Chemistry - 12th Class Chemistry Chapter 10 Short Questions Preparation

Q1. What is Grignard reagent ?How it is prepared?

Ans 1: R-Mg-X known as Grignard reagent ,These are derivatives of alkyl halided belonging to class of organo metallic compounds .Grignard reagent was first prepared by Victor Grignard in 1900. Grignard reagent is so important in organic synthesis that almost all the classes of organic compounds can be prepared from them,Due to their importance and organic compounds can be prepared from them.

Q2. What are b-elimination reaction?

Ans 1: When nucleophile attacks on hydrogen atom attached to the beta carbon of the alkyl halide,we get an alkene ,such type of reaction are called elimination reaction .In E1 mechanism the first step is the slow ionization of the substrate to give a carbocation.In the second step the nucleophile attacks on hydrogen to give an alkene as a product.

Q3. Give reason for reactivity Grignard reagent?

Ans 1: The reactivity of Grignard reagent is due to the nature of C-mg Bond which is highly polar,Magnesium is more electropositive than carbons and the C-mg bond though covalent is highly polar ,giving alkyl carbons the partial negative charge,This negative charge is unusual character which makes the alkyl group highly reactive towards electrophile center. Mostly reaction shown by Grignard reagent are exothermic.

Q4. Define Primary Alkyl Halides and secondary alkyl Halides.

Ans 1: The alkyl halides in which halogen atom halogen atom is attached with carbon which is further atached to one or no carbon atom is called primary alkyl halide.
Secondry alkyl Halide:The alkyl halides in which halogen atom is attached with a carbon which is durther attached to two carbon atom is called secondry alkyl halide.

Q5. Discuss E2 mechanism.

Ans 1: In E2 mechanism the nucleophile attacks and the leaving group leaves at the same time with formation of carbon carbon double bond.

Q6. What are primary and tertiary Alkyl Halides?

Ans 1: In a primary alkyl halide halogen atom is attached with carbon which is further attached to one or more carbon atom.In a tertiary alkyl halide halogen atom is attached with a carbon which is further attached to three carbon atom.

Q7. Define Nucleophile.

Ans 1: Nucleophile means nucleus loving ,It has an unshared electron paired available for bonding and in most cases it is basic in character,It may have negatively charged or neutral.

Q8. Inversion of configuration is 50% in S_n1.Explain?

Ans 1: In S_n1 mechanism the nucleophile attacks when the leaving group had already gone,carbocation is a planner specie allowing the nucleophile to attack on it from both the direction with equal ease,We therefore observe 50% inversion of configuration and 50% reternation of configuration.

Q9. Write a note on R-Mg-X.

Ans 1: R-Mg-X are known are Grignard reagent,These are derivatives of alkyl halides belonging to class of organo metallic compounds,Grignard reagent is so important in organic synthesis that almost all the classes of organic compounds can be prepared from them,Due to their importance and application Victor Grignard was awarded Noble Prize in Chemistry.

Q10. Give importance of Grignard reagents?

Ans 1: Grignard reagents is so important in organic synthesis that almost almost all the classes of organic compound can be prepared from them.,Due to their importance and application Victor Grignared was awarded Nobel Prize in chemistry.
