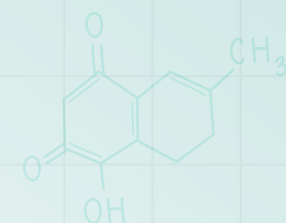


Last Moment Exam Cheat Sheet

Carbon And Its Compound

- Carbon symbol is **C** and atomic number is **6**.
- Carbon forms covalent bonds by **sharing electrons**.
- Carbon has **valency 4**.
- Carbon cannot easily form **C⁴⁻** or **C⁴⁺** due to **instability and high energy requirement**.
- **Single bond** is represented by **-**, **double bond** by **=** and **triple bond** by **≡**.
- Covalent compounds are **poor conductors** and have low melting and boiling points.
- Allotropy means existence of an element in **different physical forms** with similar chemical properties.
- **Diamond, graphite and fullerenes** are crystalline allotropes of carbon.
- Diamond is **hardest natural substance** and bad conductor of electricity.
- **1 carat = 200 mg**.
- **Graphite** is soft, slippery and **good conductor of electricity**.
- C₆₀ fullerene is buckyball with **20 hexagons and 12 pentagons**.
















- Catenation is **self-linking property** of carbon.
- Carbon shows **tetravalency** and forms single, double and triple bonds.
- Hydrocarbons contain only **carbon and hydrogen**.
- Alkanes are saturated hydrocarbons with formula **C_nH_{2n+2}** .
- Alkenes contain **$C=C$** and have formula **C_nH_{2n}** .
- Alkynes contain **$C\equiv C$** and have formula **C_nH_{2n-2}** .
- **Methane** is the simplest hydrocarbon.
- Pentane has **3 structural isomers**.
- Consecutive members of a homologous series differ by **$-CH_2$ group**.
- Ethanol formula is **C_2H_5OH** .
- Ethanol gives ethene with conc. **H_2SO_4 at 443 K**.
- Ethanol oxidises to ethanoic acid with **$KMnO_4$, $K_2Cr_2O_7$ or HNO_3** .
- Ethanoic acid is **CH_3COOH** .
- Vinegar is **5-8% ethanoic acid** in water.
- Ethanoic acid is called glacial acetic acid because it **freezes in cold climates**.
- Esterification forms ester with **fruity smell**.
- Saponification converts ester into **alcohol and salt of acid**.
- Soap molecule has **hydrophilic head and hydrophobic tail**.



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