

Ch– 10 Haloalkanes and Haloarenes

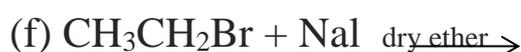
IISB/XII/CHEM/worksheet-1

Q.1. Write the structure of

- 1-chloro-2,2-dimethylpropane.
- 1-Bromo-3, 3-dimethyl-1-phenylbutane .
- 3-Chloro-5-methylhex-2- ene .
- 1-Bromo-1-chloro-1, 2, 2-trifluoroethane .
- 4-Tert-Butyl-3-iodoheptane .

Q.2. What are ambident nucleophiles? Explain with an example

Q.3 Write the formula of major product formed in the following chemical reactions:



Q.4. Answer the following :

- Haloalkanes easily dissolve in organic solvents, why?
- What is known as a racemic mixture? Give an example.

Q.5 . Illustrate the following reactions giving a suitable chemical equation for each:

- Wurtz – Fittig reaction
- Friedel - Crafts reaction

Q.6 Rearrange the compounds of each of the following sets in order of reactivity towards $\text{S}_{\text{N}}2$ displacement:

- 2-Brom-2-methylbutane, 1-Bromopentane, 2-Bromopentane
- 1-Brom-3-methylbutane, 2-Bromo-2-methylbutane, 3-bromo-2-methylbutane
- 1-Bromobutane, 1-Bromo-2,2-dimethylpropane, 1-Bromo-2-methylbutane

Q.7 Write the equations for the preparation of 1-iodobutane from

- i. 1-butanol
- ii. 1-chlorobutane
- iii. but-1-ene

Q.8 (i) State one use each of **DDT** and **Iodoform**.

- (ii) Which compound in the following pairs will react faster in S_N2 displacement and why?
- (a) 1-Bromopentane or 2-Bromopentane
 - (b) 2-Bromo-2 methyl butane or 1-bromo-2methyl butane

Q.9 How will you bring about the following conversions?

- i) Toluene to benzyl alcohol
- ii) Ethanol to ethyl fluoride
- iii) Chlorobenzene to p-nitrophenol
- iv) Benzene to 4- Bromo nitrobenzene
- v) Aniline to chlorobenzene

Q.10 What happens when

- i. n-butyl chloride is treated with alcoholic KOH,
- ii. bromobenzene is treated with Mg in the presence of dry ether,
- iii. chlorobenzene is subjected to hydrolysis,
- iv. ethyl chloride is treated with aqueous KOH,
- v. methyl bromide is treated with sodium in the presence of dry ether,
- vi. Methyl chloride is treated with KCN.