

ORGANIC CHEMISTRY - FUNCTIONAL GROUP I

Halo Alkanes, Haloarenes, Alcohol's And Phenols.

- 1) Write all possible structures for a compound having molecular formula C_3H_7Cl .
- 2) Why is chloroform stored in amber coloured bottles ?
- 3) What is Carbylamine reaction? Illustrate with a suitable example.
- 4) Even though alkylhalides are polar in nature they are insoluble in water why?
- 5) Among isomeric aryl halides the para isomer melts at a higher temperature and is less soluble in a given solvent than the ortho and meta isomers. Why?
- 6) What is Williamsons synthesis ? Give an example.
- 7) What is Wurtz reaction? Illustrate with a suitable example.
- 8) What is meant by Nucleophilic substitution reaction? Illustrate with an example.
- 9) What is freon ? What are its uses?
- 10) Distinguish between Benzene Hexa Chloride and Hexachlorobenzene.
- 11) What is DDT? What are its uses?
- 12) How will you distinguish between benzene $CH_3CH_2CH_2Br$ and $CH_2=CH-CH_2Br$?
- 13) Show giving equations how Chlorobenzene is obtained from Aniline and name the reaction.
- 14) What is Markownikoffs Rule ? Illustrate with an example.
- 15) Illustrate Peroxide/Kharasch/Antimarkownikoffs addition. Illustrate with an example.
- 16) What is meant by β elimination? Give an example.
- 17) Starting from ethyl iodide how can you get a) Ethanol b) Ethylene
- 18) Write the structures of the isomers of dichlorobenzene.
- 19) What happens when excess of Cl_2 is passed through boiling toluene in presence of Sunlight?
- 20) Chloroform is a compound containing Chlorine compound but it does not react with $AgNO_3$ why?
- 21) Mention one property to distinguish between Methanol and Ethanol.
- 22) Give a chemical test to distinguish between alcohol's and phenols.
- 23) How can you convert 1-butene to a) 1-butanol b) 2-butanol?
- 24) How can alcohol's, phenols and carboxylic acid be distinguished from one another?
- 25) Explain why low alcohol's are soluble while higher members are less soluble in water?
- 26) How is Salicylaldehyde prepared from phenol?
- 27) Explain why phenols are more acidic than alcohol's?
- 28) What happens when glycerol is heated with $KHSO_4$
- 29) Give an equation to show how glycerol can be obtained Fat.
- 30) How is salicylic acid converted to aspirin?
- 31) How will you convert 2-Chlorobutane to a) 2-butanol b) 2-butene c) 2-aminobutane and d) n-butane?
- 32) How will you convert a) Toluene into benzyl chloride. b) ethylchloride to ethylamine and c) 2-propanol to 1-bromopropane?
- 33) How do the products differ when ethyl chloride reacts separately with a) KNO_3 and $AgNO_2$ b) KCN and $AgCN$ c) Aqueous KOH and Alcoholic KOH .
- 34) Discuss elimination reactions of alkylhalides.
Explain a) Kolbes reaction b) Reimer Tiemann reaction c) Friedalcrafts reaction d) Sandmeyers reaction.