

Ch- 11 Alcohols, Phenols & Ethers

IISB/XII/CHEM/worksheet-2

Q.1. (a) Write the mechanism of hydration of ethanol to form ethene.

(b) How are the following conversions carried out?

- (i) Propene to propan-1-ol.
- (ii) Phenol to salicylic acid.

Q.2. Give the name of the reagents to bring the following conversions:

- a. Allyl alcohol to propenal
- b. But-2-ene to ethanol
- c. Cyclohexanol to cyclohexanone
- d. Ethanenitrile to ethanol
- e. Hexan-1-ol to hexanal

Q.3 . Give reasons:

- i. Phenol has higher boiling point than toluene.
- ii. Unlike phenols, alcohols are easily protonated.

Q.4 Explain the following giving one example for each :

- (i) Reimer-Tiemann reaction
- (ii) Friedel – Craft’s acetylation of anisole..

Q.5. Write a note on the following with an example each:

- i. Williamson synthesis of ether.
- ii. Kolbe’s reaction.

Q.6 Give one chemical test to distinguish between the following pairs.

- (i) Anisole and Cresol
- (ii) Benzylalcohol and Isopropylalcohol.

Q.8 How will you convert :

- (i) Phenol to benzoquinone
- (ii) Propanone to 2-methylpropan-2-ol
- (iii) Propene to propan-2-ol

Q.9 How would you obtain

- (i) Picric acid (2, 4, 6-trinitrophenol) from phenol,
- (ii) 2-Methyl propanol from 2-methylpropene?

Q.10 Draw the structure and name the product formed if the following alcohols are oxidized. Assume that an excess of oxidizing agent is used.



(ii) 2-butanol

(iii) 2-methyl-1-propanol

Q.11 Do the following conversions.

(i) Benzyl alcohol to 2-phenyl ethanoic Acid

(ii) Ethyl Chloride to propanoic Acid

Q.14 How would you obtain the following:

(i) Benzoquinone from phenol

(ii) 2-Methylpropan-2-ol from methylmagnesium bromide

(iii) Propan-2-ol from propene

Q.15 Write structures of the compounds whose IUPAC names are as follows:

(i) 2-Methylbutan-2-ol

(ii) 3,5-Dimethylhexane – 1, 3, 5-triol

(iii) 2,3 – Diethylphenol

(iv) 2-Ethoxy-3-methylpentane

(v) Cyclopent-3-en-1-ol

Q.16 Give equations of the following reactions:

(i) Oxidation of propan-1-ol with alkaline KMnO_4 solution.

(ii) Bromine in CS_2 with phenol.

(iii) Dilute HNO_3 with phenol.

(iv) Treating phenol with chloroform in presence of aqueous NaOH .

Q.15 Complete the following

