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Class - 10

Chapter - 4

Carbon and its Compound

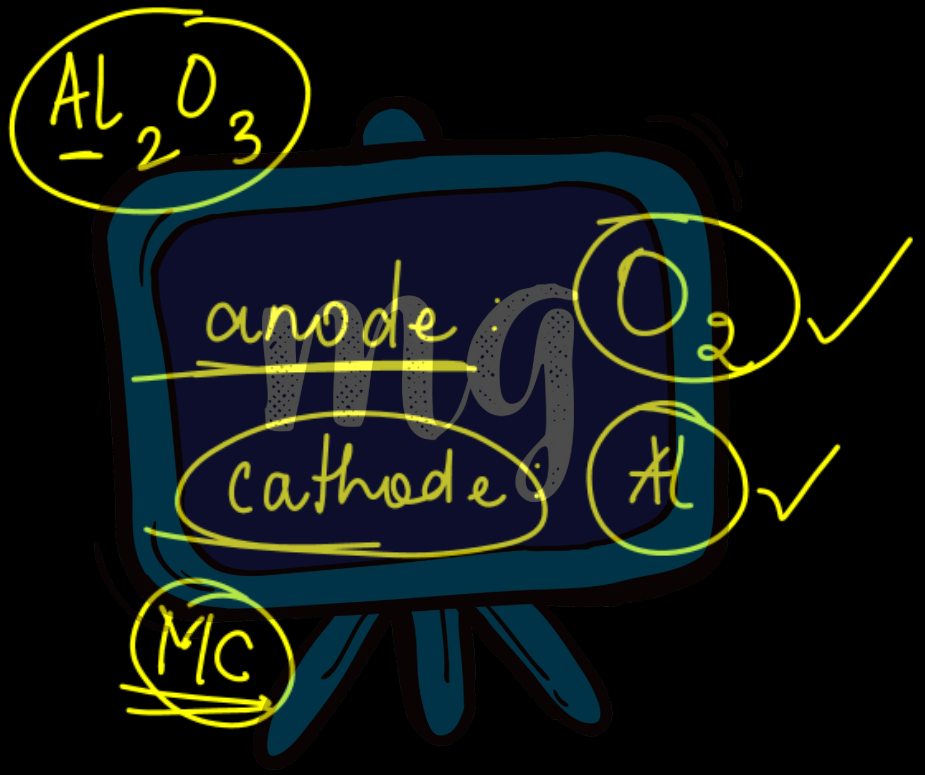
Part-1

Introduction

Disha Didi (DD)

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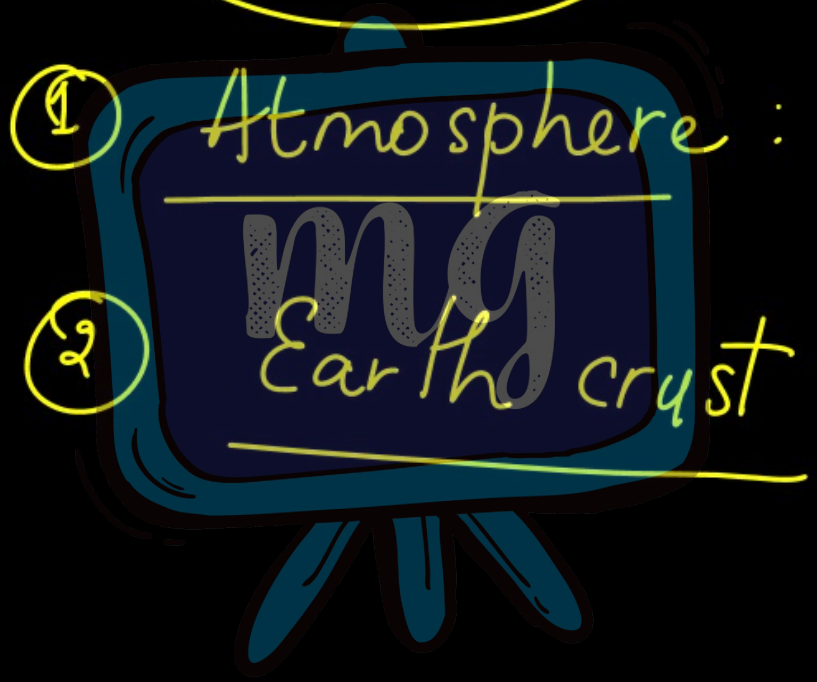
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Carbon

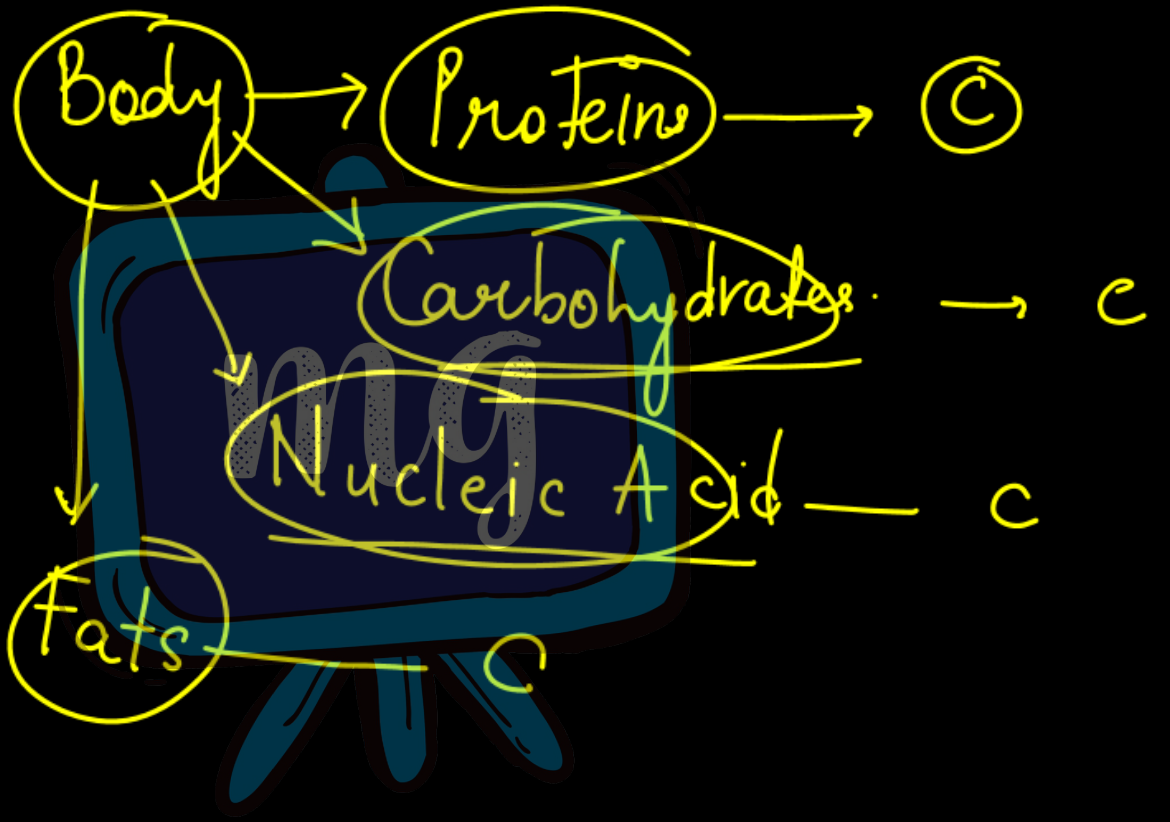
CO_2

1. Atmosphere : 0.03%
2. Earth's crust : 0.02%



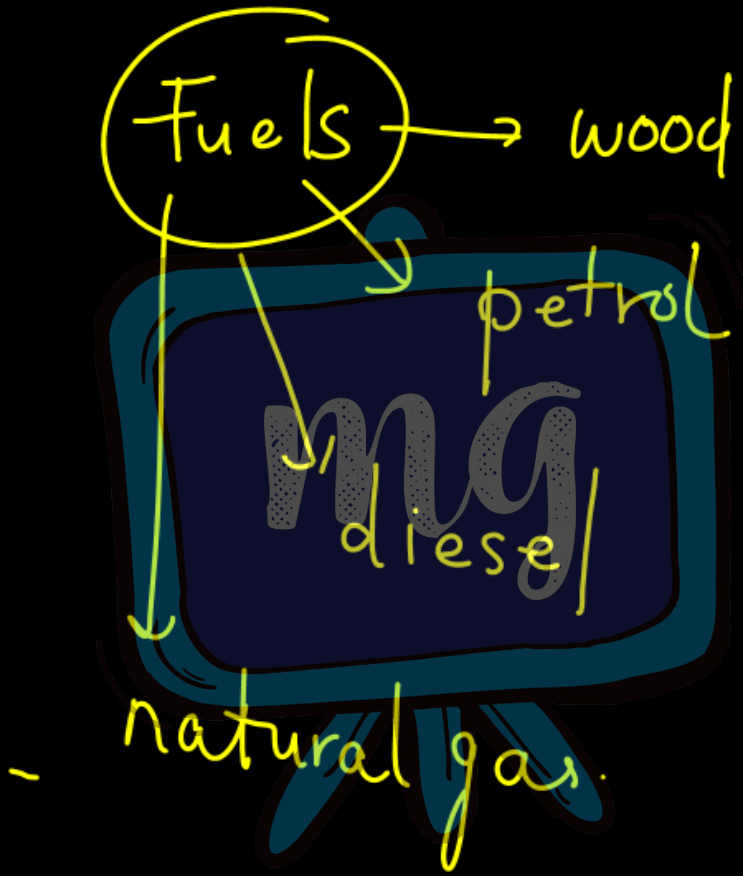
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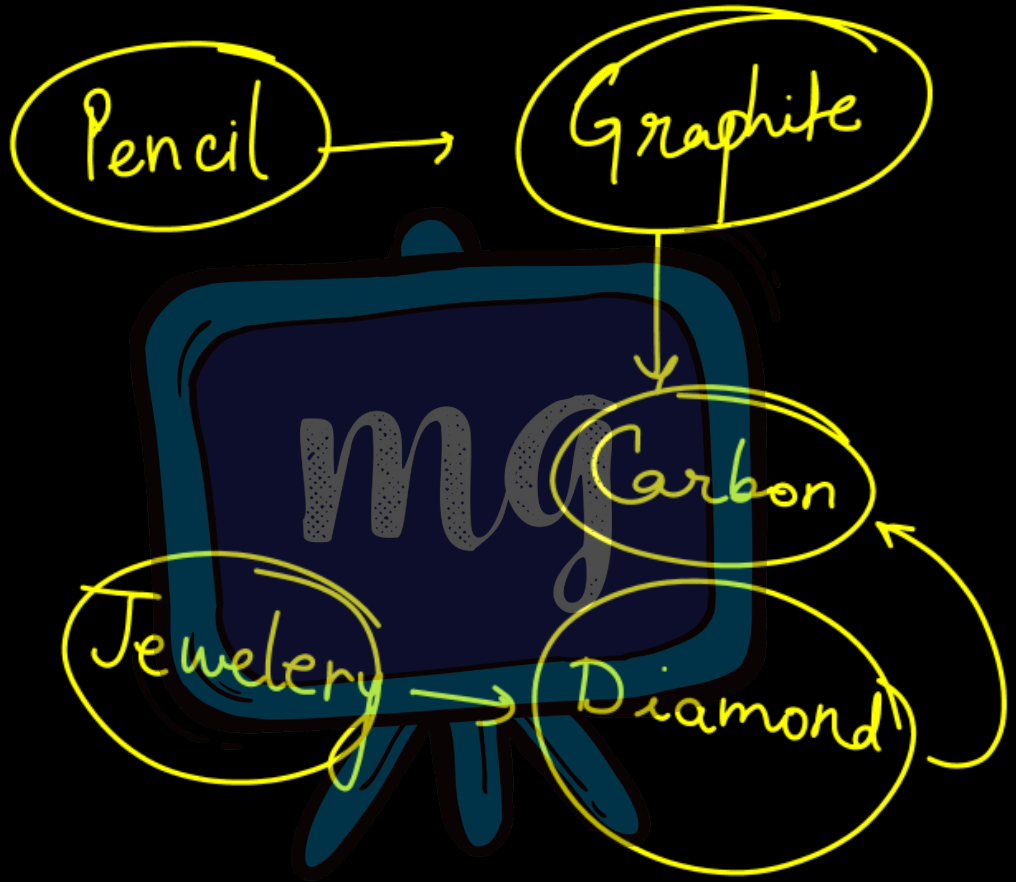
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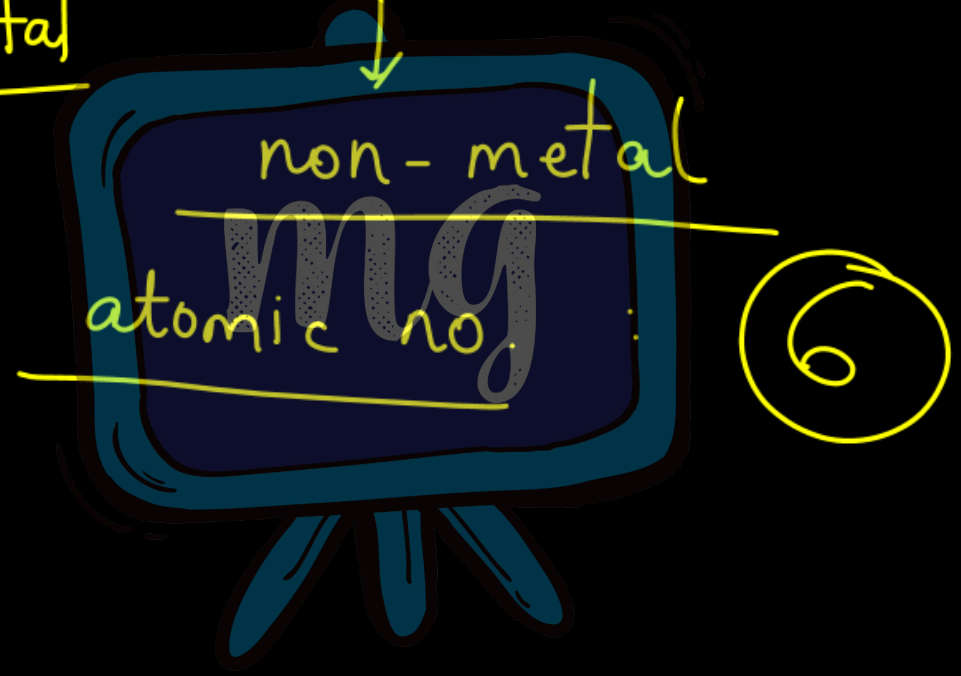
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metal

non-metal

Carbon



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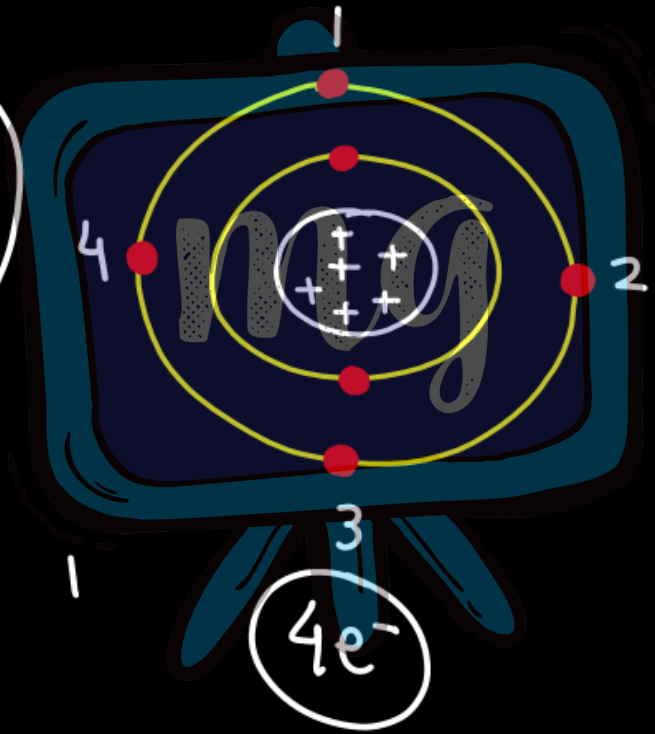
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6

E.C.

8

2, 4



metals

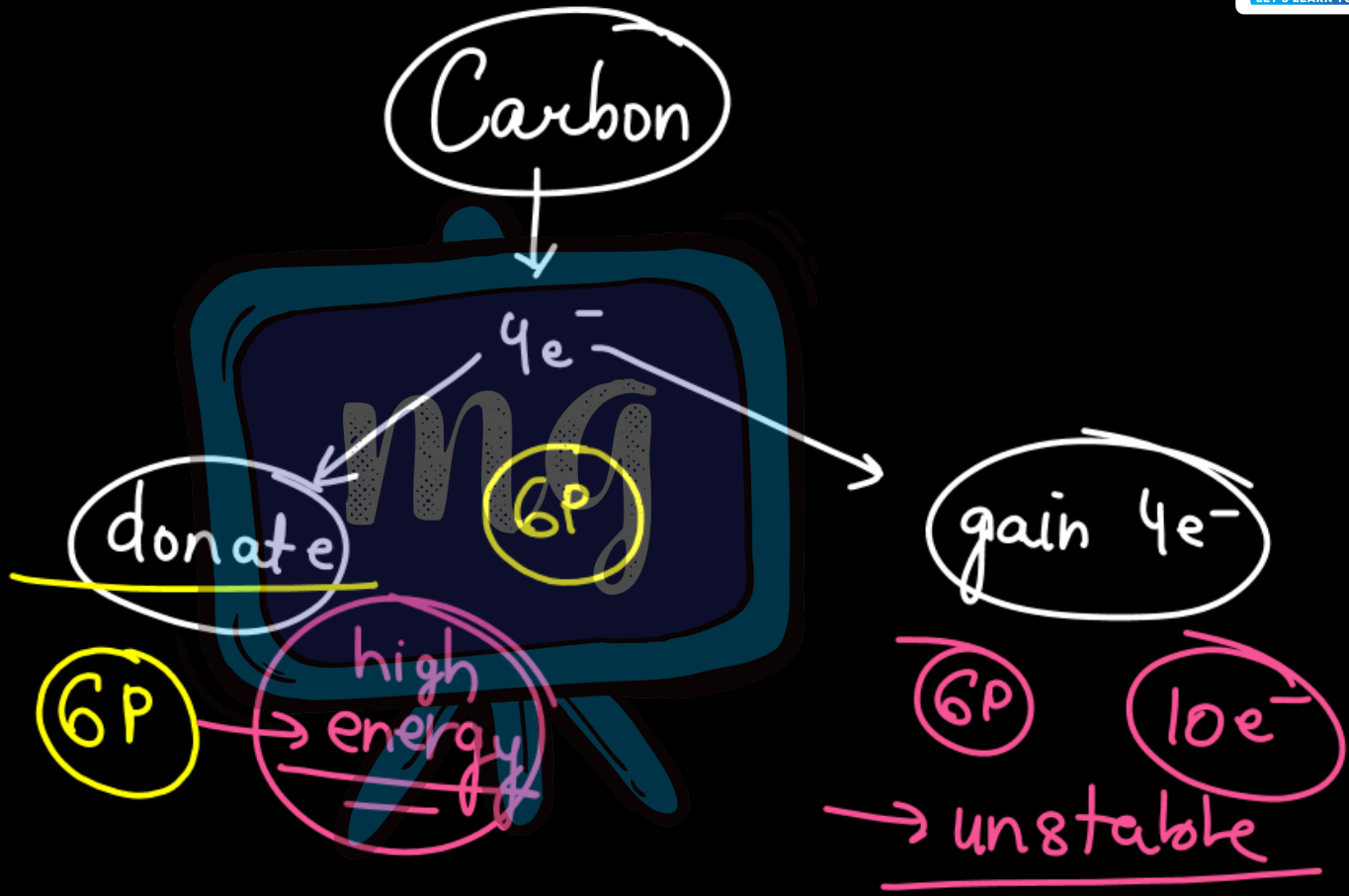
Shell < 4

non metals > 4

gain e⁻

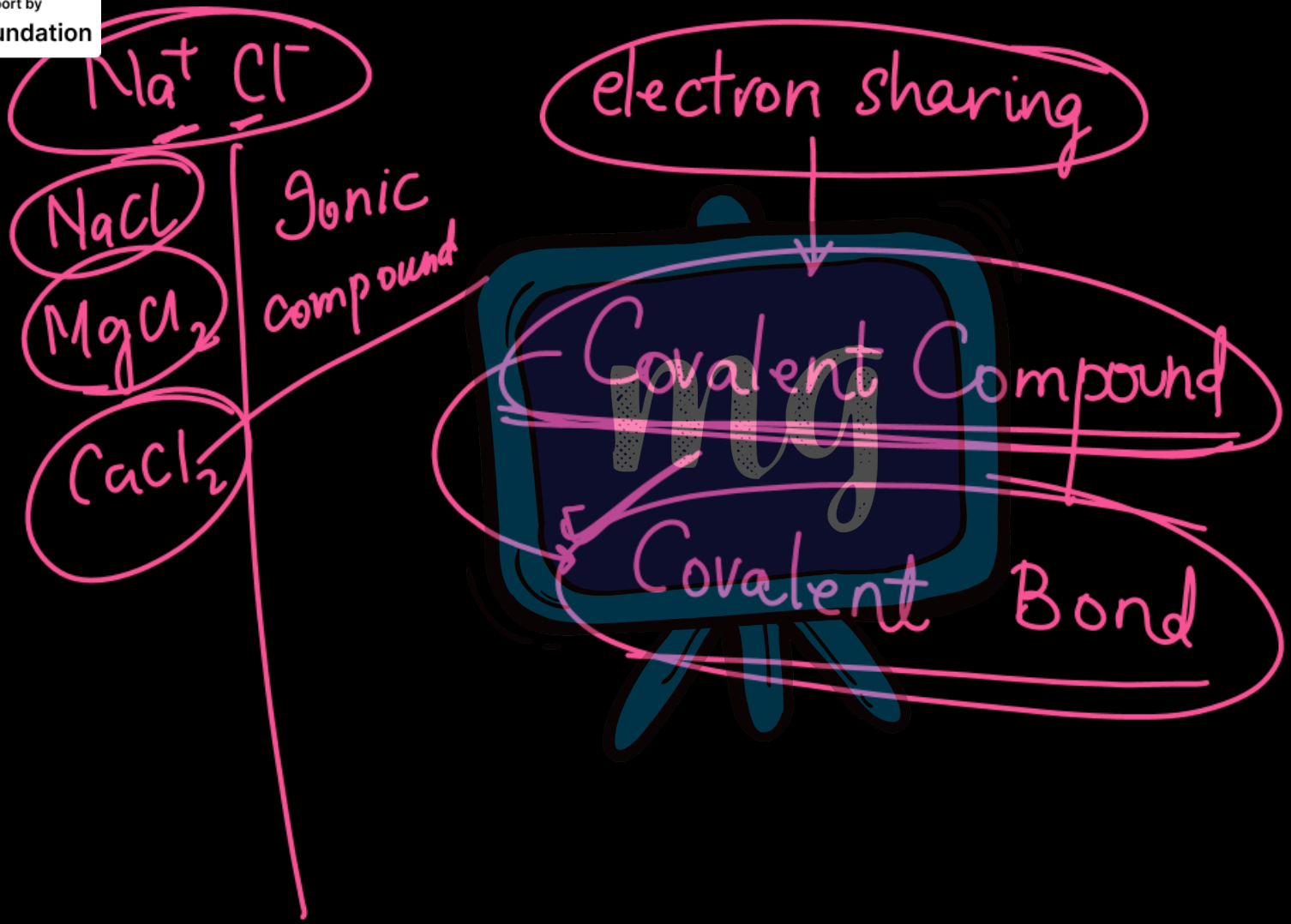
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Occurrence of Carbon

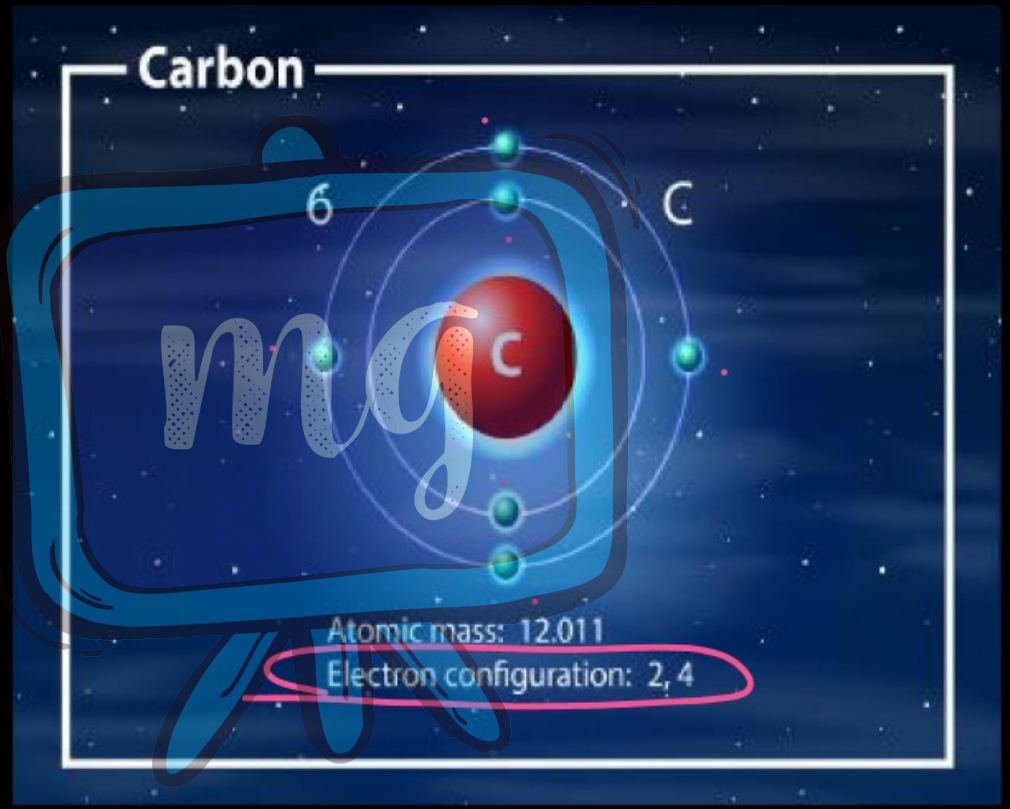




- Atmosphere – .03% (CO_2).
- Earth's crust – .02%.
- Fuel – wood, coal, charcoal, coke, petroleum, natural gas, biogas, marsh gas etc.
- Biomolecules – carbohydrates, lipids, nucleic acids, proteins.

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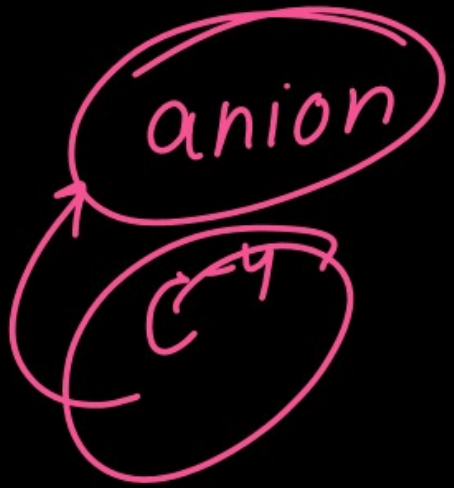
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Bonding in Carbon



- Carbon – 2, 4.
- Needs to gain or lose four electrons.

1. Forming C^{-4} anion.

By gain four electrons.

P = 6 e^- = 10

Unstable

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2. Forming C^{+4} cation.

By losing four electrons.

Require large amount of energy.

- Carbon share its valence electrons with other atoms of carbon or with atoms of other elements.

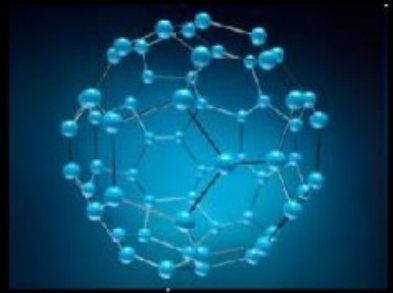
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Allotropes of Carbon

Carbon is found in the form of diamond, graphite, fullerene etc.







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Test for Presence of Carbon

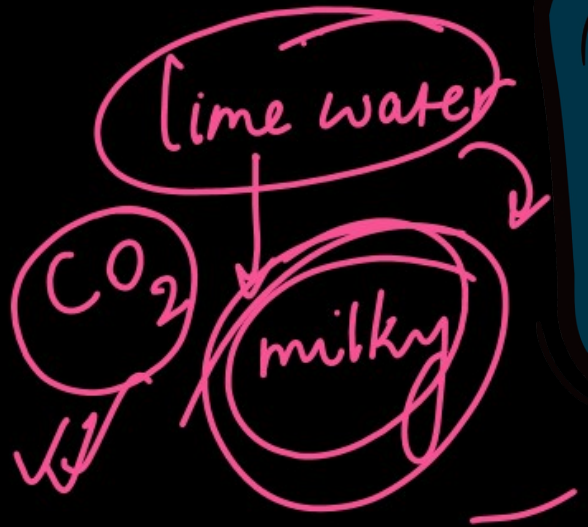
Substance → Burnt in air

↓

Pass gas through lime water

↓

If turns milky, carbon present



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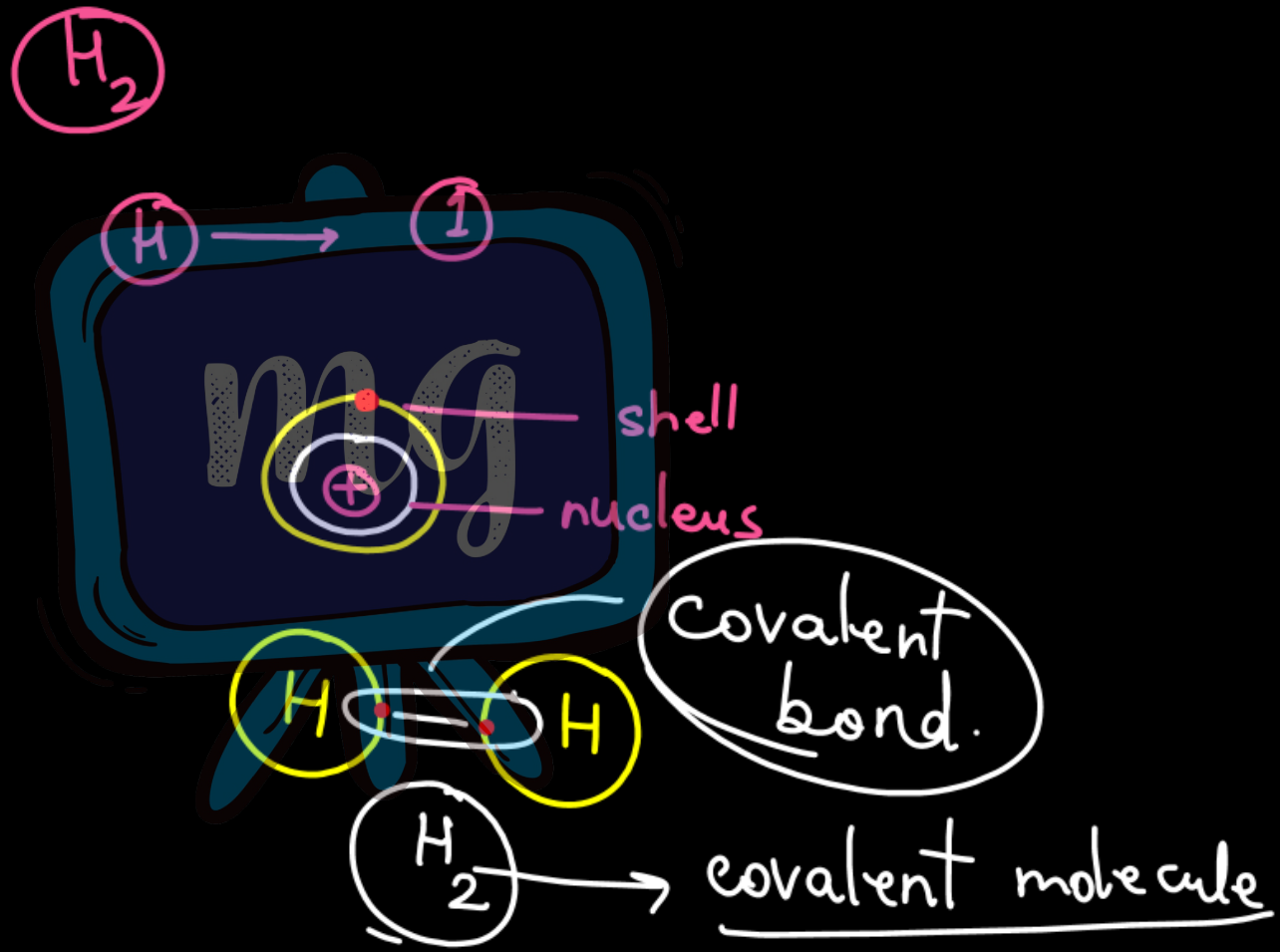
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Properties of Carbon Compounds

- Poor conductors of electricity.
- Low melting & boiling points.
- Weak forces of attraction between molecules.
- Strong intramolecular forces.
- Do not give rise to ions.

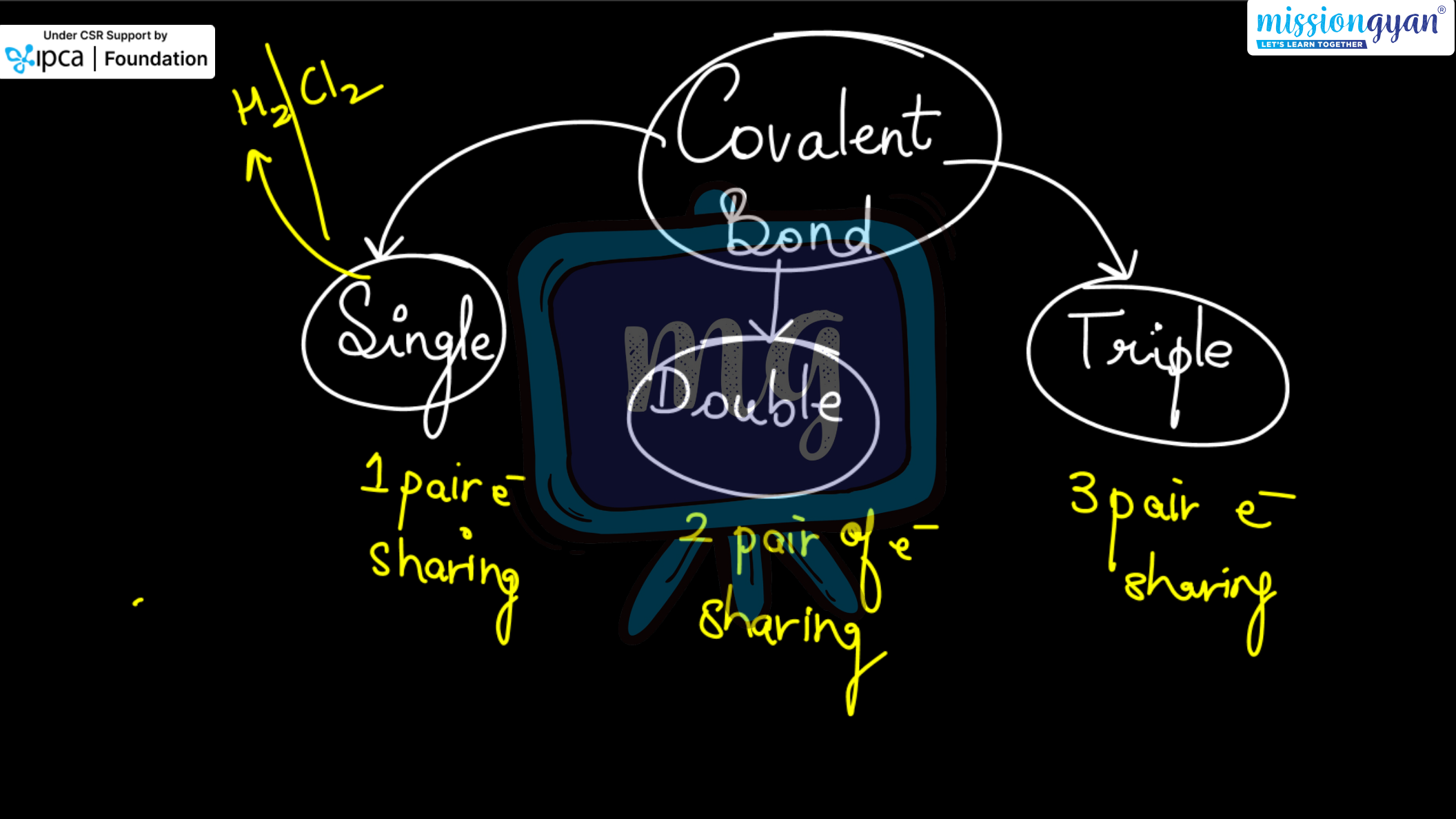
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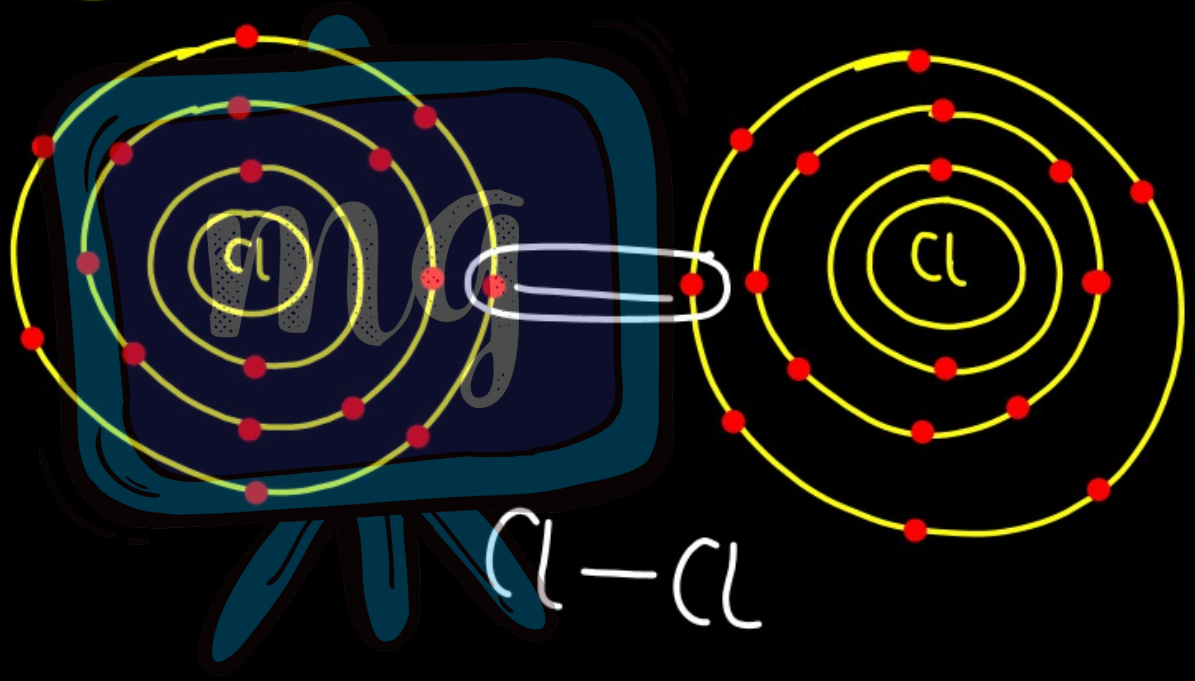
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Ar
18

Cl_2

Cl → 17

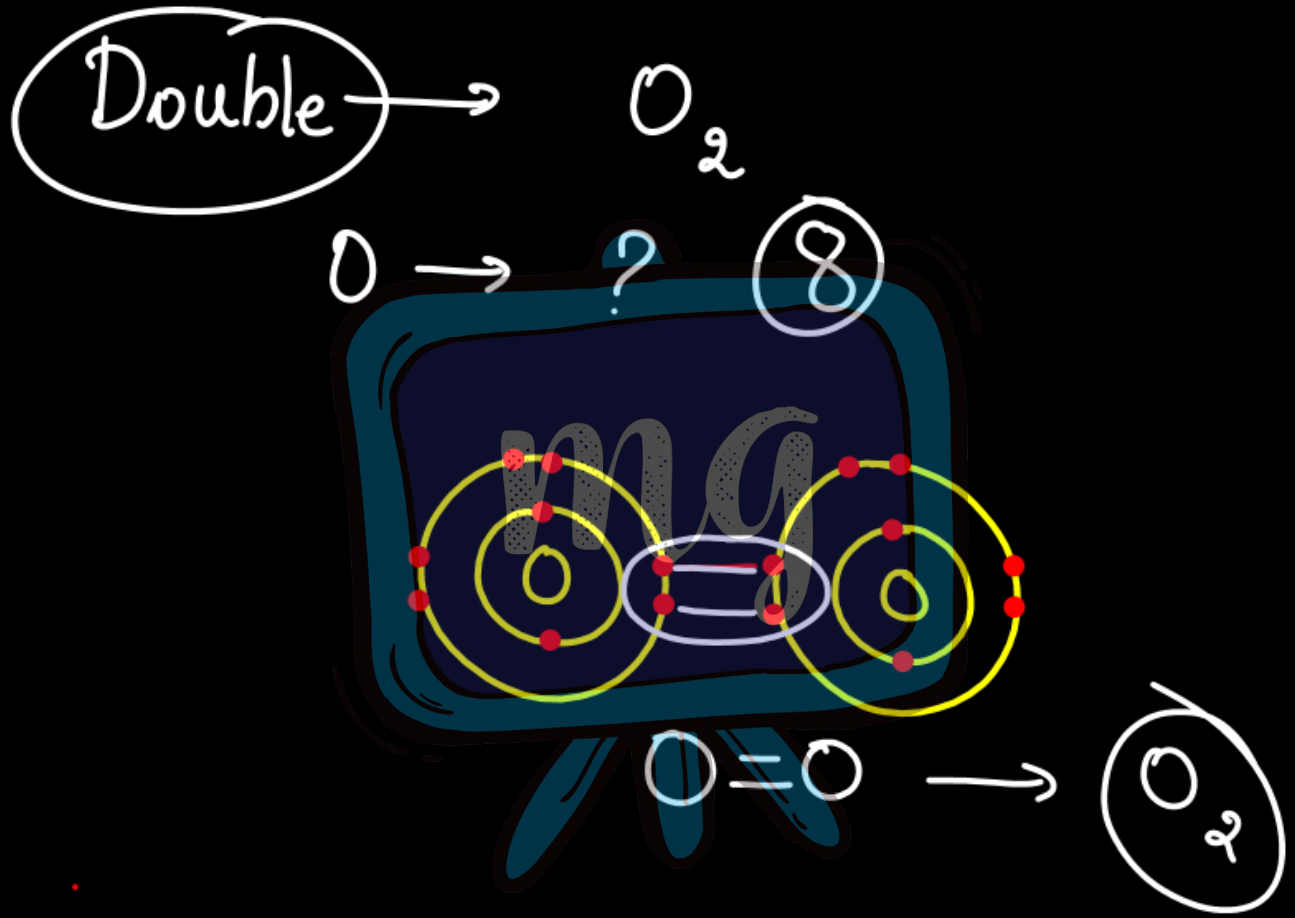


Cl — Cl

∴

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