

## Chemistry - 12th Class Chemistry Chapter 11 Short Questions Preparation

Q1. Prepare diethyl ether by Williamson synthesis?

**Ans 1:** Alcohols are reacted with metallic sodium from alkoxides. This alkaloides ion is a strong nucleophile and readily reacts with alkyl halide to produce an ether.

Q2. How secondary and tertiary alcohols can be distinguished by Lucas Test?

**Ans 1:** Secondary and tertiary alcohols are identified and distinguished by reacting them with con.HCl in an hydrous  $ZnCl_2$ . An oily layer of alkyl halides separates out on these reactions.

Q3. Why are lower alcohols more soluble in water than higher alcohols.

**Ans 1:** Lower alcohols more soluble in water than higher alcohols because solubility of alcohols is due to hydrogen bonding which is prominent in lower alcohols but diminishes in higher alcohols.

Q4. Write formula of carbolic acid and it one use.

**Ans 1:** Carbolic acid:  $C_6H_5OH$   
its is poisonous and used as a disinfectant in hospitals and washrooms.

Q5. How phenol is identified chemically?

**Ans 1:** An aqueous solution of phenol reacts with bromine water to give white ppt of 2,4,6 tribromophenol, Thus the color of bromine is discharged.

Q6. Define Fermentation.

**Ans 1:** Fermentation is a biochemical process which occurs in presence of certain enzymes secreted by microorganism such as yeast, Optimum temperature for the process of fermentation is 25-35 degree, Proper aeration, dilution of solution and the absence of any preservative are essential conditions for fermentation.

Q7. How will you distinguish between methanol and ethanol?

**Ans 1:** Ethanol gives iodoform with iodine in the presence of Na-OH, Formation of yellow crystals indicate that the alcohol is ethanol. Methanol does not give iodoform test.

Q8. Write down two method for the preparation of phenol?

**Ans 1:** 1.Prepare phenol by Dow method:In Dow method chloroenezene is treated with 10% Na OH at 360 degree and 150 atmospheres pressure. Sodium phenoxide is produced which on treating with HCl.  
2.Prepare phenol by Sodium salt of benzene sulphonic acid:  
Sodium salt of benzene sulphonic acid reacts with NaOH at 320 degree to give sodium phenoxide which on treatment with HCl gives phenol.

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Q9. Distinguish between alcohol and a phenol by chemical reaction?

**Ans 1:** 1.Alcohols does not react with bases but phenol reacts and gives salts.  
Alcohols reacts with bromine water and phenol reacts to give white ppy of tribromophenol.

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Q10. Define the preparation of methanol by reaction of Co and H<sub>2</sub>?

**Ans 1:** First of all mixture of carbon monoxide and hydrogen is purified,It is compressed under a pressure of 200 atmospheres and taken into a reaction chamber by means of coiled pipers. These vapors are passed through a condenser to get methanol Unreacted gasses are recycled though compressor to reaction chamber.

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