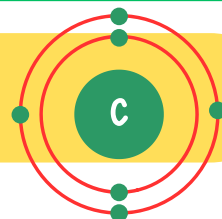


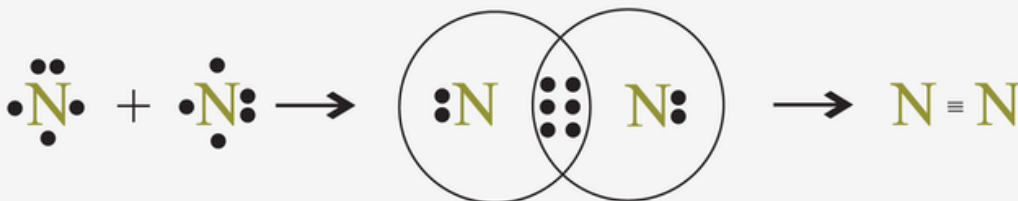
• Carbon and its Compounds



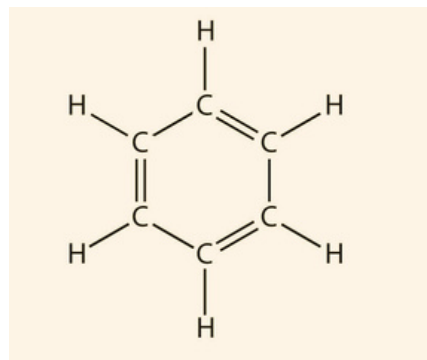
1. Draw the electron dot structure of Nitrogen. (CBSE 2023, 2021)
2. Write the chemical formula of benzene and draw its structure. (CBSE 2017, 2021, 2023)
3. What will you observe on adding a 5% alkaline KMnO_4 solution drop by drop to some warm ethanol taken in a test tube? Write the name of the compound formed during the above chemical reaction. (CBSE 2013, 2020)
4. Why do covalent compounds have low melting and boiling points? (CBSE 2020, 2021)
5. What is meant by a homologous series of carbon compounds? Write the general formula of (CBSE 2015, 2014, 2016, 2019)
 - (a) alkenes
 - (b) alkynes

Solutions

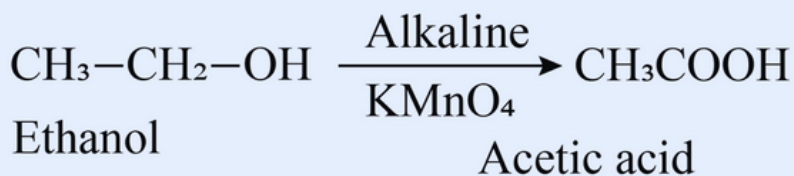
1.



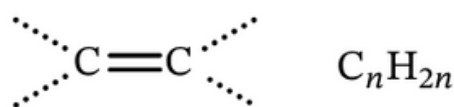
2. The molecular formula of benzene : C_6H_6



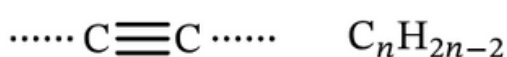
3. The purple color of KMnO_4 decolourises and ethanoic acid will be formed.



4. The molecules of covalent compounds are held by weak intramolecular forces. Thus, a very small amount of energy is required to break the bonds between two or more molecules. That is why they have low melting and boiling points.
5. The series of organic compounds having the same functional group and similar chemical properties is called the homologous series.



Alkene



Alkyne