text{HClO}_4 > \text{HClO}_2 > \text{HClO}$

Q7. What are ferrous and Teflons?

**Ans 1:** Freons: Fluorine is used for the preparation of freons, Freons is the commercial name of low molecular mass fluoro chloro carbons. These are being used as the refrigerants and aerosol propellants.

Teflons: Fluorine is used for the preparation of Teflon, It is polymerized tetrafluoroethylene compound. It is a valuable plastic which resists the action of oxidants, acid and alkalies.

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Q8. What is meant by available chlorine?

**Ans 1:** If excess of an acid is added to bleaching powder, chlorine is given out.

The amount of chlorine thus set free is called available chlorine. The activity of bleaching powder is measured in terms of available chlorine. The average percentage of available chlorine in bleaching powder is 35-40%.

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Q9. Write any two uses of Krypton?

**Ans 1:** Krypton is used to fill fluorescent tubes and in flash lamps for high speed photography.

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Q10. Write four properties of hydrogen fluorides?

**Ans 1:**

1. HF is a colourless volatile liquid.
  2. HF attacks glass and has found application as a non-aqueous solvent.
  3. HF has melting point as  $-83.8^\circ\text{C}$ .
  4. HF has boiling point as  $19.5^\circ\text{C}$ .
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