

**AIRPORT SCHOOL, AHMEDABAD**  
**HOLIDAY HOMEWORK 2018 – 19**  
**CLASS: XII**  
**SUBJECT: CHEMISTRY**

**Answer the following questions:**

1. Draw structure of a) 3-bromoprop-1-ene b) 3-bromo-2-methylprop-1-ene c) 1-chloro-2,2,-dimethyl propane
2. Define the following a) Chiral molecule b) Enantiomer c) Racemic Mixture d) Resolution
3. Which would undergo  $S_N^2$  reaction faster from 1-bromoethane & 2-bromo-2-methyl propane?
4. Which would undergo  $S_N^1$  reaction faster 1-bromopropane or 2-bromopropane?
5. Write a chemical reaction in which iodide ion displaces diazonium group from diazonium salt?
6. Complete the following: a)  $CH_3Cl + KCN \rightarrow$  b)  $C_6H_5Cl + CH_3Cl (AlCl_3) \rightarrow$
7. Identify A & B from :  $C_2H_5OH (Con. H_2SO_4 \text{ at } 443 \text{ K}) \rightarrow A + HBr \rightarrow B$
8. Identify A & B from:  $CH_3-CHBr-CH_2-CH_3 (Alc.KOH) \rightarrow A + Br_2 \rightarrow B$
9. Write the structure of the major organic product in the following: a)  $(CH_3)_3CBr + H_2O (heat) \rightarrow$  b)  $CH_3CH_2Cl + SbF_3 (heat) \rightarrow$
10. a) Why racemization occurs in  $S_N^1$  reaction? b) Why inversion is always seen in  $S_N^2$  reaction?
11. Which one of the following compound is more easily hydrolysed by KOH & Why?  $CH_3CHClCH_2CH_3$  or  $CH_3CH_2CH_2Cl$
12. An organic compound 'A' having molecular formula  $C_4H_8$  on treatment with dilute  $H_2SO_4$  gives 'B' and on treatment with concentrated HCl and anhydrous  $ZnCl_2$  gives 'C'. Write the equation involved and identify A, B & C.
13. What happens when ethanamide undergoes reduction? Write the complete reaction Name the reducing agent.
14. Give at least three differences between  $S_N^1$  &  $S_N^2$  reactions.
15. Write a chemical test to distinguish between a) chlorobenzene & benzyl chloride  
b) chloroform & carbon tetra chloride