

Chemistry - 12th Class Chemistry Chapter 12 Short Questions Preparation

Q1. Write down some uses of acetaldehyde?

Ans 1: It is used to make acetaldehyde ammonia used as rubber -accelerator, It is used as antiseptic inhalant in nasal infections. It is used in silvering of mirrors.

Q2. Addition of HCN on aldehydes and ketones is a base catalyzed reaction?

Ans 1: Hydrogen cyanide adds to aldehydes and ketones to form cyanohydrins. The reaction is carried out by adding slowly a mineral acid to an aqueous solution of sodium cyanide, The acid generates HCN from sodium cyanide in situ.

Q3. Write the name of those weak oxidizing agents which can oxidize aldehyde but not the ketone?

Ans 1: Tollen's reagent, Fehling solution and Benedict's solution.

Q4. How formaldehyde is prepared on industrial scale?

Ans 1: Formaldehyde is manufactured by passing a mixture of methanol vapour and air over iron oxide molybdenum oxide or silver catalyst at 500 C.

Q5. What is Benedict solution test?

Ans 1: Aliphatic aldehydes form a brick red precipitate with Benedict's solution. To an aldehyde solution add Benedict's solution and boil. A brick red precipitate of cuprous oxide is formed.

Q6. Define Aldol condensation.

Ans 1: Aldehydes and ketones possessing α -hydrogen atoms react with cold dilute solution of an alkali to form addition products known as aldols. The name aldols is given to the products because they contain both aldehyde and alcohol functional groups. In this process two molecules of the same carbonyl compound condense to form an aldol.

Q7. Which products are formed by the catalytic reduction of aldehydes?

Ans 1: Aldehyde and ketones on reduction with hydrogen in the presence of a metal catalyst like Pd, Pt or Ni form primary and secondary alcohols respectively. Hydrogen is added across the carbonyl group.

Q8. Write chemical formulas of hydroxylamine and phenyl hydrazine.

Ans 1: Chemical formula of hydroxylamine: NH_2OH
Chemical formula of phenyl hydrazine: $\text{C}_6\text{H}_5\text{NHNH}_2$

Q9. How will you distinguish between acetaldehyde and benzaldehyde?

Ans 1: Acetaldehyde is an aldehyde having a hydrogen atom which react with cold dilute solution of an alkali to form product known as aldol, While benzaldehyde is an aldehyde having no a hydrogen atom so under which reacts with cold dilute solution of an alkali to form product known as Cannizzaro product.

Q10. What is silver mirror test? What is its improvement?

Ans 1: Aldehyde form silver mirror with Tollen's reagent. Add Tollen's reagent to aldehyde solution in a test tube and war, A silver mirror is formed on the inside of the test tube.
