Assignment 1 Chemistry Class XII Teacher: Mrs. Manpreet Kaur

Chapter 10: Haloalkanes and Haloarenes

1.	Name the following halides according to IUPAC system: (a) CH3CH(Br)CH=C(CH3)CH2Cl (b) C(CH3)2Br (c) CH3CH(CH3)CH(Br)CH3 (d) ClCH2C=CCH2Br (e) Cl----C6H5 (f) CH3C≡ C-I
2.	Write the structures of the following organic compounds: (i) 2-Chloro-3-methylpentane (iii) 1-Chloro-4-ethylcyclohexane (ii) 2-(2-Chlorophenyl)-1-iodo octane (iv) 4-tert-Butyl-3-iodoheptane
3.	Answer the following questions: (i) What is meant by chirality of the compound? Give an example. (ii) Which of the following compounds is more easily hydrolyzed by KOH and why? CH3CH(Cl)CH2CH3 or CH3CH2CH2Cl (iii) Which one undergoes SN2 faster and why? CH3CH2CH2CH2CH2I Or CH3CH2CH2CH2CH2Cl
4.	Which one of the following reacts faster in an SN1 reaction and why? CH3CH2CH(Cl)CH2CH3 Or CH3CH2CH2CH2CH2Cl
5.	State one use of DDT and iodoform. Why chloroform is kept in dark coloured bottles completely filled?
6.	What are ambident nucleophiles? Explain with the help of an example.
7.	Account for the following: i) tert-Butyl chloride reacts with aqueous NaOH by SN1 mechanism while n-butyl chloride reacts by SN2 mechanism. ii) Among HI, HBr and HCl, HI is most reactive. iii) Alkyl halides though polar, are immisible with water.(GIVE BOND ENERGY CONCEPT) iv) Chlorobenzene is extremely less reactive towards nucleophillic substitution reaction.
8.	What will be the mechanism for the substitution of -Br by –OH in (CH3)2C(Br)CH2CH3?
9.	Identify the following compounds from A to T: Acetone (a) CH3CH2CH2Cl + NaI ---------heat----→ A (b) (CH3)3CBr + KOH Ethanol, heat--→ B (c) CH3CH(Br)CH2CH3 + NaOH (aq) -----→ C (d) CH3CH2Br + KCN --- ethanol--------→ D (e) (CH3)3CBr + H2O ------- heat---------→ E (f) (CH3)2CHCH(Br)CH2CH3 +C2H5ONa--→ F heat