

Chemistry - 12th Class Chemistry Chapter 7 Short Questions Preparation

Q1. Write down any two characteristics feature of organic compound?

Ans 1: Non lonic Character of Organic Compound: Organic Compounds are generally covalent compound, therefore do not give ionic reaction.

Isomerism:Isomerism is a very common phenomena in organic compounds.very often more than one compound are represented by the same molecule formula. However they have different structural formulas.

Q2. What does sp-hybridization occur?

Ans 1: When one 2s one 2p orbitals of the carbon atom mix together to give rise to two degenerated sp hybridized atomic orbitals. These orbitals have linear shape with a bond angle of 180 Degree.

Q3. Give names of four compounds which are homocyclic but are not aromatic?

Ans 1: 1.cyclopropane 2.cyclobutane 3.cyclo penatane 4. cyclohexane

Q4. Define functional group isomerism.

Ans 1: An atom or group of atoms or a double bond or a triple bond whose presence imparts specific properties to organic compounds is called a functional group because they are chemically functional part of molecules.

Q5. Define Catenation?

Ans 1:

1. The property of carbons atoms to link with other carbons atom to form long chain or rings is called catenation, The main reasons of such large number of compounds is catenation of carbons atoms

Q6. When does sp³- Hybridization occur?

Ans 1: When one s and three p orbitals mix together to form four new equivalent hybrid atomic orbitals having same shaper and energy. This mode of hybridization is called tetrahedral hybridization. All these four sp3 hybrid orbitals are degenerated and are directed at an angle of 109.5 in space to give a tetrahedral geometry.

Q7. Why there is a free rotation around in a single bond, but no free rotation around a double bond?

Ans 1: Two carbons atom joined by a single bond are capable of free rotation about it, However when two carbons atom are joined by a double bond ,they can not rotate freely. As a result the relative positions of the various groups attached to these carbon atoms get fixed and give rise to cic-trans isomers.

Q8. Why vital force of theory is rejected?

Ans 1: Vital force of theory was rejected by Friedrich Wohler when he synthesized urea an organic compound from ammonium cyanate a substance ok known mineral origin.

Since the synthesis of urea from ammonium cyanate ,million of organic compounds have been prepared and analyzed.

Q9. Name organic compound first of all prepared in the laboratory and how?

Ans 1: Friedrick Wohler synthesized urea,an organic compound from ammonium cyanate ,a substance of known mineral origin. NH₄CNO ------- (NH₂)₂CO

Q10. In alkanes sp³hybridization occurs.Discuss?

Ans 1: In the formation of alkane ,the four hybrid atomic orbital of carbon overlap separately with four atomic orbitals to form four equivalent bonds. For example in ethane two tetrahedrons of each carbons are joined together.