

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

Q1. How will you distinguished between 1-propanol and 2-propanol?

**Ans 1:** 1-propanol is primary alcohol while 2-propanol is a secondary alcohol.

Primary, Secondary and Tertiary alcohols are identified and distinguished by reacting them with con. HCl in anhydrous  $ZnCl_2$ . An oily layer of alkyl halides separates out in these reaction :

1. Tertiary alcohol form an oily layer immediately.
2. Secondary alcohols form an oily layer in five to ten minutes.
3. Primary alcohols form an oily layer only on heating.

Q2. How does picric acid synthesis take place?

**Ans 1:** Picric acid is synthesized by the nitration of phenol, Phenol reacts with dil and conc.

Q3. What happened when hydrogen iodide is added to ethers?

**Ans 1:** With hydrogen iodide ethers give alcohols which can react further to give alkyl iodides.

Q4. Classify alcohols giving an example for each?

**Ans 1:** Alcohols are classified into monohydric and polyhydric alcohols, Monohydric alcohols contain one -OH group while polyhydric alcohol contain two three or more -OH group and names as dihydric or trihydric.

Q5. How to convert phenol to an alcohol?

**Ans 1:** When hydrogen is passed through phenol at  $150^\circ C$  in the presence of Ni catalyst, it gives cyclohexanol which is an alcohol.

Q6. Ethanol has higher boiling point than diethyl ether.

**Ans 1:** Ethanol has higher boiling point than diethyl ether because ethanol has strong hydrogen bonding in molecule while ether don't show hydrogen bonding with its molecule.

Q7. Explain acidic behavior of phenol.

**Ans 1:** Phenoxide ion is formed by the dissociation of phenol, The negative charge on oxygen atom can become involved with the  $\pi$  electron cloud on the benzene ring, The negative charge is thus delocalized in the ring and the phenoxide ion becomes relatively stable.

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Q8. Give chemical reaction for preparation of Bakelite?

**Ans 1:** Phenol reacts with formaldehyde in the presence of acid or alkali to give hydroxyl benzyl alcohol which on further reaction with other phenol molecules yields a polymer called Bakelite.

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Q9. Differentiate between primary and secondary alcohol?

**Ans 1:** Monohydric alcohols are further classified into primary ,secondary and tertiary alcohols. In primary alcohols -OH group is attached with primary carbon atom,In secondary alcohols -OH groups is attached with secondary carbon atom .

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Q10. Write four uses of each methanol and ethanol.

**Ans 1:** Methanol is used as solvent for fats oil ,paints ,varnishes,It is also used as antifreeze in the radiators of automobiles and for denaturing of alcohol.  
Ethanol is used as solvent as a drink and as a fuel in some countries.Moreover it is used in pharmaceutical preparation and as preservation for biological specimen.

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